As filed with the Securities and Exchange Commission on January 17, 2006

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
Under
The Securities Act of 1933

TARGACEPT, INC.
(Exact name of registrant as specified in its charter)

Delaware	2834	56-2020050
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

200 East First Street, Suite 300
Winston-Salem, North Carolina 27101
(336) 480-2100
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

J. Donald deBethizy
Chief Executive Officer
Targacept, Inc.
200 East First Street, Suite 300
Winston-Salem, North Carolina 27101
(336) 480-2100
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Jonathan L. Kravetz, Esq. Megan N. Gates, Esq. Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. One Financial Center Boston, Massachusetts 02111 (617) 542-6000	Jeffrey C. Howland, Esq. Womble Carlyle Sandridge & Rice, PLLC One West Fourth Street Winston-Salem, North Carolina 27101 (336) 721-3516	Peter A. Zorn, Esq. Targacept, Inc. 200 East First Street, Suite 300 Winston-Salem, North Carolina 27101 (336) 480-2115	David E. Redlick, Esq. Stuart R. Nayman, Esq. Wilmer Cutler Pickering Hale and Dorr LLP 399 Park Avenue New York, New York 10022 (212) 230-8800

Approximate date of commencement of proposed sale of the securities to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐ ___________

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier registration statement for the same offering. ☐ ___________

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier registration statement for the same offering. ☐ ___________

If delivery of the Prospectus is expected to be made pursuant to Rule 434, please check the following box. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price (1)	Amount of Registration Fee (2)
Common Stock, par value $0.001 per share	$ 59,800,000	$ 6,399

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act.
(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price. Pursuant to Rule 457(p) under the Securities Act, the registration fee of $6,399 is offset by aggregate registration fees of $11,774 previously paid by the registrant with respect to its Registration Statement on Form S-1 (No. 333-115538) initially filed with the Securities and Exchange Commission on May 14, 2004 and subsequently withdrawn.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

[Table of Contents](#)

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is declared effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, Dated January 17, 2006

TARGACEPT

Shares
Common Stock

This is the initial public offering of Targacept, Inc. We are offering shares of our common stock. We anticipate that the initial public offering price will be between $ and $ per share. We have applied to list our common stock on the NASDAQ National Market under the symbol "TRGT."

Investing in our common stock involves risk. See " Risk Factors" beginning on page 8.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

	Price to Public	Underwriting Discounts and Commissions	Proceeds to Targacept
Per Share	$	$	$
Total	$	$	$

We have granted the underwriters the right to purchase up to additional shares of common stock to cover over-allotments.

Deutsche Bank Securities
Pacific Growth Equities, LLC
CIBC World Markets
Lazard Capital Markets

The date of this prospectus is , 2006

PROSPECTUS SUMMARY

The following summary highlights information appearing elsewhere in this prospectus. It may not contain all of the information that is important to you in deciding whether to invest in our common stock. You should read the entire prospectus carefully, including the "Risk Factors" section and the financial statements and related notes appearing at the end of this prospectus, before making an investment decision.

Targacept, Inc.

We are a biopharmaceutical company engaged in the design, discovery and development of a new class of drugs to treat multiple diseases and disorders of the central nervous system by selectively targeting neuronal nicotinic receptors, or NNRs. NNRs are found on nerve cells throughout the nervous system and serve as key regulators of nervous system activity. Our product candidates are designed to selectively target specific NNR subtypes to promote positive medical effects and limit adverse side effects.

We are developing our most advanced product candidates as treatments for target indications in three therapeutic areas: cognitive impairment, depression and anxiety, and pain. Within these areas, we have three product candidates in clinical development and two preclinical product candidates.

Cognitive Impairment

TC-1734. Our lead product candidate is a novel small molecule that we refer to as TC-1734. In December 2005, we entered into a collaborative research and license agreement with AstraZeneca AB for the development and worldwide commercialization of TC-1734 as a treatment for Alzheimer's disease, cognitive deficits in schizophrenia and potentially other conditions marked by cognitive impairment such as attention deficit hyperactivity disorder, commonly referred to as ADHD, age associated memory impairment, commonly referred to as AAMI, and mild cognitive impairment, commonly referred to as MCI. In 2004, we completed two Phase II clinical trials of TC-1734, one in AAMI and one in MCI. We are currently conducting a Phase II clinical trial of TC-1734 in AAMI to further assess the effects of TC-1734 on cognition in a cognitively impaired elderly population. We are responsible for completing this trial independently. We expect the results of this trial to be available in the first half of 2006. We also expect AstraZeneca to initiate two Phase II clinical trials of TC-1734 in the first half of 2007, one in mild to moderate Alzheimer's disease and one in cognitive deficits in schizophrenia.

Depression/Anxiety

Mecamylamine hydrochloride and TC-5214. Mecamylamine hydrochloride is the active ingredient in Inversine, which is our only product approved by the U.S. Food and Drug Administration for marketing. Inversine is approved for the management of moderately severe to severe essential hypertension, a high blood pressure disorder. However, we believe that Inversine is prescribed predominantly for the treatment of neuropsychiatric disorders, including Tourette's syndrome, autism and bipolar disorder. We are currently conducting a Phase II clinical trial of mecamylamine hydrochloride as an add-on therapy to citalopram hydrobromide, a commonly prescribed anti-depressant marketed as Celexa, in patients with major depressive disorder. We plan to conduct an interim analysis of data from this trial in January 2006 to determine whether it would be advisable to increase the number of patients in the trial in order to obtain a definitive trial result. If we do not increase the number of patients for the trial following the interim analysis, we expect the results of this trial to be available in the third quarter of 2006. Our preclinical product candidate TC-5214 is one of the molecular components of mecamylamine hydrochloride. If our ongoing Phase II clinical trial of mecamylamine hydrochloride is successful, we plan to consider accelerating the development of TC-5214 as an add-on therapy for depression in lieu of further advancement of mecamylamine hydrochloride.

TC-2216. TC-2216 is a novel small molecule that we are developing as an oral treatment for depression and anxiety disorders. TC-2216 is currently a preclinical product candidate. We plan to conduct the additional preclinical safety studies necessary to support the filing in the second half of 2006 of an investigational new drug application, or IND, for clinical trials of TC-2216.

Pain

TC-2696. TC-2696 is a novel small molecule that we are developing as an oral treatment for acute post-operative pain. Depending on clinical trial results, available resources and other considerations, we may pursue development of TC-2696 for other classes of pain in addition to or instead of acute post-operative pain. In 2004, we completed a Phase I clinical trial of TC-2696. We are currently conducting a Phase I multiple rising dose clinical trial to further assess the safety and tolerability profile of TC-2696. We expect the results of this trial to be available in the first half of 2006.

Upon effectiveness of our agreement with AstraZeneca relating to TC-1734, we and AstraZeneca have agreed to initiate a preclinical research collaboration designed to discover and develop additional compounds that, like TC-1734, act on the NNR known as a4ß2. Under the agreement, AstraZeneca is responsible for funding the research collaboration, which has an initial term of four years and can be extended by mutual agreement. In addition to our a4ß2 research collaboration with AstraZeneca, we have a preclinical program focused on identifying and developing compounds that selectively target another NNR, known as a7, which we believe may have application in the treatment of conditions such as schizophrenia, cognitive impairment and inflammation. We have selected a lead compound that we refer to as TC-5619 that acts selectively on the a7 NNR. We plan to conduct the additional preclinical studies that would be needed to support the filing in 2007 of an IND for clinical trials of TC-5619. We have additional preclinical programs in areas in which we believe drugs that target specific NNR subtypes can be exploited for medical benefit, such as smoking cessation and obesity.

We develop product candidates using our proprietary databases and computer-based molecular design technologies, which we refer to collectively as Pentad. Together with our proprietary assays and novel screening methods, Pentad enables us to efficiently identify, prioritize, characterize and optimize novel compounds. We used Pentad to design or optimize TC-1734, TC-2696, TC-2216 and TC-5619.

Strategic Collaboration with AstraZeneca AB

Our agreement with AstraZeneca relating to TC-1734 becomes effective upon expiration or early termination of the Hart-Scott-Rodino waiting period applicable to the agreement. AstraZeneca has agreed to pay us an initial fee of $10 million upon effectiveness of the agreement. AstraZeneca has also agreed to make an additional payment to us of $20 million if it decides to conduct a Phase II clinical trial of TC-1734 following the completion of additional safety and product characterization studies that AstraZeneca will conduct at its expense to generate further data with respect to TC-1734. We expect AstraZeneca to complete these safety and product characterization studies within approximately 12 to 15 months after the agreement becomes effective. Under the agreement, we are eligible to receive other payments of up to $249 million, contingent upon the achievement of development, regulatory and first commercial sale milestones for TC-1734 for Alzheimer's disease, cognitive deficits in schizophrenia and ADHD, and royalties on future product sales. If TC-1734 is developed under the agreement for indications other than Alzheimer's disease, cognitive deficits in schizophrenia and ADHD, we would also be eligible to receive payments contingent upon the achievement of development, regulatory and first commercial sale milestones for TC-1734 for those indications. In addition, if the agreement continues in effect following AstraZeneca's completion of the additional safety and product characterization studies, we would be entitled to receive a minimum of $23.7 million in aggregate research fees over the four-year term of the a4ß2 research collaboration. Based on the current budget for the research collaboration, we expect to receive approximately $26.4 million in aggregate research fees under the agreement.

Our NNR Focus

We trace our scientific lineage to a research program initiated by R.J. Reynolds Tobacco Company in 1982 to study the activity and effects of nicotine, a compound that interacts non-selectively with all nicotinic receptors. There is a significant amount of published clinical data relating to nicotine, including studies in which individuals with Alzheimer's disease and other conditions marked by cognitive impairment showed therapeutic improvement when treated with a nicotine patch. We have used this clinical data, together with our deep understanding of the biological characteristics and functions of NNRs that we have built over more than 20 years, to validate NNRs as potential targets for drug activity. We have also developed an expertise in designing compounds of low molecular weight, referred to as small molecules, that can selectively interact with specific NNR subtypes, with the objective of eliciting a desired medical effect and limiting side effects such as those typically seen with nicotine. We have built an extensive patent estate covering the structure or therapeutic use of small molecules designed to regulate the central nervous system by selectively affecting specific NNR subtypes.

Our Business Strategy

Our goal is to become a leader in the discovery, development and commercialization of novel drugs that selectively target NNRs in order to treat diseases and disorders where there is significant medical need and commercial potential. To achieve this goal, we are pursuing the following strategies:

- Develop and commercialize drugs that selectively target specific NNR subtypes.
- Collaborate selectively to develop and commercialize product candidates.
- Remain at the forefront of the commercialization of NNR research.
- Identify and prioritize indications in which drugs that selectively target specific NNR subtypes can be exploited for medical benefit.
- Build a specialized sales and marketing organization.

Risks Associated with Our Business

Our business is subject to numerous risks, as more fully described in the section entitled "Risk Factors" immediately following this prospectus summary.

We have a limited operating history and have incurred substantial net losses since our incorporation in 1997. We expect to continue to incur substantial losses for the foreseeable future. Inversine is the only product that we have available for commercial sale, and it generates limited revenues. All of our other product candidates are undergoing clinical trials or are in early stages of development, and failure is common and can occur at any stage of development. In particular, we discontinued development of two product candidates because they failed to meet defined clinical endpoints in Phase II clinical trials that we completed in 2004. We had been developing one of these product candidates as a treatment for ADHD and the other as a treatment for ulcerative colitis. None of our product candidates, other than Inversine, has received regulatory approval for marketing and sale. Our ability to generate product revenue in the future will depend heavily on the successful development and commercialization of our product candidates. Even if we succeed in developing and commercializing one or more of our product candidates, we may never generate sufficient sales revenue to achieve and then sustain profitability.

The successful development and commercialization of our lead product candidate, TC-1734, will depend substantially on our recently established collaboration with AstraZeneca. AstraZeneca can terminate our collaboration agreement if it determines in its sole discretion within 15 months after the agreement becomes effective not to proceed with the further development of TC-1734 based on the results of the safety and product characterization studies that AstraZeneca will conduct at its expense for TC-1734 and all other available information with respect to TC-1734. In that event, we would be required to reimburse AstraZeneca for the amount of all research fees that it paid to us under the a4ß2 research collaboration while it conducted the studies and to pay AstraZeneca an additional $5 million as compensation for assigning to us the data and any intellectual property generated in the studies. In addition, we have the right to offer to AstraZeneca any compound that acts on any NNR other than the a4ß2 NNR that we may in the future seek to exploit for Alzheimer's disease, cognitive deficits in schizophrenia, other conditions marked by cognitive impairment or schizophrenia. However, if we do not offer the compound to AstraZeneca, we are generally not permitted to develop or commercialize the compound for any of these indications. As a result, our ability to work in these indications outside the collaboration is substantially limited during the term of the collaboration. Furthermore, the number of compounds that we are permitted to offer to AstraZeneca is limited under the agreement. We have also granted AstraZeneca rights of first negotiation for the development and commercialization of compounds for depression, anxiety and bipolar disorder.

Company History

Our history traces back to 1982 when R.J. Reynolds Tobacco Company initiated a program to study the activity and effects of nicotine in the body. We were incorporated in Delaware in 1997 as a wholly owned subsidiary of RJR and became an independent company in August 2000. Our executive offices are located at 200 East First Street, Suite 300, Winston-Salem, North Carolina 27101, and our telephone number is (336) 480-2100. Our web site is located at www.targacept.com. Information contained on our web site is not incorporated by reference into, and does not form any part of, this prospectus. We have included our website address in this document as an inactive textual reference only. Our trademarks include Targacept® and Inversine®. Other service marks, trademarks and trade names appearing in this prospectus are the property of their respective owners. Unless the context requires otherwise, references in this prospectus to the "company," "we," "us," and "our" refer to Targacept, Inc.

Table of Contents

The Offering

Common stock offered by Targacept	shares
Common stock to be outstanding after this offering	shares
Over-allotment option	shares
Use of proceeds	To fund clinical trials, preclinical testing and other research and development activities, general and administrative expenses, working capital needs and other general corporate purposes. See "Use of Proceeds."
Risk factors	You should read the "Risk Factors" section of this prospectus for a discussion of the factors to consider carefully before deciding to invest in shares of our common stock.
Proposed NASDAQ National Market symbol	TRGT

The number of shares of our common stock that will be outstanding immediately after this offering is based on 263,361 shares of common stock outstanding as of September 30, 2005 and an additional 13,832,015 shares of common stock issuable upon the conversion of all outstanding shares of our series A, series B and series C convertible preferred stock concurrently with the completion of this offering.

The number of shares of our common stock that will be outstanding immediately after this offering excludes:

- 1,622,578 shares of common stock issuable upon the exercise of options outstanding as of September 30, 2005, at a weighted average exercise price of $2.86 per share, of which options to purchase 925,079 shares were exercisable;
- 48,962 shares of common stock reserved for future grant under our 2000 equity incentive plan as of September 30, 2005; and
- 2,700,000 shares of common stock that will become reserved for future grant under our 2006 stock incentive plan concurrently with the completion of this offering.

Unless otherwise indicated, all information in this prospectus assumes:

- no exercise by the underwriters of their over-allotment option to purchase up to shares of our common stock;
- the conversion of all outstanding shares of our convertible preferred stock into 13,832,015 shares of common stock concurrently with the completion of this offering; and
- no exercise of an outstanding warrant exercisable for 215,054 shares of common stock at an exercise price of $14.63 per share that will expire if not exercised concurrently with the completion of this offering.

Table of Contents

Summary Financial Data

The following tables summarize our financial data. You should read the following summary financial data together with our financial statements and the related notes appearing at the end of this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section and other financial information included in this prospectus.

The pro forma net loss attributable to common stockholders per share information is computed using the weighted average number of common shares outstanding, after giving pro forma effect to the conversion of all outstanding shares of our convertible preferred stock into 13,832,015 shares of common stock concurrently with the completion of this offering.

	Year ended December 31,			Nine months ended September 30,	
	2002	2003	2004	2004	2005
				(unaudited)	
	(in thousands, except share and per share data)				
Statement of Operations Data:					
Net revenue	$ 2,286	$ 2,458	$ 3,738	$ 1,581	$ 941
Operating expenses:					
Research and development	16,244	18,179	22,771	17,782	18,608
General and administrative	4,135	3,600	5,163	3,764	5,255
Cost of product sales	244	743	198	28	244
Purchased in-process research and development	2,666	—	—	—	—
Total operating expenses	23,289	22,522	28,132	21,574	24,107
Loss from operations	(21,003)	(20,064)	(24,394)	(19,993)	(23,166)
Interest and dividend income	88	791	505	356	899
Interest expense	(103)	(122)	(132)	(96)	(196)
Gain (loss) on disposal of fixed assets	(54)	—	(4)	(4)	—
Net loss	(21,072)	(19,395)	(24,025)	(19,737)	(22,463)
Preferred stock accretion	(4,173)	(8,341)	(8,744)	(6,426)	(8,425)
Net loss attributable to common stockholders	$ (25,245)	$ (27,736)	$ (32,769)	$ (26,163)	$ (30,888)
Basic and diluted net loss per share applicable to common stockholders.	$ (339.63)	$ (254.33)	$ (149.48)	$ (126.18)	$ (118.30)
Shares used to compute basic and diluted net loss per share	74,332	109,053	219,213	207,345	261,094
Pro forma basic and diluted net loss per share applicable to common stockholders (unaudited)			$ (2.33)		$ (1.60)
Shares used to compute pro forma basic and diluted net loss per share (unaudited)			10,330,279		14,058,554

The pro forma balance sheet information gives effect to the conversion of all outstanding shares of our convertible preferred stock into 13,832,015 shares of common stock concurrently with the completion of this offering. The pro forma as adjusted balance sheet information gives further effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, after deducting estimated underwriting discounts and commissions and offering expenses payable by us.

	As of September 30, 2005		
	Actual	Pro forma	Pro forma as adjusted
		(unaudited) (in thousands)	
Balance Sheet Data:			
Cash, cash equivalents and short-term investments	$ 30,740	$ 30,740	
Working capital	26,974	26,974	
Total assets	34,321	34,321	
Long-term debt payable, net of current portion	1,535	1,535	
Convertible preferred stock	180,814	—	
Accumulated deficit	(155,329)	(121,636)	
Total stockholders’ equity (net capital deficiency)	(153,264)	27,550	

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below together with all of the other information contained in this prospectus before deciding to invest in our common stock. If any of these risks actually occurs, our business, business prospects, financial condition, results of operations or cash flows would likely suffer, maybe materially. This could cause the trading price of our common stock to decline, and you could lose part or all of your investment.

Risks Related to Our Financial Results and Need for Additional Financing

We have incurred losses since our inception and anticipate that we will continue to incur substantial losses for the foreseeable future. We may never achieve or sustain profitability.

We were incorporated in 1997 and operated as a wholly owned subsidiary of R.J. Reynolds Tobacco Company until August 2000. We have a limited operating history and have incurred substantial net losses since our inception. As of September 30, 2005, we had an accumulated deficit of $155.3 million. Our net loss was $19.4 million for the year ended December 31, 2003, $24.0 million for the year ended December 31, 2004 and $22.5 million for the nine months ended September 30, 2005. Our losses have resulted principally from costs incurred in connection with our research and development activities, including clinical trials, and from general and administrative expenses associated with our operations. We expect to continue to incur substantial losses for the foreseeable future. We expect our research and development expenses to increase substantially following the completion of this offering as we expand our clinical trial activity and as our product candidates advance through the development cycle. We also expect our general and administrative expenses to increase substantially as we expand our infrastructure. As a result, we will need to generate significant revenues to pay these expenses and achieve profitability.

Inversine is our only current source of product revenue. We acquired the rights to Inversine in August 2002. Sales of Inversine generated revenues of only $815,000 for the year ended December 31, 2003, $767,000 for the year ended December 31, 2004 and $504,000 for the nine months ended September 30, 2005. Inversine is approved in the United States for the management of moderately severe to severe essential hypertension, a high blood pressure disorder. However, we believe that the substantial majority of Inversine sales are derived from prescriptions written by a very limited number of physicians for the treatment of neuropsychiatric disorders, including Tourette’s syndrome, autism and bipolar disorder, in children and adolescents. If any of these physicians were to change their prescribing habits, Inversine sales would suffer. We do not expect that sales of Inversine will increase substantially in the future.

If we are unable to develop and commercialize any of our product candidates, if development is delayed or if sales revenue from any product candidate that receives marketing approval is insufficient, we may never become profitable. Even if we do become profitable, we may not be able to sustain or increase our profitability on a quarterly or annual basis.

We will require substantial additional financing and our failure to obtain additional funding when needed could force us to delay, reduce or eliminate our product development programs or commercialization efforts.

We will require substantial future capital in order to continue to conduct the research and development and clinical and regulatory activities necessary to bring our product candidates to market and to establish marketing and sales capabilities. Our future capital requirements will depend on many factors, including:

- the scope, progress, results and cost of preclinical development and laboratory testing and clinical trials;
- the costs, timing and outcomes of regulatory reviews;
- the number and characteristics of product candidates that we pursue;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property-related claims;
- the costs of establishing sales and marketing functions and of establishing arrangements for manufacturing;
- the rate of technological advancements for the indications that we target;
- our ability to establish strategic collaborations and licensing or other arrangements on terms favorable to us;
- the costs to satisfy our obligations under existing and potential future collaborations;
- the timing, receipt and amount of milestone and other payments from AstraZeneca and potential future collaborators;
- the timing, receipt and amount of sales or royalties, if any, from our potential products; and
- the extent and scope of our general and administrative expenses.

In addition, we may seek additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through collaboration and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or product candidates or grant licenses on terms that are not favorable to us.

Our current operating plan provides for us to continue, either alone or with a collaborator, to advance our product candidates through the development process. It is also our objective to continue to invest in our preclinical programs and to file at least one investigational new drug application, or IND, or foreign equivalent each year beginning in 2006. We do not expect our existing capital resources and the net proceeds from this offering to be sufficient to enable us to fund the completion of the development of any of our product candidates. We expect that our existing capital resources and the net proceeds from this offering will enable us to maintain currently planned operations through mid-2008. However, our operating plan may change as a result of many factors, including those described above, and we may need additional funds sooner than planned to meet operational needs and capital requirements for product development and commercialization.

Our collaboration agreement with AstraZeneca relating to our lead product candidate, TC-1734, provides for AstraZeneca to conduct additional safety and product characterization studies before deciding whether to proceed with planned Phase II clinical trials to evaluate the efficacy of TC-1734 in mild to moderate Alzheimer’s disease and cognitive deficits in schizophrenia.

AstraZeneca can terminate our collaboration agreement if it determines in its sole discretion within 15 months after the agreement becomes effective not to proceed with the further development of TC-1734 based on the results of these additional studies and all other available information with respect to TC-1734. In that event, we would be required to reimburse AstraZeneca for the amount of all research fees that it paid to us under the a4ß2 research collaboration that we and AstraZeneca have agreed to conduct under the agreement while AstraZeneca conducted the studies. In addition, we would be required to pay AstraZeneca $5 million as compensation for assigning to us the data and any intellectual property generated in the studies. If AstraZeneca terminates our agreement, we may need additional capital sooner than planned.

We currently have no credit facility or committed sources of capital other than from AstraZeneca for research and development expenses under our collaboration agreement, which we could be required to refund. Additional funds may not be available when we need them on terms that are acceptable to us, or at all. If adequate funds are not available on a timely basis, we may:

- terminate or delay clinical trials for one or more of our product candidates;
- delay our establishment of sales and marketing capabilities or other activities that may be necessary to commercialize our product candidates; or
- curtail significant drug development programs that are designed to identify new product candidates.

Risks Related to the Development and Regulatory Approval of Our Product Candidates

Our success depends substantially on our most advanced product candidates, which are still under development. If we are unable to bring any or all of these product candidates to market, or experience significant delays in doing so, our ability to generate product revenue and our likelihood of success will be harmed.

Upon effectiveness of our collaboration agreement, we and AstraZeneca have agreed to develop TC-1734 for Alzheimer's disease and cognitive deficits in schizophrenia. However, TC-1734 has not yet been evaluated in any clinical trial in patients suffering from Alzheimer's disease or cognitive deficits in schizophrenia. We are currently conducting a Phase II clinical trial of TC-1734 in age associated memory impairment, commonly referred to as AAMI, to further assess the effects of TC-1734 on cognition in a cognitively impaired elderly population. We are responsible for completing this trial independently. Our ability to generate product revenue in the future will depend heavily on the successful development and commercialization of TC-1734.

Inversine is our only marketed product and generates limited revenues. We are currently conducting a Phase II clinical trial of mecamylamine hydrochloride, the active ingredient in Inversine, as an add-on therapy in patients with major depressive disorder.

Mecamylamine hydrochloride and TC-1734 are our only product candidates currently in a Phase II clinical trial. We have completed a Phase I single rising dose clinical trial for TC-2696, our product candidate for the treatment of pain and are currently conducting a Phase I multiple rising dose clinical trial for TC-2696. Our other product candidates are in various stages of preclinical development.

Any of our product candidates could be unsuccessful if it:

- does not demonstrate acceptable safety and efficacy in preclinical studies or clinical trials or otherwise does not meet applicable regulatory standards for approval;
- does not offer therapeutic or other improvements over existing or future drugs used to treat the same conditions;

- is not capable of being produced in commercial quantities at acceptable costs; or
- is not accepted in the medical community and by third-party payors.

We do not expect any of our current product candidates to be commercially available for at least the next several years, if at all. If we are unable to make our product candidates commercially available, we will not generate substantial product revenues and we will not be successful.

If safety studies conducted by AstraZeneca demonstrate that TC-1734 is not safe for individuals that metabolize the drug slowly or when the primary means by which the body metabolizes TC-1734 is blocked, AstraZeneca could cease development of TC-1734 and terminate its agreement with us. Poor results from these safety studies or termination of our agreement with AstraZeneca would make it more difficult for us to advance development and obtain the regulatory approvals required to market and sell TC-1734.

Metabolism of a drug refers to a process in which a drug is broken down and then eliminated from the body. The means by which the body metabolizes a drug is referred to as the metabolic pathway. Due to genetic differences, individuals can metabolize drugs through the same metabolic pathway at different rates. For any particular metabolic pathway, an individual can be a poor, intermediate or extensive metabolizer. Drugs that are metabolized through a particular metabolic pathway may remain in the body at higher concentrations and for longer periods of time in people who are poor metabolizers than in people who are intermediate or extensive metabolizers through that metabolic pathway. As a result, a drug that is determined to be safe when metabolized efficiently by an extensive metabolizer may not be safe or may not be as safe when metabolized inefficiently by a poor metabolizer.

As discussed in greater detail below under "—Risks Related to our Dependence on Third Parties," our agreement with AstraZeneca provides for AstraZeneca to conduct additional safety and product characterization studies of TC-1734 before deciding whether to proceed with further development of TC-1734. In particular, our agreement with AstraZeneca provides that AstraZeneca will assess the safety of TC-1734 in both extensive metabolizers and poor metabolizers, as well as in combination with another drug that may block TC-1734's primary metabolic pathway. We expect AstraZeneca to conduct a small clinical trial to characterize the cardiovascular effects of TC-1734 at doses of up to 200mg in both extensive metabolizers and poor metabolizers. The highest dose at which we have assessed the safety of TC-1734 in persons over the age of 65 is 150mg, in our completed Phase II clinical trial in AAMI. In that trial, three out of eight subjects treated with 150mg of TC-1734 while fasting experienced side effects such as headache, lightheadedness, dizziness and vomiting and dropped out of the trial. However, in a Phase I clinical trial of TC-1734 that we conducted, TC-1734 was well tolerated at doses of up to 320mg in young adults. We also expect AstraZeneca to conduct a small clinical trial to characterize the cardiovascular effects of TC-1734 when administered in combination with paroxetine, a known inhibitor of a key enzyme involved in TC-1734's primary metabolic pathway.

If the safety studies to be conducted by AstraZeneca demonstrate that TC-1734 is not safe in poor metabolizers or is not safe when the primary metabolic pathway for TC-1734 is blocked, AstraZeneca could decide not to conduct a Phase II clinical trial of TC-1734 and terminate its agreement with us. If AstraZeneca terminates our agreement, it would delay our development of TC-1734. In addition, poor results from these studies would make it more likely that we would not receive the regulatory approvals required to market and sell TC-1734. Even if we were to receive the required regulatory approvals, the regulatory authorities could limit the patient population for which TC-1734 is approved to those who are extensive or intermediate metabolizers through TC-1734's primary metabolic pathway. If regulatory authorities limit the patient population for which TC-1734 is approved in this manner, it would have an adverse effect on TC-1734's commercial potential.

If the combination of TC-1734 administered together with other drugs that are commonly prescribed for Alzheimer's disease or schizophrenia is not considered to be safe, the commercial potential of TC-1734 would be adversely affected.

A drug that is generally safe when taken alone may not be safe or may not be as safe when taken together with other drugs. We expect AstraZeneca to conduct a small clinical trial of TC-1734 administered together with each of donepezil, a commonly prescribed treatment for mild to moderate Alzheimer's disease, and multiple commonly prescribed treatments for schizophrenia in healthy volunteers to evaluate the interaction of the drugs and the combined effects on metabolism and safety. If the interaction of TC-1734 and donepezil adversely affects the metabolism of TC-1734 such that TC-1734 and donepezil are determined to be unsafe together, it could limit TC-1734's commercial potential as a treatment for mild to moderate Alzheimer's disease. In addition, if the interaction of TC-1734 and any or all of the commonly prescribed treatments for schizophrenia adversely affects the metabolism of TC-1734 such that TC-1734 and any of those treatments are determined to be unsafe together, it could limit TC-1734's commercial potential as a treatment for cognitive deficits in schizophrenia. Moreover, if TC-1734 is determined not to be safe when administered together with any or all of the commonly prescribed treatments for schizophrenia, AstraZeneca could decide not to advance TC-1734 as a treatment for cognitive deficits in schizophrenia, which would limit TC-1734's overall commercial potential. Furthermore, if the interaction of TC-1734 with any of these commonly prescribed treatments adversely affects the metabolism of TC-1734, AstraZeneca could decide not to conduct any Phase II clinical trials of TC-1734 and terminate its agreement with us. If AstraZeneca terminates our agreement, it would delay our development of TC-1734.

If we do not obtain the regulatory approvals required to market and sell our product candidates, our ability to generate product revenue will be materially impaired and our business will not be successful.

The preclinical laboratory testing, development, manufacturing and clinical trials of product candidates that we develop, whether independently or in collaboration with a third party, as well as their distribution, sale and marketing, are regulated by the U.S. Food and Drug Administration, or FDA, and other federal, state and local governmental authorities in the United States and by similar agencies in other countries. We must receive regulatory approval of each product candidate before we can market and sell it. We have only limited experience in pursuing regulatory approvals. Securing FDA approval requires the submission of extensive preclinical and clinical data and information about the chemistry and manufacture of, and control procedures for, each potential product. In addition, the supporting information submitted to the FDA must establish the safety and efficacy of the product candidate for each indicated use. The marketing approval process takes many years, requires the expenditure of substantial resources, is subject to delays and can vary substantially based upon the type, complexity and novelty of the product candidates involved. In addition to the time and expense involved, the process is uncertain and we may never receive the required regulatory approvals. In addition, the FDA, the U.S. Congress and foreign regulatory authorities may from time to time change approval policies or adopt new laws or regulations, either of which could prevent or delay our receipt of required approvals. Even if we receive regulatory approval to market a particular product candidate, the approval will be subject to limitations on the indicated uses for which it may be marketed and may not permit labeling claims that are necessary or desirable for its promotion.

According to the FDA, a Phase I clinical trial program typically takes several months to complete, a Phase II clinical trial program typically takes several months to two years to complete and a Phase III clinical trial program typically takes one to four years to complete. Industry sources report that the preparation and submission of a new drug application, or NDA, which is required for regulatory approval in the United States, generally takes six months to one year to complete after completion of a pivotal clinical trial. Industry sources also report that approximately 10% to 15% of all NDAs accepted for filing by the FDA are not approved and that FDA approval, if granted, usually takes approximately one year after submission, although it may take longer if additional information is required by the FDA. In addition, the Pharmaceutical Research and Manufacturers of America reports that only one out of five product candidates that enter clinical trials will ultimately be approved by the FDA for commercial sale.

The FDA may delay, limit or deny approval of any of our product candidates for many reasons. For example:

- clinical trial results may indicate that the product candidate is not safe or effective;
- the FDA may interpret our clinical trial results to indicate that the product candidate is not safe or effective, even if we interpret the results differently; or
- the FDA may deem the processes and facilities that we, our collaborative partners or our third-party manufacturers propose to use in connection with the manufacture of the product candidate to be unacceptable.

In particular, because drugs that target NNRs are a new class of drugs, the FDA and other applicable regulatory authorities may require more preclinical or clinical data for our product candidates or more time to evaluate that data than we currently anticipate. If we obtain the requisite regulatory approval for a particular product candidate, the approval may not extend to all indications for which we have sought approval, which could limit the use of the product and adversely impact our potential revenues.

Even if the FDA approves a product candidate for marketing and sale in the United States, applicable regulatory authorities in other countries may not approve the product candidate or may subject their approval to conditions such as additional product testing or otherwise cause delays. The regulatory approval process varies among countries, but generally includes all of the risks associated with obtaining FDA approval. In addition, many countries require a separate review process prior to marketing to determine whether their respective national health insurance schemes will pay for newly approved products, as well as the price that may be charged for a product. This process will cause delays in the marketing of any of our product candidates that receives marketing approval and could adversely impact our revenues and results of operations.

If clinical trials for our product candidates are not successful, we will not obtain the regulatory approvals required to market and sell them.

To obtain the requisite regulatory approvals to market and sell any of our product candidates, we must demonstrate, through extensive preclinical studies and clinical trials, that the product candidate is safe and effective in humans. The number of clinical trials required to obtain approval varies depending on the particular product candidate, the disease or condition for which it is in development and the regulations applicable to it. Preclinical studies and clinical trials are lengthy and expensive, difficult to design and implement and subject to a historically high rate of failure. The development of each of our product candidates involves significant risks at each stage of testing. A failure of one or more of our clinical trials could occur at any stage of testing. In 2004, we completed Phase II clinical trials for product candidates that we had been developing for attention deficit hyperactivity disorder and ulcerative colitis. Because we determined that these product candidates failed to meet defined endpoints of the Phase II clinical trials, we discontinued the development of these product candidates. If we experience similar difficulties or failures in our ongoing or future clinical trials, or if we are not able to design our clinical trials with clear criteria to determine the efficacy of our product candidates, our product candidates may never be approved for sale or become commercially available.

We may not be able to obtain authority or approval from the FDA, other applicable regulatory authorities or the institutional review boards at our intended investigational sites to commence or complete our clinical trials. Before a clinical trial may commence in the United States, we must submit an IND containing preclinical studies, chemistry, manufacturing, control and other information and a study protocol to the FDA. If the FDA does not object within 30 days after submission of the IND, then the trial may commence. If commenced, we, the FDA, other applicable regulatory authorities or institutional review boards may delay, suspend or terminate clinical trials of a product candidate at any time if, among other reasons, we or they believe the subjects or patients participating in the clinical trials are being exposed to unacceptable health risks or for other reasons.

If we do not prove in clinical trials that our product candidates are safe and effective, we will not obtain marketing approvals from the FDA and other applicable regulatory authorities. In particular, one or more of our product candidates may not exhibit the expected medical benefits in humans, may cause harmful side effects or may have other unexpected characteristics that preclude regulatory approval for any or all indications of use or limit commercial use if approved. For example, in the 100mg dose group of our Phase I multiple rising dose trial of TC-2696, our product candidate for pain, we suspended further dosing after two of three volunteers discontinued participation in the trial due to dizziness, nausea and, in one case, vomiting. Both of these volunteers had received a single dose of TC-2696 prior to discontinuing participation in the trial. We did not see comparable effects at 100mg in our completed single rising dose trial of TC-2696. Based on in vitro metabolism studies of TC-2696 that we subsequently conducted, we currently believe that the different effects of 100mg in our single rising dose trial and our multiple rising dose trial may be due to genetic differences in the primary metabolic pathway of TC-2696. We have not yet determined the dose range in which positive medical effects, if any, are achieved with TC-2696. If following further evaluation we determine that the different effects observed are in fact due to the primary metabolic pathway of TC-2696, that TC-2696 is not safe in poor metabolizers or is not safe when the primary metabolic pathway for TC-2696 is blocked and that 100mg of TC-2696 is within the dose range in which positive medical effects are achieved with TC-2696, we may not receive the regulatory approvals required to market and sell TC-2696. Even if we do receive the required regulatory approvals, the regulatory authorities may limit the patient population for which TC-2696 is approved to those who are extensive or intermediate metabolizers through TC-2696’s primary metabolic pathway.

Upon effectiveness of our collaboration agreement, we and AstraZeneca have agreed to develop TC-1734 as a treatment for Alzheimer’s disease and for cognitive deficits in schizophrenia. We and AstraZeneca may also in the future develop TC-1734 as a treatment for AAMI. AAMI is a condition that is characterized by gradual memory loss or other cognitive impairment that generally occurs with normal aging. Because AAMI accompanies normal aging, is not a disease state and does not prevent a person from functioning on a daily basis, the FDA or foreign regulatory authorities may require that we establish that TC-1734 meets a higher threshold of safety than the FDA or foreign regulatory authorities would require for diseases and more severe disorders. If we or AstraZeneca is unable to demonstrate that TC-1734 meets this higher safety threshold, the FDA or foreign regulatory authorities may not grant approval to market TC-1734 for the treatment of AAMI.

Our research and preclinical programs and product candidates target diseases or disorders that are not well understood. For example, there is only limited scientific understanding of the causes of Alzheimer's disease, AAMI, schizophrenia, including cognitive deficits in schizophrenia, and depression and anxiety. In addition, there are no approved drugs that target NNRs to treat these diseases, and there is only limited scientific understanding of the relationships between these diseases and the neurological pathways targeted by our product candidates and research and preclinical programs. These uncertainties increase the risk that one or more of our clinical trials will not be successful.

If positive results of our completed clinical trials of TC-1734 in AAMI and MCI are not replicated in future clinical trials in Alzheimer's disease, cognitive deficits in schizophrenia or other indications, we will not obtain the regulatory approvals required to market and sell TC-1734.

Positive findings in preclinical studies of a product candidate may not be predictive of similar results in clinical trials in humans. In addition, positive results in early clinical trials of a product candidate may not be replicated in later clinical trials. In particular, we have completed Phase II clinical trials of TC-1734 in AAMI and mild cognitive impairment, commonly referred to as MCI. In these trials, TC-1734 demonstrated positive effects on cognition. However, because we designed the size and duration of dosing of our completed Phase II AAMI and MCI trials primarily to evaluate the safety of TC-1734, our findings in those trials on cognition may not be replicated in our ongoing Phase II AAMI trial or in future clinical trials of TC-1734 in Alzheimer's disease, cognitive deficits in schizophrenia or other indications that are designed primarily to evaluate efficacy and involve a large number of subjects and a long duration of dosing. In addition, although TC-1734 demonstrated positive effects on cognition at some dose levels with respect to some measures of cognition tested in the Phase II clinical trial in AAMI, TC-1734 did not demonstrate positive effects as to all measures at all dose levels and placebo showed superior effects to TC-1734 as to some measures at some dose levels in the trial.

Like most drugs, the active component of TC-1734 must be combined with an inactive component to form a powder, known as a salt, that is suitable for commercialization as a pharmaceutical product. We have developed a salt form of TC-1734 that is different from the salt form of TC-1734 that we used in our completed trials and that we are currently using in our ongoing Phase II trial in AAMI. We anticipate that we or AstraZeneca will use the alternate salt form of TC-1734 in the planned Phase II trials in mild to moderate Alzheimer's disease and cognitive deficits in schizophrenia and in future clinical trials of TC-1734. The results of our completed clinical trials of TC-1734 in the initial salt form may not be replicated in future clinical trials of TC-1734 in the alternate salt form.

In our completed clinical trials of TC-1734 in AAMI and MCI, we used a battery of tests developed by CDR Ltd. to assess each subject's cognitive function. We are also using the CDR test battery in our ongoing Phase II clinical trial of TC-1734 in AAMI. However, if we or AstraZeneca use an additional or a different test battery for future AAMI trials, there would be a greater risk that the results of our completed Phase I and Phase II clinical trials of TC-1734 will not be replicated in those future clinical trials and that the future trials will not provide a sufficient basis for further development or regulatory approval.

If we do not have success in our clinical trials of TC-1734 for Alzheimer's disease or cognitive deficits in schizophrenia, we will not obtain the regulatory approvals required to market TC-1734 for Alzheimer's disease or cognitive deficits in schizophrenia notwithstanding positive results in completed or future clinical trials of TC-1734 in other indications.

Upon effectiveness of our collaboration agreement, we and AstraZeneca have agreed to develop TC-1734 for Alzheimer's disease and cognitive deficits in schizophrenia. We and

AstraZeneca may also seek to develop TC-1734 for other conditions marked by various degrees of cognitive impairment, such as ADHD, AAMI or MCI. Successful results in clinical trials of TC-1734 in a condition marked by one degree of cognitive impairment may not be predictive of successful results in clinical trials of TC-1734 in a condition marked by more severe cognitive impairment or in cognitive impairment resulting from a different condition. Neither we nor AstraZeneca has conducted any clinical trial of TC-1734 in Alzheimer's disease or cognitive deficits in schizophrenia. The findings in our completed Phase II trials of TC-1734 in persons with AAMI or MCI may not be predictive of the effect of TC-1734 in Alzheimer's disease or cognitive deficits in schizophrenia.

The CDR test battery that we used previously and are currently using in our clinical trials of TC-1734 is different from the Alzheimer's Disease Assessment Scale-cognitive subscale, or ADAS-Cog, the test battery that is most often used to assess the efficacy of drugs for Alzheimer's disease. ADAS-Cog is designed to measure improvement in persons who are severely impaired and is generally less sensitive than the CDR test battery in measuring improvement in persons who are less impaired. We and AstraZeneca plan to use ADAS-Cog, and not the CDR test battery, as the primary endpoint in our clinical trials of TC-1734 in Alzheimer's disease. The findings in our completed trials as to the effect of TC-1734 on various aspects of cognition as measured by the CDR test battery may not be predictive of the effect of TC-1734 on cognition as measured by ADAS-Cog. If future clinical trials of TC-1734 in Alzheimer's disease are not successful, we and AstraZeneca will not obtain the regulatory approvals required to market TC-1734 for Alzheimer's disease.

If clinical trials for our product candidates are prolonged or delayed, we would be unable to commercialize our product candidates on a timely basis, which would require us to incur additional costs and delay our receipt of any revenues from potential product sales.

We cannot predict whether we will encounter problems with any of our completed, ongoing or planned clinical trials that will cause us or any regulatory authority to delay or suspend those clinical trials or delay the analysis of data derived from them. A number of events, including any of the following, could delay the completion of our ongoing and planned clinical trials and negatively impact our ability to obtain regulatory approval for, and to market and sell, a particular product candidate:

- conditions imposed on us by the FDA or any foreign regulatory authority regarding the scope or design of our clinical trials;
- delays in recruiting and enrolling patients or volunteers into clinical trials;
- delays in obtaining, or our inability to obtain, required approvals from institutional review boards or other reviewing entities at clinical sites selected for participation in our clinical trials;
- insufficient supply or deficient quality of our product candidates or other materials necessary to conduct our clinical trials;
- lower than anticipated retention rate of subjects and patients in clinical trials;
- negative or inconclusive results from clinical trials, or results that are inconsistent with earlier results, that necessitate additional clinical study;
- serious and unexpected drug-related side effects experienced by subjects and patients in clinical trials; or
- failure of our third-party contractors to comply with regulatory requirements or otherwise meet their contractual obligations to us in a timely manner.

Clinical trials require sufficient patient enrollment, which is a function of many factors, including the size of the patient population, the nature of the trial protocol, the proximity of patients to clinical sites, the availability of effective treatments for the relevant disease and the eligibility criteria for the clinical trial. Delays in patient enrollment can result in increased costs and longer development times. We previously experienced delays in patient enrollment for our Phase II clinical trial of TC-1734 in persons with MCI. In that trial, we limited the eligible patient population to persons whose condition was sufficiently severe to qualify for a diagnosis of MCI, but not severe enough to qualify for a diagnosis of dementia. Similarly, we expect that the eligible patient population for the Phase II clinical trial of TC-1734 for mild to moderate Alzheimer's disease to be conducted by AstraZeneca will be limited to Alzheimer's disease patients for whom the disease has not yet progressed to the severe stage. As a result of these inclusion limits, there could be delays in recruitment for this trial similar to those that we experienced in our MCI trial. In addition, this trial would require some of the Alzheimer's disease patients to be assigned randomly into a dosing group that would receive placebo instead of TC-1734. Those patients would not receive any medication for the duration of the trial. As a result, Alzheimer's disease patients or their caregivers may be unwilling or unable to give informed consent to participate in the trial, which would result in delays in patient enrollment. The failure to enroll patients in a clinical trial could delay the completion of the clinical trial beyond our current expectations. In addition, the FDA could require us and AstraZeneca to conduct clinical trials with a larger number of subjects than we have projected for any of our product candidates. We and AstraZeneca may not be able to enroll a sufficient number of patients in a timely or cost-effective manner. Furthermore, enrolled patients may drop out of clinical trials, which could impair the validity or statistical significance of those clinical trials.

Prior to commencing clinical trials in the United States, we must submit an IND to the FDA and the IND must become effective. We conducted our completed Phase I clinical trial for our product candidate TC-2696 outside the United States and we are conducting our ongoing Phase I multiple rising dose clinical trial of TC-2696 outside the United States. We have not submitted an IND to enable us to conduct clinical trials of TC-2696 in the United States.

We do not know whether our clinical trials will begin as planned, will need to be restructured or will be completed on schedule, if at all. Delays in our clinical trials will result in increased development costs for our product candidates. In addition, if our clinical trials are delayed, our competitors may be able to bring products to market before we do and the commercial viability of our product candidates could be limited.

If we are unable to successfully develop and manufacture a salt form of TC-2696 acceptable for use as a pharmaceutical product, clinical development may be delayed and we will not be able to commercialize TC-2696.

In our completed Phase I single rising dose trial of TC-2696 and in our ongoing Phase I multiple rising dose trial of TC-2696, we used a particular salt form of TC-2696 that we refer to as the hemigalactarate salt. We do not expect that the hemigalactarate salt form of TC-2696 will ultimately be viable for marketing as a pharmaceutical product because it accumulates moisture. If our ongoing Phase I multiple rising dose clinical trial of TC-2696 is successful, we plan to conduct additional work to develop a salt form of this product candidate that is acceptable for use as a pharmaceutical product. If we are unable to develop a pharmaceutically acceptable salt form of TC-2696, we may have to terminate or substantially delay development of this product candidate.

If the FDA or foreign regulatory authorities do not consider AAMI or MCI to be a clinical indication appropriate for the approval of a drug, we and AstraZeneca will not receive the regulatory approvals required to market and sell TC-1734 for AAMI or MCI.

Upon effectiveness of our collaboration agreement, we and AstraZeneca have agreed to develop TC-1734 for Alzheimer's disease and cognitive deficits in schizophrenia. In addition, we and AstraZeneca may in the future pursue development of TC-1734 for one or both of AAMI and MCI. Neither the FDA nor, to our knowledge, any foreign regulatory authority has approved a drug indicated for use in the treatment of AAMI or MCI. Furthermore, neither AAMI nor MCI is listed in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, or DSM-IV, the manual published by the American Psychiatric Association to establish diagnostic criteria. We do not know if the FDA or any foreign regulatory authority will be willing to recognize AAMI or MCI as a distinct clinical condition, or in the FDA's terminology, a clinical entity, for which approval of a drug is possible. If neither the FDA nor any foreign regulatory authority recognizes AAMI or MCI as a clinical entity, we and AstraZeneca will not obtain the regulatory approval required to market TC-1734 for AAMI or MCI even if our clinical trials show that TC-1734 is safe and provides a medical benefit for the persons treated.

When the FDA assesses whether a proposed clinical entity justifies labeling, it generally requires that the existence of the clinical entity be broadly accepted by medical experts in the relevant clinical discipline and that the clinical entity can be defined in practice. This means that the clinical entity must be able to be diagnosed using valid and reliable criteria that are widely accepted by those medical experts. The FDA imposes these requirements to assure that both the population for whom a drug is intended and the effects of the drug in that population can be adequately described in labeling for the drug. The FDA has informed us that it believes it is questionable whether AAMI satisfies these criteria. In letters that we have received from the FDA in connection with the protocol for our ongoing Phase II trial of TC-1734 for the treatment of AAMI, the FDA has informed us that, in its view, because varying methodologies and criteria have historically been used by medical experts to define AAMI, the requisite consensus in the medical community has not been established. The FDA has also informed us that it is unclear whether our Phase II clinical trial design and efficacy endpoints are appropriate for measuring the clinical effect of TC-1734 in AAMI. In particular, the FDA has informed us that it is unclear whether the power of attention factor of the CDR test battery, which we are using as one of our co-primary endpoints for our ongoing AAMI trial, is an appropriate outcome measure to use for assessing the effect of a drug on AAMI, in which the only claimed deficit is an impairment of memory. In addition, the FDA indicated that we would need to demonstrate statistically significant improvement on a global measure of overall cognitive improvement to show that the effects of TC-1734 in AAMI are clinically meaningful. If we and AstraZeneca are unable to establish to the satisfaction of the FDA or foreign regulatory authorities that AAMI can be identified using criteria that are accepted in the medical community, that both the deficit in cognitive performance associated with the condition and its subsequent improvement can be measured and that the improvement is clinically meaningful, we and AstraZeneca will not obtain the regulatory approval required to market TC-1734 for AAMI.

Our product candidates will remain subject to ongoing regulatory review even if they receive marketing approval. If we fail to comply with continuing regulations, we could lose these approvals and the sale of our products could be suspended.

Even if we receive regulatory approval to market a particular product candidate, the approval could be conditioned on us conducting additional costly post-approval studies or could limit the indicated uses included in our labeling. Moreover, the product may later cause adverse effects that limit or prevent its widespread use, force us to withdraw it from the market or impede or delay our ability to obtain regulatory approvals in additional countries. In addition, the manufacturer of the product and its facilities will continue to be subject to FDA review and periodic inspections to ensure adherence to applicable regulations. After receiving marketing approval, the manufacturing, labeling, packaging, adverse event reporting, storage, advertising, promotion and record keeping related to the product will remain subject to extensive regulatory requirements. We may be slow to adapt, or we may never adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements.

If we fail to comply with the regulatory requirements of the FDA and other applicable U.S. and foreign regulatory authorities or previously unknown problems with our products, manufacturers or manufacturing processes are discovered, we could be subject to administrative or judicially imposed sanctions, including:

- restrictions on the products, manufacturers or manufacturing processes;
- warning letters;
- civil or criminal penalties;
- fines;
- injunctions;
- product seizures or detentions;
- import bans;
- voluntary or mandatory product recalls and publicity requirements;
- suspension or withdrawal of regulatory approvals;
- total or partial suspension of production; and
- refusal to approve pending applications for marketing approval of new drugs or supplements to approved applications.

Because we have a number of compounds and are considering a variety of target indications, we may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we must focus on research programs and product candidates for the specific indications that we believe are the most promising. As a result, we may forego or delay pursuit of opportunities with other product candidates or other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Through 2004, we spent managerial and financial resources on clinical trials for two product candidates that we have ceased developing. We may in the future spend our resources on other research programs and product candidates for specific indications that ultimately do not yield any commercially viable products. Furthermore, if we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been advantageous for us to retain sole development and commercialization rights.

We may not be successful in our efforts to identify or discover additional product candidates.

A key element of our strategy is to develop and commercialize drugs that selectively target specific NNR subtypes. We seek to do so through our understanding of the role of specific NNRs in the nervous system, our scientific expertise and the use of Pentad.

Other than TC-1734, TC-2696 and mecamylamine hydrochloride, all of our product candidates are at a preclinical stage. A significant portion of the research that we are conducting involves new and unproven compounds. Research programs to identify new product candidates require substantial technical, financial and human resources. These research programs may initially show promise in identifying potential product candidates, yet fail to yield product candidates for clinical development for a number of reasons, including:

- the research methodology used may not be successful in identifying potential product candidates; or
- potential product candidates may, on further study, be shown to have harmful side effects or other characteristics that indicate that they are unlikely to be effective products.

If we are unable to develop suitable product candidates through internal research programs, we will not be able to increase our revenues in future periods, which could result in significant harm to our financial position and adversely impact our stock price. Any additional product candidates that we are able to develop through our internal research programs will require the commitment of substantial time and financial resources for further preclinical research and clinical development.

Risks Related to Our Dependence on Third Parties

The successful development and commercialization of our lead product candidate, TC-1734, depends substantially on our recently established collaboration with AstraZeneca. If AstraZeneca is unable to further develop or commercialize TC-1734, or experiences significant delays in doing so, our business will be materially harmed.

In December 2005, we entered into our collaborative research and license agreement with AstraZeneca for the development and worldwide commercialization of TC-1734 for the treatment of Alzheimer’s disease, cognitive deficits in schizophrenia and potentially other indications marked by cognitive impairment. We do not have a history of working together with AstraZeneca and cannot predict the success of the collaboration. The collaboration involves a complex allocation of rights, provides for milestone payments to us based on the achievement of specified development, regulatory and first commercial sale milestones and provides us with royalty-based revenue if TC-1734 or another product candidate is successfully commercialized. AstraZeneca has decision-making authority for most matters in our collaboration. AstraZeneca is also generally responsible for conducting and funding virtually all future development and regulatory approval activities for TC-1734 and will have significant control over the conduct and timing of development efforts with respect to TC-1734. Although we have had discussions with AstraZeneca regarding its current plans and intentions, AstraZeneca may change its development plans for TC-1734. We have little control over the amount and timing of resources that AstraZeneca devotes to the development of TC-1734. If AstraZeneca fails to devote sufficient financial and other resources to the development plan for TC-1734, the development and potential commercialization of TC-1734 would be delayed. This would result in a delay in milestone payments and, if regulatory approval to market and sell TC-1734 is obtained, royalties that we could receive on commercial sales.

If AstraZeneca terminates our collaboration agreement, or if we otherwise lose AstraZeneca as a collaborator in the development or commercialization of TC-1734, it would materially harm our business.

Our agreement with AstraZeneca provides for AstraZeneca to conduct additional safety and product characterization studies of TC-1734 before deciding whether to proceed with planned

Phase II clinical trials to evaluate the efficacy of TC-1734 in mild to moderate Alzheimer's disease and cognitive deficits in schizophrenia. These studies consist of:

- in vitro studies to assess whether TC-1734, when administered at a therapeutically-relevant dose, activates a particular protein that can activate an enzyme known as CYP1A1 that is considered by some scientists to increase susceptibility to cancer;
- a small clinical trial to characterize the cardiovascular effects of various doses of TC-1734 in persons who are extensive metabolizers and in persons who are poor metabolizers of TC-1734;
- a single-dose study in dogs to further assess TC-1734's cardiovascular effects; and
- small clinical trials to evaluate the interaction and combined effects of TC-1734 with each of paroxetine, a known inhibitor of a key enzyme involved in TC-1734's primary metabolic pathway, donepezil, a commonly prescribed treatment for mild to moderate Alzheimer's disease, and multiple commonly prescribed treatments for schizophrenia.

Upon completion of any or all of these studies, AstraZeneca has the right to terminate our agreement. In that event, we would be required to reimburse AstraZeneca for the amount of all research fees that it paid to us under the a4ß2 research collaboration that we and AstraZeneca have agreed to conduct under the agreement while AstraZeneca conducted the studies. In addition, we would be required to pay AstraZeneca $5 million as compensation for assigning to us the data and any intellectual property generated in the studies.

In a study in rats conducted by a former collaborator of ours, TC-1734 was found to activate the enzyme CYP1A1, but at a dose substantially higher than the doses at which we and AstraZeneca plan to pursue development of TC-1734 for Alzheimer's disease and cognitive deficits in schizophrenia. If AstraZeneca determines that TC-1734 also activates CYP1A1 in humans at a therapeutically relevant dose, AstraZeneca may terminate our agreement.

In addition, the study design for the single-dose cardiovascular study of TC-1734 in dogs that we expect AstraZeneca to conduct is substantially similar to a study previously conducted by a former collaborator of ours as part of the preclinical evaluation of TC-1734 in which cardiovascular effects were observed. However, we believe that the cardiovascular effects in the prior study were not related to TC-1734, but resulted from the presence of a substance that was used to facilitate the administration and delivery of TC-1734 and that is now known to cause cardiovascular effects in dogs. We do not expect that AstraZeneca will use that substance in its study. We did not observe cardiovascular effects in subsequent studies in dogs that we conducted in which we administered TC-1734 over 90 days and 180 days. If the results of the single-dose study in dogs that we expect AstraZeneca to conduct are not favorable, AstraZeneca may terminate our agreement.

Upon effectiveness of our agreement, we and AstraZeneca have agreed to initiate preclinical research designed to identify and develop additional compounds that act on the a4ß2 NNR and enhance cognitive function. The agreement provides for a four-year research term. AstraZeneca will have the right to terminate the a4ß2 research collaboration upon at least six months notice effective three years after the research term begins. AstraZeneca will have the right to terminate the collaboration agreement upon 90 days notice after the earlier of the end of the research term or four years after the research term begins.

If AstraZeneca terminates our agreement at any time, whether on the basis of any of the safety and product characterization studies of TC-1734 or for any other reason, it would delay our development of TC-1734 and materially harm our business and could accelerate our need for additional capital. In particular, we would have to fund the clinical development and commercialization of TC-1734 on our own, seek another collaborator or licensee for clinical development and commercialization or abandon the development and commercialization of TC-1734.

We will depend on collaborations with third parties for the development and commercialization of some of our product candidates. If these collaborations are not successful, we may not be able to capitalize on the market potential of these product candidates.

In addition to our collaboration with AstraZeneca, we intend to selectively enter into collaboration agreements with leading pharmaceutical and biotechnology companies where our potential collaborator has particular therapeutic expertise in a target indication or where the target indication represents a large, primary care market. We will have limited control over the amount and timing of resources that our collaborators dedicate to the development of our licensed product candidates. Our ability to generate revenues from our collaborators will depend on our collaborators' abilities to establish the safety and efficacy of our product candidates, to obtain regulatory approvals and to achieve market acceptance.

Strategic collaborations involving our product candidates, including our collaboration with AstraZeneca, pose the following risks to us:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not pursue further development and commercialization of our product candidates or may elect not to continue or renew research and development programs based on preclinical or clinical trial results, changes in their strategic focus or available funding, or external factors such as an acquisition that diverts resources or creates competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive;
- a collaborator with marketing and distribution rights to one or more products may not commit enough resources to their marketing and distribution;
- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation;
- disputes may arise between us and the collaborators that result in the delay or termination of the research, development or commercialization of our product candidates or that result in costly litigation or arbitration that diverts management attention and resources; and
- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development of the applicable product candidates.

Collaboration agreements may not lead to development of product candidates in the most efficient manner or at all. For example, a collaborative research and development agreement that we entered into with Aventis Pharma SA for the development of our compounds for the treatment or prevention of Alzheimer's disease terminated effective January 2, 2005. None of our compounds that were subject to this agreement were advanced into clinical development under the agreement.

In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators. If a present or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development program could be delayed, diminished or terminated.

If we do not establish additional collaborations, we may have to alter our development plans.

Our drug development programs and potential commercialization of our product candidates will require substantial additional cash to fund expenses. Our strategy includes selectively collaborating with leading pharmaceutical and biotechnology companies to assist us in furthering development and potential commercialization of some of our product candidates. We intend to do so especially for target indications in which our potential collaborator has particular therapeutic expertise or that involve a large, primary care market that must be served by large sales and marketing organizations.

We are entitled to offer to AstraZeneca the right to develop and commercialize any compound that acts on any NNR other than the a4ß2 NNR that we may in the future seek to exploit for Alzheimer's disease, cognitive deficits in schizophrenia, other conditions marked by cognitive impairment or schizophrenia. However, if we do not offer the compound to AstraZeneca, we are generally not permitted to develop or commercialize the compound for any of these indications. As a result, our ability to seek additional collaborations for these indications is substantially limited during the term of our collaboration with AstraZeneca. We have also granted AstraZeneca rights of first negotiation for the development and commercialization of compounds for depression, anxiety and bipolar disorder.

We face significant competition in seeking appropriate collaborators. Collaborations are complex and time-consuming to negotiate and document. We may not be able to negotiate collaborations on acceptable terms, or at all. If that were to occur, we may have to curtail the development of a particular product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of our sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we will not be able to bring our product candidates to market and generate product revenue.

If our contract manufacturers fail to devote sufficient resources to our concerns, or if their performance is substandard, our clinical trials and product introductions may be delayed or there may be a shortage of commercial supply.

Our product candidates require precise, high quality manufacturing. We have limited internal manufacturing capability. We have historically manufactured our product candidates only in small quantities for preclinical testing and have contracted with third parties to manufacture, in collaboration with us, our product candidates for clinical trials and, in the case of Inversine, for commercial sale. If any of our product candidates is approved by the FDA or by foreign regulatory authorities for marketing and sale, it will need to be manufactured in substantially larger, commercial quantities. Our experience in the manufacture of drugs in commercial quantities is limited to our contractual arrangements with third parties to manufacture Inversine and its active ingredient.

We currently rely on various third-party contract manufacturers, including Siegfried Ltd., for our product candidates and we intend to continue to rely on third-party manufacturers to supply, store and distribute our product candidates for our clinical trials and to manufacture commercial supplies of any product candidate that is approved for sale. Our reliance on third-party manufacturers will expose us to risks that could delay or prevent the initiation or completion of our clinical trials, the submission of applications for regulatory approvals, the approval of our products by the FDA or the commercialization of our products or result in higher costs or lost product revenues. In particular, contract manufacturers:

- could encounter difficulties in achieving volume production, quality control and quality assurance and suffer shortages of qualified personnel, which could result in their inability to manufacture sufficient quantities of drugs to meet our clinical schedules or to commercialize our product candidates;
- could terminate or choose not to renew the manufacturing agreement, based on their own business priorities, at a time that is costly or inconvenient for us;
- could fail to establish and follow FDA-mandated current good manufacturing practices, or cGMPs, required for FDA approval of our product candidates or fail to document their adherence to cGMPs, either of which could lead to significant delays in the availability of material for clinical study and delay or prevent filing or approval of marketing applications for our product candidates; and
- could breach, or fail to perform as agreed under, the manufacturing agreement.

We expect to rely initially on a single contract manufacturer for each of our product candidates. Currently, we have separate arrangements with third-party manufacturers, each of which is a sole supplier to us, for mecamylamine hydrochloride, the active ingredient of Inversine, and for the finished tablets of Inversine. Changing these or any manufacturer that we subsequently engage for a particular product or product candidate may be difficult, as the number of potential manufacturers is limited and we will have to compete with third parties for access to those manufacturing facilities. cGMP manufacturing processes and procedures typically must be reviewed and approved by the FDA and changing manufacturers may require re-validation of any new facility for cGMP compliance, which would likely be costly and time-consuming. We may not be able to engage replacement manufacturers on acceptable terms quickly or at all. In addition, our contract manufacturers located in foreign countries may be subject to import limitations or bans. As a result, if any of our contract manufacturers is unable, for whatever reason, to supply the contracted amounts of Inversine or any other product that we successfully bring to market, a shortage would result which would have a negative impact on our revenues.

Drug manufacturers are subject to ongoing periodic unannounced inspection by the FDA, the United States Drug Enforcement Agency and corresponding state and foreign agencies to ensure strict compliance with cGMPs, other government regulations and corresponding foreign standards. While we are obligated to audit the performance of third-party contractors, we do not have control over our third-party manufacturers' compliance with these regulations and standards. Failure by our third-party manufacturers or us to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, failure of the government to grant pre-market approval of drugs, delays, suspension or withdrawal of approvals, seizures or recalls of product, operating restrictions and criminal prosecutions.

If third parties on which we rely for clinical trials do not perform as contractually required or as we expect, we may not be able to obtain regulatory approval for or commercialize our product candidates.

We do not have the ability to independently conduct the clinical trials required to obtain regulatory approval for our product candidates. We depend on independent clinical investigators and, in some cases, contract research organizations and other third-party service providers to conduct the clinical trials of our product candidates and expect to continue to do so. We rely heavily on these parties for successful execution of our clinical trials, but we do not control many aspects of their activities. Nonetheless, we are responsible for confirming that each of our clinical trials is conducted in accordance with its general investigational plan and protocol. Moreover, the FDA requires us to comply with regulations and standards, commonly referred to as good clinical practices, for conducting and recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the trial participants are adequately protected. Our reliance on third parties that we do not control does not relieve us of these responsibilities and requirements. Third parties may not complete activities on schedule or may not conduct our clinical trials in accordance with regulatory requirements or the respective trial plans and protocols. The failure of these third parties to carry out their obligations could delay or prevent the development, approval and commercialization of our product candidates or result in enforcement action against us.

Risks Related to Our Intellectual Property

If we are unable to protect our intellectual property effectively, our competitors may develop and market similar products and the value of our technology and our ability to compete would be damaged.

Our continued success depends significantly on our ability to obtain and maintain meaningful intellectual property protection for our product candidates, technology and know-how. We generally seek to protect our compounds and technologies by, among other methods, filing U.S. and foreign patent applications related to our proprietary technology that is important to the development of our business. We file patent applications directed to our product candidates in an effort to establish intellectual property positions regarding new chemical entities and uses in the treatment of disease.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. Our ability to maintain and solidify our proprietary position for our technology will depend on our success in obtaining effective patent claims and enforcing claims that are granted. We do not know whether any of our patent applications or those patent applications that we license will result in the issuance of any patents. Moreover, our issued patents and those that may issue in the future, or those licensed to us, may be challenged, invalidated, rendered unenforceable or circumvented, any of which could limit our ability to stop competitors from marketing related products. In addition, the rights granted under any issued patents may not provide us with competitive advantages against competitors with similar compounds or technologies. Furthermore, our competitors may independently develop similar technologies in a manner that does not infringe our patents or other intellectual property.

Although we own or otherwise have rights to a number of patents, these patents may not effectively exclude competitors from engaging in activities that compete with us. Furthermore, the issuance of a patent is not conclusive as to its validity or enforceability, and third parties may challenge the validity or enforceability of our patents. Because patent applications in the United States and many foreign countries are confidential for a period of time after filing, and because publications of discoveries in the scientific literature often lag behind actual discoveries, we cannot be certain that we were the first to make the inventions claimed in our issued U.S. patents or pending patent applications, or that we were the first to file for protection of the inventions set forth in the foreign patents or patent applications. It is possible that a competitor may successfully challenge our patents or that challenges will result in the elimination or narrowing of patent claims and, therefore, reduce our patent protection.

Because of the extensive time required for development, testing and regulatory review of a new drug, it is possible that any related patent may expire before any of our product candidates can be commercialized or remain in force for only a short period following commercialization. In either case, this would reduce any advantages of the patent. The patent laws of various foreign countries in which we intend to compete may not protect our intellectual property to the same extent as the laws of the United States. Changes in either patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection.

If we are unable to protect the confidentiality of our proprietary information and know-how, the commercial value of our technology and product candidates could be reduced.

In addition to patents, we rely on protection of trade secrets, know-how and confidential and proprietary information to maintain our competitive position. To maintain the confidentiality of trade secrets and proprietary information, we generally enter into confidentiality agreements with our employees, consultants, contractors and collaborative partners upon the commencement of our relationship with them. These agreements typically require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. However, we may not obtain these agreements in all circumstances, and individuals with whom we have these agreements may not comply with their terms. Even if obtained, these agreements may not provide meaningful protection for our trade secrets or other proprietary information or an adequate remedy in the event of their unauthorized use or disclosure. The loss or exposure of our trade secrets or other proprietary information could impair our competitive position.

We also typically enter into agreements with employees that provide inventions conceived by them in the course of rendering services to us are our exclusive property and, where appropriate, we enter into similar agreements with consultants and contractors. To the extent that our employees, consultants or contractors use technology or know-how owned by others in their work for us, disputes may arise as to the rights in related inventions.

If we fail to comply with our obligations in our intellectual property licenses with third parties, we could lose license rights that are important to our business.

We are a party to various license agreements. In particular, we license patent rights for a method of use of our product candidate for pain, TC-2696, and two of our product candidates for depression, mecamylamine hydrochloride and one of its molecular components, TC-5214. We may enter into additional licenses in the future. Our existing licenses impose, and we expect future licenses will impose, various diligence, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with these obligations, the licensor may have the right to terminate the license, in which event we might not be able to market any product that is covered by the licensed patents.

Our patent protection for any particular compound may be limited to a particular method of use or indication such that, if a third party were to obtain approval of the compound for use in another indication, we could be subject to competition arising from off-label use.

Although we generally seek the broadest patent protection available for our proprietary compounds, we may not be able to obtain patent protection for the actual composition of any particular compound and may be limited to protecting a new method of use for the compound or otherwise restricted in our ability to prevent others from exploiting the compound. For example, we currently rely on method of use patent coverage in the United States for mecamylamine hydrochloride and TC-5214. Although we are pursuing patent protection for the composition of TC-5214 as a pharmaceutical product, the likelihood that we will obtain that patent protection is uncertain. If we are unable to obtain patent protection for the actual composition of any compound that we seek to develop and commercialize and must rely on method of use patent coverage, we would likely be unable to prevent others from manufacturing or marketing that compound for any use that is not protected by our patent rights. If a third party were to receive marketing approval for the compound for another use, physicians could nevertheless prescribe it for indications that are not described in the product's labeling or approved by the FDA or other regulatory authorities. Even if we have patent protection for the prescribed indication, as a practical matter, we would have little recourse as a result of this off-label use. In that event, our revenues from the commercialization of the compound would likely be adversely affected.

We may be involved in lawsuits to protect or enforce our patents that could be expensive and time-consuming.

We may initiate patent litigation against third parties to protect or enforce our patent rights and we may be similarly sued by third parties. We may also become subject to interference or opposition proceedings conducted in the patent and trademark offices of various countries to determine our entitlement to patents. The defense and prosecution of intellectual property suits, interference proceedings and related legal and administrative proceedings, if necessary, would be costly and divert our technical and management personnel from conducting our business. Moreover, we may not prevail in any of these suits. An adverse determination of any litigation or proceeding could put our patents at risk of being invalidated or narrowly interpreted and our patent applications at risk of not being issued and could prevent us from protecting our rights, particularly in countries where the laws may not protect such rights as fully as in the United States.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that disclosure of some of our confidential information could be compelled and the information compromised. In addition, during the course of this kind of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments that, if perceived as negative by securities analysts or investors, could have a substantial adverse effect on the trading price of our common stock.

Claims by third parties that we infringe their proprietary rights may result in liability for damages or prevent or delay our development and commercialization efforts.

Our success depends in part on avoiding the infringement of other parties' patents and proprietary rights. Patents may issue from patent applications of which we are unaware, and avoiding patent infringement may be difficult. We may infringe or it may be alleged that we infringe third-party patents. If a third party were to file a patent infringement suit against us, we could be forced to stop or delay research, development, manufacturing or sales of any infringing product in the country or countries covered by the patent infringed, unless we can obtain a license from the patent holder. Any necessary license may not be available on acceptable terms or at all, particularly if the third party is developing or marketing a product competitive with the infringing product. Even if we are able to obtain a license, the rights may be nonexclusive, which would give our competitors access to the same intellectual property.

We also may be required to pay substantial damages to the patent holder in the event of an infringement. These damages could in some circumstances be triple the actual damages the patent holder incurs. If we have supplied infringing products to third parties for marketing or have licensed third parties to manufacture, use or market infringing products, we may be obligated to indemnify these third parties for any damages they may be required to pay to the patent holder and for any losses they may sustain themselves as a result.

Any successful infringement action brought against us may also adversely affect marketing of the infringing product in other markets not covered by the infringement action, as well as our marketing of other products based on similar technology. Furthermore, we may suffer adverse consequences from a successful infringement action against us even if the action is subsequently reversed on appeal, nullified through another action or resolved by settlement with the patent holder. The damages or other remedies awarded, if any, may be significant. As a result, any infringement action against us would likely delay the regulatory approval process, harm our competitive position, be very costly and require significant time and attention of our key management and technical personnel.

Risks Related to Commercialization

Even if approved for marketing, our product candidates may not gain market acceptance and may fail to generate significant revenues.

The commercial success of any of our product candidates for which we may obtain marketing approval from the FDA or other regulatory authorities will depend upon their acceptance by the medical community and third-party payors as clinically useful, cost-effective and safe. Many of the product candidates that we are developing are based upon technologies or methods of treatment that are relatively new and unproven. As a result, it may be more difficult for us to achieve market acceptance of our products.

The degree of market acceptance of any drug depends on a number of factors, such as:

- its demonstration of efficacy and safety in clinical trials;
- its superior efficacy as compared to alternative treatment methods and its side effect profile;
- its cost-effectiveness and the availability of insurance or other third-party reimbursement;
- its convenience and ease of administration;
- the timing of its market entry relative to competitive treatments;
- the extent and success of marketing and sales efforts; and
- the product labeling or product insert required by the FDA or regulatory authorities in other countries.

In addition, perceptions about the relationship or similarity between our product candidates and nicotine could limit their market potential. Our product candidates derive their medical effects by interacting with NNRs. Nicotine, which can have significantly negative health effects, also interacts with NNRs. Accordingly, our product candidates may be perceived by some to be nicotine or to be closely related to nicotine, particularly in light of the shared derivative names, “nicotine” and neuronal “nicotinic” receptors, and the fact that our company was launched originally as a research group within, and then as a subsidiary of, R.J. Reynolds Tobacco Company. This potential perception could result in a reluctance by patients to take, or by physicians to prescribe, any of our product candidates that receives marketing approval, which would affect our revenues.

We currently have limited sales, marketing and distribution experience and no internal sales or distribution capabilities. If we are unable to enter into collaborations or other arrangements with third parties to market and sell our product candidates or to develop our own internal marketing capability, we may not be successful in commercializing our products.

We currently have limited sales, marketing and distribution experience. Our experience is limited to a contractual arrangement with a third party to distribute Inversine, which we acquired in 2002 and which generates only limited sales. We currently have no internal sales or distribution capabilities. Although we intend to build an internal sales force and expand our marketing capabilities in areas where specialists heavily influence our target markets, such as neurology and psychiatry, we also intend to seek to further augment our sales, marketing and distribution capabilities through arrangements with third parties. In particular, our strategy includes selectively entering into collaborations and other strategic alliances with respect to product candidates for disease indications with sales and distribution characteristics requiring a large sales force. There are risks involved with establishing our own sales force and marketing and distribution capabilities, as well as in entering into arrangements with third parties to perform these services. Developing our own sales force will be expensive and time-consuming and could delay any product launch. We may not be successful in entering into arrangements with third parties on terms that are favorable to us or at all. Also, we would have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell, market or distribute our products effectively. If we do not establish sales and distribution capabilities successfully, either on our own or in collaboration with third parties, we may not successfully commercialize our products.

Unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives applicable to our product candidates could limit our potential product revenue.

The regulations governing drug pricing and reimbursement vary widely from country to country. Some countries require approval of the sale price of a drug before it can be marketed and, in many of these countries, the pricing review period begins only after approval is granted. In some countries, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. Although we monitor these regulations, our product candidates are currently in the development stage and we will not be able to assess the impact of price regulations for at least several years. As a result, we may obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay the commercial launch of the product and may negatively impact the revenues we are able to derive from sales in that country.

Successful commercialization of our products will also depend in part on the extent to which coverage and adequate payment for our products will be available from government health administration authorities, private health insurers and other third-party payors. If we succeed in bringing a product candidate to the market, it may not be considered cost-effective and reimbursement to the patient may not be available or sufficient to allow us to sell it at a satisfactory price. Because our product candidates are in the development stage, we are unable at this time to determine their cost-effectiveness. We may need to conduct expensive studies in order to demonstrate cost-effectiveness. Moreover, third-party payors frequently require that drug companies provide them with predetermined discounts from list prices and are increasingly challenging the prices charged for medical products. Because our product candidates are in the development stage, we do not know the level of reimbursement, if any, we will receive for any products that we are able to successfully develop. If the reimbursement for any of our product candidates is inadequate in light of our development and other costs, our ability to achieve profitability could be affected.

We believe that the efforts of governments and third-party payors to contain or reduce the cost of healthcare will continue to affect the business and financial condition of pharmaceutical and biopharmaceutical companies. A number of legislative and regulatory proposals to change the healthcare system in the United States and other major healthcare markets have been proposed and adopted in recent years. For example, the U.S. Congress has enacted a limited prescription drug benefit for Medicare recipients as part of the Medicare Prescription Drug, Improvement and Modernization Act of 2003. While the program established by this statute may increase demand for any products that we are able to successfully develop, if we participate in this program, our prices will be negotiated with drug procurement organizations for Medicare beneficiaries and are likely to be lower than prices we might otherwise obtain. If successfully developed, TC-1734, our product candidate for Alzheimer's disease, cognitive deficits in schizophrenia and other conditions marked by cognitive impairment, could be particularly affected by this law because Alzheimer's disease is a disease that affects the elderly. Non-Medicare third-party drug procurement organizations may also base the price they are willing to pay on the rate paid by drug procurement organizations for Medicare beneficiaries. In addition, ongoing initiatives in the United States have and will continue to increase pressure on drug pricing. The announcement or adoption of any such initiative could have an adverse effect on potential revenues from any product candidate that we may successfully develop.

If our competitors develop and market drugs that are less expensive, more effective or safer than ours, if they develop and market products faster than we do, or if they have better sales and marketing capabilities than we do, any products we are able to commercialize may not generate initial or ongoing revenues.

The development and commercialization of new drugs is highly competitive. Our business is characterized by extensive research efforts and rapid developments. We expect intense competition in our target markets as new products and advanced technologies become available. Our competitors include large pharmaceutical, biotechnology and other companies and research institutions, many of which have greater financial, technical and other resources and personnel and more experience in research, clinical development, regulatory and drug commercialization than we have. Our competitors may:

- develop products that are more effective, safer, more convenient or less costly than our product candidates;
- obtain FDA or other regulatory approval for their products more rapidly than we do;
- adapt more quickly to new technologies and scientific advances;
- initiate or withstand substantial price competition more successfully than we can;
- have greater success in recruiting skilled scientific workers from the limited pool of available talent;
- obtain more effective intellectual property protection than we have;
- negotiate third-party licensing and collaboration arrangements more effectively than we do; and
- take advantage of acquisition or other opportunities more readily than we do.

Competitive products may render our product candidates obsolete or noncompetitive before we can recover our development or commercialization expenses.

We also face substantial competition from therapies designed to target NNRs. We believe that several prominent pharmaceutical companies have product candidates that target NNRs in development, including Pfizer, with a compound for which it has filed an NDA for smoking cessation, Sanofi-Aventis, with a compound that has completed a Phase II clinical trial for smoking cessation, and Abbott Laboratories, with one compound in Phase I for pain and another in Phase II for Alzheimer's disease, ADHD and schizophrenia. We expect that we will face increased competition in the future if therapies that target NNRs are further validated and companies initiate or expand programs focused on NNRs, whether independently or by collaboration or acquisition.

Any products that we are able to successfully develop and commercialize in the future could be subject to competition from lower priced generic drugs. The manufacturer of a generic product could challenge our patents as invalid or not infringed and subject us to expensive litigation. We do not know if we would prevail in litigation and succeed in keeping the generic product out of the market until our patent protection expires.

If we successfully develop and obtain approval for our product candidates, we will face competition based on the safety and effectiveness of our products, the timing and scope of regulatory approvals, the availability and cost of supply, marketing and sales capabilities, reimbursement coverage, price, patent position and other factors. Our competitors may develop or commercialize more effective or more affordable products, or obtain more effective patent protection, than we do. Accordingly, our competitors may commercialize products more rapidly or effectively than we do.

If approved, our product candidates will compete for a share of the existing market with numerous approved products. There is currently no approved product for cognitive deficits in schizophrenia. We believe that the primary competitive products for use in indications that we are currently targeting include:

- for mild to moderate Alzheimer's disease, acetylcholinesterase inhibitors such as Aricept from Pfizer/Eisai, Reminyl from Johnson & Johnson and Exelon from Novartis and for moderate to severe Alzheimer's disease, Namenda from Forest Laboratories, which acts by regulating the neurotransmitter glutamate;
- for pain, non-steroidal anti-inflammatory drugs such as Celebrex from Pfizer and opioids such as OxyContin from Purdue Pharma;
- for depression, selective serotonin reuptake inhibitors such as Prozac from Eli Lilly, Paxil from GlaxoSmithKline, Zoloft from Pfizer, Celexa and Lexapro from Forest Laboratories and the dual uptake inhibitor Effexor from Wyeth;
- for schizophrenia, anti-psychotics such as Seroquel from AstraZeneca, Zyprexa from Eli Lilly, Risperdal from Johnson & Johnson, Geodon from Pfizer and Abilify from Bristol-Myers Squibb; and
- for smoking cessation, Zyban from GlaxoSmithKline.

We may have substantial exposure to product liability claims and may not have adequate insurance to pay them.

We face an inherent business risk of exposure to product liability claims if the use of our products is alleged to have resulted in harm to others. This risk exists for product candidates in clinical trials, whether or not the product candidate is subsequently approved for commercial sale, as well as for products in commercial distribution. Any product liability claim arising in the future against us or any third party that we have agreed to indemnify, regardless of its merit or eventual adjudication, could be costly and significantly divert management's attention from conducting our business or adversely affect our reputation and the demand for our products.

We have secured product liability insurance coverage with limits of $8 million per occurrence and $8 million in the aggregate. Our current insurance coverage may not reimburse us or may not be sufficient to reimburse us for any expenses or losses we may incur. We intend to expand our coverage with respect to any products for which we obtain marketing approval. However, additional insurance may not be available to cover our potential liabilities fully or may be prohibitively expensive. In addition, some potential product liability claims may be excluded from coverage under the terms of the policy. Our inability to obtain adequate insurance coverage at an acceptable cost could prevent or impede the commercialization of our product candidates.

Our business activities involve hazardous materials, which could subject us to significant liability.

Our research and development activities involve, and any future manufacturing processes that we conduct may involve, the use of hazardous materials, including hazardous chemicals and radioactive materials. Accordingly, we are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these materials. We incur significant costs to comply with these laws and regulations. Moreover, despite precautionary procedures that we implement, we cannot eliminate the risk of accidental contamination or injury from these materials. In the event of an accident or environmental discharge, we may be held liable for any resulting damages. We do not carry insurance against the risk of contamination or injury from hazardous materials.

If our promotional activities fail to comply with the regulations and guidelines of the FDA and other applicable regulatory authorities, we may be subject to warnings or enforcement actions that could harm our business.

Physicians may prescribe drugs for uses that are not described in the product's labeling or for uses that differ from those tested in clinical studies and approved by the FDA or similar regulatory authorities in other countries. Regulatory authorities generally do not regulate the behavior of physicians in their choice of treatments. Regulatory authorities do, however, restrict communications on the subject of off-label use. Companies cannot actively promote approved drugs for off-label uses but, in some countries outside of the European Union, they may under specified conditions disseminate articles published in peer-reviewed journals that discuss off-label uses of approved products to physicians. To the extent allowed, we may in the future disseminate peer-reviewed articles on our products to physicians. We do not currently promote Inversine for off-label use in the treatment of any neuropsychiatric disorder. However, if we undertake any promotional activities in the future for Inversine or any other product candidate that we are able to commercialize and our activities fail to comply with these regulations or guidelines, we may be subject to warnings from, or enforcement action by, these authorities.

Risks Related to Employees and Managing Growth

If we lose our key personnel or are unable to attract and retain additional skilled personnel, we may be unable to successfully develop and commercialize our product candidates or effectively compete in our industry.

Our performance depends substantially on the performance of our senior management and key scientific, technical and managerial personnel, including our Chief Executive Officer and President, J. Donald deBethizy, and our Vice President, Clinical Development and Regulatory Affairs, Geoffrey C. Dunbar. Our executive officers, including these individuals, can terminate their employment agreements with us at any time. The loss of the services of any of our executive officers may significantly delay or prevent the achievement of product research and development and other business objectives. We maintain key man life insurance policies on Dr. deBethizy and Dr. Dunbar, among other executive officers. We also rely on consultants and advisors to assist us in formulating our research and development strategy. All of our consultants and advisors are either self-employed or employed by other organizations, and they may have other commitments, including consulting or advisory contracts with other organizations, that may affect their ability to contribute to us.

Our ability to operate successfully and manage our potential future growth will depend on our ability to identify, recruit and retain additional qualified scientific, technical, financial and managerial personnel. There is currently a shortage of skilled executives in our industry, and we face intense competition for such personnel. We may not be able to continue to attract and retain personnel with the advanced qualifications necessary for the growth of our business.

We may encounter difficulties in managing our growth, which could increase our losses.

We expect the number of our employees and the scope of our operations to grow following the completion of this offering. Continued growth may place a significant strain on our managerial, operational and financial resources, in particular as we expand our focus beyond drug discovery and development to commercialization. To manage our anticipated growth, we must continue to implement and improve our managerial, operational and financial systems and controls and reporting processes and procedures, to expand our facilities and to continue to recruit and train additional qualified personnel. We may not be able to manage our growth effectively. Moreover, we may discover deficiencies in existing systems and controls that could expose us to an increased risk of incurring financial or accounting irregularities or fraud.

Risks Related to Our Common Stock and this Offering

The market price of our common stock may be highly volatile. You may not be able to resell your shares at or above the initial public offering price.

There has been no public market for our common stock prior to this offering, and it is possible that no active trading market for our common stock will develop or continue following this offering. You may not be able to sell your shares quickly or at the market price if trading in our common stock is not active. The initial public offering price for the shares will be determined by negotiation with representatives of the underwriters and may not be indicative of prices that will prevail in the trading market. Please see “Underwriters” for more information regarding our arrangements with the underwriters and the factors to be considered in setting the initial public offering price.

We expect that the trading price of our common stock is likely to be highly volatile in response to factors that are beyond our control. The stock market in general has previously experienced extreme price and volume fluctuations. The market prices of securities of pharmaceutical and biotechnology companies have been extremely volatile and have experienced fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. These broad market fluctuations could result in extreme fluctuations in the price of our common stock, which could cause a decline in the value of your shares.

If you purchase shares of our common stock in this offering, you will experience immediate and substantial dilution of your investment.

The offering price of our common stock will be substantially higher than the net tangible book value per share of our existing capital stock as of September 30, 2005. As a result, based on an assumed initial public offering price of $ per share, purchasers of our common stock in this offering will incur immediate and substantial dilution of $ per share, representing the difference between our pro forma net tangible book value per share after giving effect to this offering and the assumed initial public offering price, and will incur $ additional dilution if outstanding stock options and warrants with exercise prices below the public offering price are exercised. See “Dilution” for a more detailed discussion of the dilution new investors will incur in this offering.

If our operating results fluctuate significantly, our stock price may decline and result in losses to you.

Our operating results are likely to fluctuate significantly from quarter to quarter and year to year. These fluctuations could cause our stock price to decline. Some of the factors that could cause our operating results to fluctuate include:

- our inability, or the inability of AstraZeneca or any of our potential future collaborators, to successfully complete preclinical studies and clinical trials in a timely manner or at all, resulting in a delay in receiving, or a failure to receive, the required regulatory approvals to commercialize our product candidates;
- the timing of regulatory approvals or other regulatory actions;
- general and industry-specific economic conditions that may affect the research and development expenditures of AstraZeneca or any of our potential future collaborators;
- the timing of receipt of milestone payments from AstraZeneca or any of our potential future collaborators; and
- the expiration or termination of agreements with AstraZeneca or any of our potential future collaborators or the execution of new agreements.

Due to fluctuations in our operating results, a period-to-period comparison of our results of operations may not be a good indication of our future performance. In any particular quarter or quarters, our operating results could be below the expectations of securities analysts or investors and our stock price could decline.

If our existing stockholders sell a substantial number of shares of our common stock in the public market, our stock price may decline.

Sales of a substantial number of shares of our common stock in the public market following this offering could cause the market price to decline. Such sales also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate. After this offering, we will have shares of common stock outstanding based on the number of shares outstanding as of September 30, 2005. If there are more shares of our common stock offered for sale than buyers are willing to purchase, the market price of our common stock may decline to a market price at which buyers are willing to purchase the offered shares and sellers remain willing to sell the shares. The number of shares of our common stock available for sale in the public market is limited by restrictions under federal securities laws and under lock-up agreements that substantially all of our current stockholders have entered into with the underwriters. Except in limited circumstances, these lock-up agreements restrict our stockholders from selling or otherwise disposing of their shares for a period of 180 days after the date of this prospectus, subject to a possible extension, without the prior written consent of Deutsche Bank Securities Inc. on behalf of the underwriters. However, Deutsche Bank Securities may, in its sole discretion, release all or any portion of the common stock from the restrictions of the lock-up agreements. Deutsche Bank Securities does not have any pre-established conditions to waiving the terms of the lock-up agreements. Any determination to release any shares subject to the lock-up agreements would be based on a number of factors at the time of determination, including but not necessarily limited to the market price of the common stock, the liquidity of the trading market for the common stock, general market conditions, the number of shares proposed to be sold and the timing, purpose and terms of the proposed sale.

Additionally, of the 1,622,578 shares of our common stock that may be issued upon the exercise of options outstanding as of September 30, 2005, approximately shares will be vested and eligible for sale 180 days after the date of this prospectus. For a further description of the eligibility of shares for sale into the public market following the offering, see “Shares Eligible for Future Sale.” In the future, we may issue additional shares to our employees, directors or consultants, in connection with corporate alliances or acquisitions or to raise capital. Accordingly, sales of a substantial number of shares of our common stock in the public market could occur at any time.

Management may invest or spend the proceeds of this offering in ways in which you may not agree or in ways that may not yield a favorable return to our stockholders.

Management will retain broad discretion over the use of the net proceeds from this offering. Stockholders may not agree with such uses, and our use of the proceeds may not yield a significant return or any return at all for our stockholders. We intend to use the proceeds from this offering for research and development and other general corporate purposes. Because of the number and variability of factors that will determine our use of the proceeds from this offering, their ultimate use may vary substantially from their currently intended use.

Concentration of ownership among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Following the completion of this offering, our executive officers, directors and their affiliates will beneficially own or control approximately % of the outstanding shares of our common stock. Accordingly, our current executive officers, directors and their affiliates will have substantial control over the outcome of corporate actions requiring stockholder approval, including the election of directors, any merger, consolidation or sale of all or substantially all of our assets or any other significant corporate transactions, as well as our management and affairs. The concentration of ownership may also delay or prevent a change of control of us at a premium price if these stockholders oppose it, even if it would benefit our other stockholders.

Provisions of our charter, bylaws and Delaware law may make an acquisition of us or a change in our management more difficult.

Provisions of our certificate of incorporation and bylaws that will be in effect upon the completion of this offering could discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. These provisions also could limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. Stockholders who wish to participate in these transactions may not have the opportunity to do so. Furthermore, these provisions could prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions:

- allow the authorized number of directors to be changed only by resolution of our board of directors;
- establish a classified board of directors, providing that not all members of the board be elected at one time;

- authorize our board of directors to issue without stockholder approval blank check preferred stock that, if issued, could operate as a "poison pill" to dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that is not approved by our board of directors;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit stockholder action by written consent;
- establish advance notice requirements for stockholder nominations to our board of directors or for stockholder proposals that can be acted on at stockholder meetings;
- limit who may call stockholder meetings; and
- require the approval of the holders of 66 $^{2}/_{3}$% of the outstanding shares of our capital stock entitled to vote in order to amend certain provisions of our certificate of incorporation and bylaws.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which may, unless certain criteria are met, prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a prescribed period of time.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements under “Prospectus Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Business” and elsewhere in this prospectus constitute forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. While we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we caution you that these statements are based on a combination of facts and factors currently known by us and projections of the future, about which we cannot be certain. Many important factors affect our ability to achieve our objectives, including the following:

- the success of our collaboration with AstraZeneca;
- the size and growth potential of the potential markets for our product candidates and our ability to serve those markets;
- the rate and degree of market acceptance of our product candidates;
- our plans to research, develop and commercialize our product candidates;
- the success of our clinical trials;
- the success of non-clinical studies conducted to further characterize our clinical stage product candidates;
- our ability to obtain and maintain regulatory approval for our product candidates;
- our use of the proceeds from this offering;
- the accuracy of our estimates regarding expenses, future revenues, capital requirements and needs for additional financing, and our ability to obtain additional financing;
- our ability to attract and to establish collaborations with pharmaceutical and biotechnology companies with development, regulatory and commercialization expertise;
- our ability to obtain and maintain intellectual property protection for our product candidates;
- the successful development of our marketing capabilities;
- the success of competing therapies that are or become available; and
- the performance of third-party manufacturers with which we contract to provide a supply of our product candidates.

In addition, you should refer to the “Risk Factors” section of this prospectus for a discussion of other important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. The Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act of 1933 do not protect any forward-looking statements that we make in connection with this offering.

You should read this prospectus completely. In some cases, you can identify forward-looking statements by the following words: “may,” “will,” “could,” “would,” “should,” “expect,” “intend,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue,” “ongoing” or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. We may not update these forward-looking statements even though our situation may change in the future. We qualify all the forward-looking statements contained in this prospectus by the foregoing cautionary statements.

USE OF PROCEEDS

We estimate that our net proceeds from the sale of shares of our common stock in this offering will be approximately $ million, or approximately $ million if the underwriters exercise their over-allotment option in full, assuming an initial public offering price of $ per share and after deducting estimated underwriting discounts and commissions and offering expenses payable by us.

We estimate that we will use:

- approximately $ million of these net proceeds to complete our ongoing Phase II clinical trial of mecamylamine hydrochloride as an add-on therapy in patients with major depressive disorder and to conduct additional development of mecamylamine hydrochloride;
- approximately $ million of these net proceeds to complete our ongoing Phase I clinical trial and to conduct a Phase II clinical trial of TC-2696, our product candidate for acute post-operative pain;
- approximately $ million of these net proceeds to conduct the additional preclinical safety studies necessary to support an IND for clinical trials, to conduct Phase I clinical trials and to initiate a Phase II clinical trial of TC-2216, our product candidate for depression and anxiety disorders;
- approximately $ million of these net proceeds to conduct the additional preclinical safety studies necessary to support an IND for clinical trials and, unless licensed by us to AstraZeneca under the terms of our collaboration agreement, to conduct Phase I clinical trials of TC-5619;
- approximately $ million to fund preclinical testing and other research and development activities in one or more of the areas of smoking cessation, obesity and inflammation; and
- approximately $ million of these net proceeds to fund general and administrative expenses, other research and development expenses, working capital needs and other general corporate purposes.

We may also use a portion of the net proceeds for the potential acquisition of, or investment in, technologies, products or companies that complement our business, although we have no current understandings, commitments or agreements to do so.

The amounts and timing of our actual expenditures may vary significantly depending upon numerous factors, including the progress and status of our development and commercialization efforts, the amount of proceeds actually raised in this offering, the amount of cash generated through our existing strategic collaboration with AstraZeneca, any additional strategic collaborations into which we may enter and sales of Inversine, and our operating costs and capital expenditures. Accordingly, our management will have significant flexibility in applying the net proceeds of this offering. We may change the allocation of use of these proceeds as a result of contingencies such as the progress and results of our clinical trials and other research and development activities, product development timelines and the status of our intellectual property position, any decision by us to offer one or more compounds to AstraZeneca and by AstraZeneca to license any or all of those compounds under the terms of our collaboration agreement, the establishment of collaborations, the results of our commercialization efforts, our manufacturing requirements and regulatory or competitive developments. In particular, if AstraZeneca terminates our collaboration agreement following the completion of the additional safety and product characterization studies of TC-1734 that AstraZeneca will conduct and we choose to fund the clinical development of TC-1734 on our own, we would need to use a substantial portion of the net proceeds of this offering for that purpose or seek additional funds from external sources.

Under our collaboration agreement, AstraZeneca will assume substantially all development costs for TC-1734. We do not expect our existing capital resources and the net proceeds from this offering to be sufficient to enable us to fund the completion of the development of any of our other product candidates. We expect that our existing capital resources, together with the net proceeds from this offering, will be sufficient to fund our operations through mid-2008. It is possible that we will not make the progress that we expect because the actual costs and timing of drug development, particularly clinical trials, are highly uncertain, are subject to substantial risk and often change depending on the target indication, the particular development strategy and the results of earlier clinical trials. As a result, we may need to raise additional funds from external sources to make the development progress described in this paragraph.

Until the funds are used as described above, we intend to invest the net proceeds from this offering in short-term interest-bearing, investment grade securities.

DIVIDEND POLICY

We have never declared or paid cash dividends on any of our shares of capital stock. We currently intend to retain future earnings, if any, to finance the expansion and growth of our business and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements and other factors that our board of directors deems relevant. In addition, the terms of any future debt or credit facility may preclude us from paying dividends.

CAPITALIZATION

The following table sets forth our capitalization at September 30, 2005:

- on an actual basis;
- on a pro forma basis to give effect to the conversion of all outstanding shares of our convertible preferred stock into 13,832,015 shares of common stock concurrently with the completion of this offering; and
- on a pro forma as adjusted basis to give further effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, after deducting estimated underwriting discounts and commissions and offering expenses payable by us.

You should read this table together with our financial statements and the related notes appearing at the end of this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section and other financial information included in this prospectus.

	As of September 30, 2005		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands, except share and per share data)		
Total long-term obligations	$ 2,483	$ 2,483	$
Redeemable convertible preferred stock, $0.001 par value; 93,309,532 shares authorized, 88,505,565 shares issued and outstanding actual; no shares authorized, issued or outstanding pro forma and pro forma as adjusted	180,814	—	
Stockholders' equity (deficit):			
Common stock, $0.001 par value; 16,666,666 shares authorized actual and pro forma; 100,000,000 shares authorized pro forma as adjusted; 263,361 issued and outstanding actual; 14,095,376 shares issued and outstanding pro forma; shares issued and outstanding pro forma as adjusted	—	14	
Preferred stock, $0.001 par value; no shares authorized, issued or outstanding actual and pro forma; 5,000,000 shares authorized and no shares issued and outstanding pro forma as adjusted	—	—	
Capital in excess of par value	1,851	148,958	
Common stock warrants	214	214	
Accumulated deficit	(155,329)	(121,636)	
Total stockholders' equity (deficit)	(153,264)	27,550	
Total capitalization	$ 30,033	$ 30,033	$

The table above does not include:

- 1,622,578 shares of common stock issuable upon exercise of options outstanding as of September 30, 2005, at a weighted average exercise price of $2.86 per share, of which options to purchase 925,079 shares were exercisable; and
- 48,962 shares of common stock reserved for future grant under our 2000 equity incentive plan as of September 30, 2005.

DILUTION

If you invest in our common stock, your interest will be diluted immediately to the extent of the difference between the initial public offering price per share of our common stock and the pro forma net tangible book value of our common stock immediately after completion of this offering.

The historical net tangible book value of our common stock as of September 30, 2005 was approximately $(153.8) million, or approximately $(583.94) per share, based on 263,361 shares of common stock outstanding as of September 30, 2005. Historical net tangible book value per share represents our total tangible assets less total liabilities divided by the actual number of shares of our common stock outstanding.

As of September 30, 2005, the pro forma net tangible book value of our common stock was approximately $27.0 million, or approximately $1.92 per share. Pro forma net tangible book value per share represents our total tangible assets less total liabilities divided by the pro forma number of shares of our common stock outstanding, after giving effect to the conversion of all outstanding shares of our convertible preferred stock into 13,832,015 shares of common stock concurrently with the completion of this offering.

Assuming the sale of the shares of our common stock offered by this prospectus at an assumed initial public offering price of $ per share, after deducting estimated underwriting discounts and commissions and offering expenses payable by us, our pro forma net tangible book value as of September 30, 2005 would have been $, or $ per share. This represents an immediate increase in pro forma net tangible book value of $ per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of $ per share to new investors purchasing in this offering at the initial public offering price. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share		$
Historical net tangible book value per share	$(583.94)	
Increase attributable to the conversion of convertible preferred stock	585.86	
Pro forma net tangible book value per share before this offering	1.92	
Increase per share attributable to new investors		
Pro forma net tangible book value per share after this offering		
Dilution per share to new investors		$

The following table summarizes, on a pro forma basis as of September 30, 2005, the total number of shares of common stock purchased from us, the total consideration paid and the average price per share paid by existing stockholders and by new investors purchasing shares in this offering at an assumed initial public offering price of $ per share, before deducting estimated underwriting discounts and commissions and offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price per Share
	Number	Percent	Amount	Percent	
Existing stockholders	14,095,376	%	$148,958,000	%	$ 10.57
New investors					
Total		100.0%	$	100.0%	

The share data in the table above is based on shares outstanding as of September 30, 2005, counting as outstanding 13,832,015 shares of common stock underlying all outstanding convertible preferred stock.

The share data in the table above excludes:

- 1,622,578 shares of common stock issuable upon the exercise of options outstanding as of September 30, 2005, at a weighted average exercise price of $2.86 per share, of which options to purchase 925,079 shares were exercisable;
- 48,962 shares of common stock reserved for future grant under our 2000 equity incentive plan as of September 30, 2005; and
- 215,054 shares of common stock subject to an outstanding warrant with an exercise price of $14.63 per share that will expire if not exercised concurrently with the completion of this offering.

If the underwriters exercise their over-allotment in full, the following will occur:

- the number of shares of our common stock held by existing stockholders would decrease to approximately % of the total number of shares of our common stock outstanding after this offering; and
- the number of shares of our common stock held by new investors would increase to shares, or approximately % of the total number of our common stock outstanding after this offering.

SELECTED FINANCIAL DATA

You should read the following selected financial data together with our financial statements and the related notes appearing at the end of this prospectus and the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section and other financial data included in this prospectus.

We have derived the statement of operations data for the years ended December 31, 2002, 2003 and 2004 and the balance sheet data as of December 31, 2003 and 2004 from our audited financial statements included in this prospectus. We have derived the statement of operations data for the years ended December 31, 2000 and 2001 and the balance sheet data as of December 31, 2000 and 2001 from our audited financial statements not included in this prospectus. We have derived the statement of operations data for the nine months ended September 30, 2004 and 2005 and the balance sheet data as of September 30, 2004 and 2005 from our unaudited financial statements included in this prospectus. In the opinion of our management, these unaudited financial statements reflect all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of these financial statements. We became an independent company in August 2000, prior to which we were a wholly owned subsidiary of R.J. Reynolds Tobacco Company. Our historical results for any prior or interim period are not necessarily indicative of the results to be expected for the fiscal year ending December 31, 2005 or for any other future period.

The pro forma net loss attributable to common stockholders per share information is computed using the weighted average number of common shares outstanding, after giving pro forma effect to the conversion of all outstanding shares of our convertible preferred stock into 13,832,015 shares of common stock concurrently with the completion of this offering, as if the conversion had occurred at the date of the original issuance.

Table of Contents

	Year ended December 31,					Nine months ended September 30,	
	2000	2001	2002	2003	2004	2004	2005
						(unaudited)	
	(in thousands, except share and per share data)						
Statement of Operations Data:							
Net revenue	$ 2,351	$ 1,703	$ 2,286	$ 2,458	$ 3,738	$ 1,581	$ 941
Operating expenses:							
Research and development	3,675	8,152	16,244	18,179	22,771	17,782	18,608
General and administrative	1,653	2,302	4,135	3,600	5,163	3,764	5,255
Cost of product sales	—	—	244	743	198	28	244
Purchased in-process research and development	—	—	2,666	—	—	—	—
Total operating expenses	5,328	10,454	23,289	22,522	28,132	21,574	24,107
Loss from operations	(2,977)	(8,751)	(21,003)	(20,064)	(24,394)	(19,993)	(23,166)
Interest and dividend income	536	1,449	88	791	505	356	899
Interest expense	—	—	(103)	(122)	(132)	(96)	(196)
Loss on disposal of fixed assets	—	—	(54)	—	(4)	(4)	—
Net loss	(2,441)	(7,302)	(21,072)	(19,395)	(24,025)	(19,737)	(22,463)
Preferred stock accretion	(981)	(3,808)	(4,173)	(8,341)	(8,744)	(6,426)	(8,425)
Net loss attributable to common stockholders	$ (3,422)	$ (11,110)	$ (25,245)	$ (27,736)	$ (32,769)	$ (26,163)	$(30,888)
Basic and diluted net loss per share applicable to common stockholders	$ (229.33)	$ (200.97)	$ (339.63)	$ (254.33)	$ (149.48)	$ (126.18)	$(118.30)
Shares used to compute basic and diluted net loss per share	14,922	55,283	74,332	109,053	219,213	207,345	261,094
Pro forma basic and diluted net loss per share applicable to common stockholders (unaudited)					$ (2.33)		$ (1.60)
Shares used to compute pro forma basic and diluted net loss per share (unaudited)					10,330,279		14,058,554

	As of December 31,					As of September 30,	
	2000	2001	2002	2003	2004	2004	2005
						(unaudited)	
	(in thousands, except share and per share data)						
Balance Sheet Data:							
Cash, cash equivalents and short-term investments	$ 28,053	$ 21,180	$ 49,361	$ 42,977	$ 53,075	$ 24,425	$ 30,740
Working capital	27,654	20,371	46,685	40,526	50,079	21,054	26,974
Total assets	29,338	24,396	54,379	47,390	58,204	29,208	34,321
Long-term debt, net of current	—	—	2,088	1,462	3,443	1,654	1,535
Redeemable convertible preferred stock	54,418	58,365	108,026	130,134	171,778	136,560	180,814
Accumulated deficit	(27,581)	(38,691)	(63,936)	(91,672)	(124,441)	(117,835)	(155,329)
Total stockholders' equity (deficit)	(27,314)	(38,268)	(63,335)	(90,796)	(122,966)	(116,394)	(153,264)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and the related notes appearing at the end of this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. You should read the "Risk Factors" section of this prospectus for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a biopharmaceutical company engaged in the design, discovery and development of a new class of drugs to treat multiple diseases and disorders of the central nervous system by selectively targeting a class of receptors known as neuronal nicotinic receptors, or NNRs. We are developing our most advanced product candidates as treatments for target indications in three therapeutic areas: cognitive impairment, depression and anxiety, and pain. Within these areas, we have three product candidates in clinical development and two preclinical product candidates. Our lead product candidate is a novel small molecule that we refer to as TC-1734. In December 2005, we entered into a collaborative research and license agreement with AstraZeneca AB for the development and worldwide commercialization of TC-1734 as a treatment for Alzheimer's disease, cognitive deficits in schizophrenia and potentially other conditions marked by cognitive impairment such as attention deficit hyperactivity disorder, commonly referred to as ADHD, age associated memory impairment, commonly referred to as AAMI, and mild cognitive impairment, commonly referred to as MCI. We are currently conducting a Phase II clinical trial of TC-1734 in AAMI at our own expense to further assess the effects of TC-1734 on cognition in a cognitively impaired elderly population. Mecamylamine hydrochloride, our product candidate currently in a Phase II clinical trial as an add-on therapy in patients with major depressive disorder, is the active ingredient in Inversine, our product approved in the United States for moderately severe to severe essential hypertension.

We trace our scientific lineage to a research program initiated by R.J. Reynolds Tobacco Company in 1982 to study the activity and effects of nicotine in the body and the function of nicotinic receptors. We were incorporated in Delaware in 1997 as a wholly owned subsidiary of RJR. In August 2000, we became an independent company when we issued shares of our series B convertible preferred stock to outside investors.

We have devoted substantially all of our resources to the discovery and development of our product candidates and technologies, including the design, conduct and management of preclinical and clinical studies and related manufacturing, regulatory and clinical affairs, and intellectual property prosecution. Through 1998, we received all of our funding from RJR. At the end of 1998, we entered into a collaboration agreement with the predecessor company to Aventis Pharma SA. Aventis Pharma SA is now controlled by Sanofi-Aventis. We received an upfront license fee and research support payments under this agreement which, together with a modest amount of additional financial support from RJR, funded our activities through August 2000. Since August 2000, we have funded our operations primarily through the private placement of equity securities and, to a much lesser extent, through payments we received from our collaborators, equipment and building lease incentive financing, sales of our product Inversine and government grants.

We have never been profitable. As of September 30, 2005, we had an accumulated deficit of $155.3 million. We expect to continue to incur substantial losses for the foreseeable future. We expect our research and development expenses to increase substantially following the completion of this offering as we expand our clinical trial activity, as our product candidates advance through the development cycle and as we invest in additional product opportunities and research programs. We also expect our general and administrative expenses to increase substantially due to costs associated with being a public company. Clinical trials and preclinical studies are time-consuming, expensive and may never yield a product that will generate revenue. A substantial portion of our revenue for the next several years will depend on the conduct of research and the successful achievement of milestone events in the development of TC-1734 under our agreement with AstraZeneca. Our revenue may vary substantially from quarter to quarter and year to year. We believe that period-to-period comparisons of our results of operations are not meaningful and should not be relied upon as indicative of our future performance.

We currently have one FDA approved product, Inversine. We acquired rights to Inversine in August 2002. Inversine is approved for the management of moderately severe to severe essential hypertension, a high blood pressure disorder with an unknown cause. However, we believe that Inversine is prescribed predominantly for the treatment of neuropsychiatric disorders, including Tourette's syndrome, autism and bipolar disorder, in children and adolescents. Sales of Inversine generated revenue of $767,000 for the year ended December 31, 2004 and $504,000 for the nine months ended September 30, 2005.

Our agreement with AstraZeneca relating to TC-1734 becomes effective upon expiration or early termination of the Hart-Scott-Rodino waiting period applicable to the agreement. AstraZeneca has agreed to pay us an initial fee of $10 million upon effectiveness of the agreement. AstraZeneca has also agreed to make an additional payment to us of $20 million if it decides to conduct a Phase II clinical trial of TC-1734 following the completion of additional safety and product characterization studies that AstraZeneca will conduct at its expense to generate further data with respect to TC-1734. We expect AstraZeneca to complete these safety and product characterization studies within approximately 12 to 15 months after the agreement becomes effective. We are eligible to receive other payments of up to $249 million, contingent upon the achievement of development, regulatory and first commercial sale milestones for TC-1734 for Alzheimer's disease, cognitive deficits in schizophrenia and ADHD, and royalties on future product sales. If TC-1734 is developed under the agreement for indications other than Alzheimer's disease, cognitive deficits in schizophrenia and ADHD, we would also be eligible to receive payments contingent upon the achievement of development, regulatory and first commercial sale milestones for TC-1734 for those indications. Under the terms of a sponsored research agreement and a subsequent license agreement between us and the University of Kentucky Research Foundation, or UKRF, we are required to pay to UKRF a low single digit percentage of any of these payments, including royalties, that we receive from AstraZeneca.

If AstraZeneca decides to initiate a Phase II clinical trial of TC-1734 following the completion of the additional safety and product characterization studies, we would be entitled under the agreement to receive a minimum of approximately $23.7 million in research fees. If AstraZeneca terminates our agreement upon completion of any or all of the additional safety and product characterization studies, we would be required to reimburse AstraZeneca for the amount of all research fees that it paid to us under the a4ß2 research collaboration that we and AstraZeneca have agreed to conduct under the agreement while AstraZeneca conducted the studies. In addition we would be required to pay AstraZeneca an additional $5 million as compensation for assigning to us the data and any intellectual property generated in the studies. AstraZeneca can terminate the agreement if it determines in its sole discretion within 15 months after the agreement becomes effective not to proceed with the further development of TC-1734 based on the results of the additional safety and product characterization studies and all other available information with respect to TC-1734.

We previously entered into two collaboration agreements with Aventis. One of those collaboration agreements with Aventis terminated effective January 2, 2005. The research term for the other collaboration agreement with Aventis expired on December 31, 2004. As of September 30, 2005, we had received a total of $8.0 million in upfront license fees and payments for research and development services under the two agreements. We will not receive any additional amounts under the agreements.

In December 2004, we entered into a development agreement with The Stanley Medical Research Institute relating to the development of one of our compounds for the treatment of cognitive deficits in schizophrenia. Upon effectiveness of the agreement, The Stanley Medical Research Institute paid us $1.25 million in return for our issuance of a convertible promissory note in an equal principal amount. In August 2005, we repaid the promissory note in full. We and The Stanley Medical Research Institute terminated the development agreement in December 2005 after we entered into our collaboration agreement with AstraZeneca.

In January 2001, we entered into a collaboration agreement with Dr. Falk Pharma GmbH covering the development and commercialization of one of our compounds for the treatment of ulcerative colitis and other gastrointestinal and liver diseases. Upon effectiveness of the collaboration agreement, Dr. Falk Pharma paid us a $1.0 million upfront license fee and purchased $1.0 million of our common stock. We and Dr. Falk Pharma shared the development costs for the lead compound subject to the collaboration agreement. We and Dr. Falk Pharma discontinued the development of the lead compound in the fourth quarter of 2004 and have terminated this agreement.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. On an ongoing basis, we evaluate these estimates and judgments, including those described below. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. These estimates and assumptions form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results and experiences may differ materially from these estimates.

While our significant accounting policies are more fully described in Note 2 to our financial statements included at the end of this prospectus, we believe that the following accounting policies are the most critical to aid you in fully understanding and evaluating our reported financial results and affect the more significant judgments and estimates that we use in the preparation of our financial statements.

Revenue Recognition

Our collaboration agreements contain multiple elements, including upfront fees, research fees for ongoing research and development, payments associated with achieving development, regulatory and commercialization milestones and royalties to be paid based on specified percentages of net product sales or net profits, if any. We consider a variety of factors in determining the appropriate method of revenue recognition under these arrangements such as whether the elements are separable, whether there are determinable fair values and whether there is a unique earnings process associated with a particular element of an agreement.

We recognize research fee revenue from research services performed under our collaboration agreements as research is performed and related expenses are incurred. We defer upfront fees and amortize them over the estimated research and development period. All revenue to date under collaboration agreements, or under government grants, is non-refundable. We recognize revenue based on the achievement of development and regulatory milestones that carry substantive performance risk upon achievement of the milestone event. As of December 31, 2005, we have not received payment of any milestone-based revenues. We record product sales revenues when goods are shipped, at which point title has passed, and we establish an allowance for estimated returns at that time.

We are eligible to receive future research fees, license fees and milestone payments under our collaboration agreement with AstraZeneca, which becomes effective upon expiration or early termination of the Hart-Scott-Rodino waiting period applicable to the agreement. The amount of research fees, license fees and milestone payments will depend on the extent of our research activities and the timing and achievement of development, regulatory and first commercial sale milestone events. AstraZeneca has agreed to pay us an initial fee of $10 million upon effectiveness of the agreement. Based on the collaboration agreement terms, we will allocate $5 million of the initial fee to the a4ß2 research collaboration, which we expect to recognize as revenue over the four-year term of the research collaboration. We will defer recognition of the remaining $5 million of the initial fee, which we will allocate to the TC-1734 license grants, until AstraZeneca makes a determination whether to conduct Phase II clinical development of TC-1734 following the completion of additional safety and product characterization studies to be conducted by AstraZeneca. If AstraZeneca decides to conduct a Phase II clinical trial of TC-1734 following the completion of the safety and product characterization studies, we would recognize the deferred $5 million of the initial fee as revenue over the expected development period for TC-1734. We expect to recognize any revenue based on the achievement of milestones under the collaboration agreement upon achievement of the milestone event, as long as we determine that the revenue satisfies the revenue recognition requirements of generally accepted accounting principles and Securities and Exchange Commission Staff Accounting Bulletin, or SAB 101, *Revenue Recognition in Financial Statements*, as amended by SAB No. 104, *Revision of Topic 13*. SAB 101 requires that four basic criteria must be met before revenue can be recognized: persuasive evidence of an arrangement exists; delivery has occurred or services have been rendered; the fee is fixed and determinable; and collectibility is reasonably assured. We will record research fees that we receive from AstraZeneca while it is conducting the safety and product characterization studies on TC-1734 as deferred revenue. If the agreement continues in effect following the completion of the additional safety and product characterization studies to be conducted by AstraZeneca, we will recognize all research fees previously recorded as deferred revenue and recognize future research fee revenues as the research is performed and related expenses are incurred.

Accrued Expenses

As part of the process of preparing financial statements, we are required to estimate accrued expenses. This process involves reviewing open contracts and purchase orders, communicating with our applicable personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost. The majority of our service providers invoice us monthly in arrears for services performed. We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on facts and circumstances known to us. We periodically confirm the accuracy of our estimates with the service providers and make adjustments if necessary. To date, we have not adjusted our estimate at any particular balance sheet date in any material amount. Examples of estimated accrued expenses include:

- fees paid to contract research organizations in connection with preclinical and toxicology studies and clinical trials;
- fees paid to investigative sites in connection with clinical trials;
- fees paid to contract manufacturers in connection with the production of clinical trial materials and Inversine; and
- professional service fees.

We base our expenses related to clinical trials on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and clinical research organizations that conduct and manage clinical trials on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we will adjust the accrual accordingly. If we do not identify costs that we have begun to incur or if we underestimate or overestimate the level of services performed or the costs of these services, our actual expenses could differ from our estimates.

Purchased In-process Research and Development Expense

We determine the amount of any acquired in-process research and development expense based on an analysis of the cash flows that we expect to be generated by products that may arise from in-process technologies that we have acquired. As part of this analysis, we review the project rights that we acquire to determine the stage of their development, the probability of demonstrating sufficient safety and efficacy in clinical trials to obtain regulatory approval and product specific risk factors inherent in the drug development process. The product specific risk factors that we review include the type of drug under development, the likelihood of regulatory approval, manufacturing process capability, scientific rationale, preclinical and clinical safety and efficacy data, target product profile and development plans. Different estimates and assumptions for any of these factors would, if changed, result in a different estimate of in-process research and development expense.

In August 2002, we acquired from Layton Bioscience, Inc. marketing and trademark rights to Inversine and patent rights related to its active ingredient for cash consideration of $3.5 million. In allocating the purchase price, including the amount of in-process research and development, we considered an appraisal prepared by an independent appraiser using established valuation techniques for the pharmaceutical industry. We allocated approximately $2.7 million of the purchase price to in-process research and development, which we expensed in connection with the acquisition.

Stock-Based Compensation

Effective January 1, 2005, we adopted Statement of Financial Accounting Standard No. 123(R), *Share-Based Payment*, or SFAS 123R. Under SFAS 123R, we recognize the grant-date fair value of stock options and other stock-based compensation issued to employees and non-employee directors over the requisite service periods, which are typically the vesting periods. We currently use the Black-Scholes formula to estimate grant-date fair value and expect to continue to use this valuation model in the future. We have adopted SFAS 123R using the modified prospective method, which requires us to record compensation expense for the non-vested portion of previously issued awards that were outstanding at January 1, 2005, and any awards issued or modified after January 1, 2005.

The fair value of our common stock underlying stock options and other stock-based compensation granted to employees and non-employee directors has historically been determined by our board of directors based upon information available as of the grant dates. We engaged a third party in January 2006 to perform a retrospective analysis to determine the deemed fair market value of our common stock for accounting purposes in light of the potential initial public offering of our common stock. We expect this retrospective analysis to be performed in accordance with applicable elements of the practice aid issued by the American Institute of Certified Public Accountants, *Valuation of Privately Held Company Equity Securities Issued as Compensation*, and to address the deemed fair market value of our common stock as of March 2005.

For all periods prior to January 1, 2005, we accounted for our employee stock-based compensation using the intrinsic value method in accordance with Accounting Principles Board Opinion No. 25 and related interpretations, or APB 25. Under APB 25, we recognized compensation expense for stock options granted to employees and non-employee directors only if the exercise price was below the fair market value of the underlying common stock on the date of grant. We recognized this compensation expense over the vesting periods of the shares purchasable upon exercise of options. We recorded deferred stock-based compensation related to stock options granted to employees and directors of $130,000 in 2002, $65,000 in 2003 and $51,000 in 2004. We amortized our deferred stock-based compensation on a straight-line basis over the related option vesting periods, which range from immediate vesting to four years.

As required by Statement of Financial Accounting Standards No. 123, *Accounting for Stock-Based Compensation,* or SFAS 123, as amended by SFAS No. 148, *Accounting for Stock-Based Compensation—Transition and Disclosure*, our financial statement footnotes disclose on a pro forma basis the amount of compensation expense that we would have recorded for periods prior to January 1, 2005, had we applied the fair value option methodology described in SFAS 123. Had we recorded all of our stock-based compensation using the SFAS 123 fair value methodology, our compensation expense would have been approximately $866,400 greater and our diluted net loss per share attributable to common stockholders would have been approximately $3.96 greater in 2004. For more information, you should refer to Note 2 to our financial statements included at the end of this prospectus.

Financial Operations Overview

Revenue

Inversine is our only commercial product generating revenue. Sales of Inversine generated revenue of $815,000 for the year ended December 31, 2003, $767,000 for the year ended December 31, 2004 and $504,000 for the nine months ended September 30, 2005. We have entered into an exclusive distribution agreement with a third party for the distribution of Inversine. We do not have or use a sales force or actively promote Inversine. Accordingly, we do not anticipate any significant increase in Inversine sales. If any of the very limited number of physicians that most often prescribe Inversine were to cease to do so, revenue generated by

Inversine sales would likely be substantially less. We have no other commercial products for sale and do not anticipate that we will have any other commercial products for sale for at least the next several years.

Our collaboration agreement with AstraZeneca becomes effective upon expiration or early termination of the Hart-Scott-Rodino waiting period applicable to the agreement. AstraZeneca has agreed to pay us an initial fee of $10 million upon effectiveness of the agreement. AstraZeneca has also agreed to make an additional payment to us of $20 million if it decides to conduct a Phase II clinical trial of TC-1734 following the completion of the additional safety and product characterization studies that AstraZeneca will conduct at its expense to generate further data with respect to TC-1734. We expect AstraZeneca to complete these safety and product characterization studies within approximately 12 to 15 months after the agreement becomes effective. We are eligible to receive other payments of up to $249 million, contingent upon the achievement of development, regulatory and first commercial sale milestones for TC-1734 for Alzheimer's disease, cognitive deficits in schizophrenia and ADHD, and royalties on future product sales. If TC-1734 is developed under the agreement for indications other than Alzheimer's disease, cognitive deficits in schizophrenia and ADHD, we would also be eligible to receive payments contingent upon the achievement of development, regulatory and first commercial sale milestones for TC-1734 for those indications. Under the terms of a sponsored research agreement and a subsequent license agreement between us and UKRF, we are required to pay to UKRF a low single digit percentage of any of these amounts that we may receive from AstraZeneca. If AstraZeneca terminates our agreement upon completion of any or all of the safety and product characterization studies, we would be required to reimburse AstraZeneca for the amount of all research fees that it paid to us under the a4ß2 research collaboration while it conducted the studies and to pay AstraZeneca an additional $5 million as compensation for assigning to us the data and any intellectual property generated in the studies.

Upon effectiveness of our collaboration agreement, we and AstraZeneca have agreed to initiate preclinical research designed to discover and develop additional compounds that, like TC-1734, act on the a4ß2 NNR. While AstraZeneca is conducting the safety and product characterization studies, AstraZeneca has agreed to pay us research fees equal to 50% of our research expenses based on a negotiated rate designed to approximate our personnel costs to conduct the research. If our agreement with AstraZeneca continues in effect following the completion of the safety and product characterization studies, AstraZeneca has agreed to pay us additional research fees equal to the remaining 50% of our research expenses incurred while those studies were conducted and thereafter research fees equal to 100% of our research expenses in the collaboration, subject to specified limits. If our agreement with AstraZeneca continues in effect following the completion of the safety and product characterization studies, we would be entitled to receive a minimum of $23.7 million in aggregate research fees over the four-year term of the a4ß2 research collaboration. Based on the current budget for the research collaboration, we expect to receive approximately $26.4 million in aggregate research fees under the agreement.

Other revenue has consisted primarily of amounts earned for providing research and development services under our two collaboration agreements with Aventis and non-refundable upfront license fees that we received in connection with our first agreement with Aventis and our collaboration agreement with Dr. Falk Pharma. We received research support payments from Aventis of $1.3 million for the year ended December 31, 2003 and $338,000 for the year ended December 31, 2004. We did not receive any research support payments from Aventis for the nine months ended September 30, 2005. The research term of our continuing agreement with Aventis ended in December 2004. We will not receive additional research support payments from Aventis under the agreement.

In 2003, we were awarded a cooperative agreement from the National Institute of Standards and Technology through its Advanced Technology Program. The terms of the agreement provide for us to receive up to $1.9 million over a three-year period to help fund the development of sophisticated new computer simulation software designed to more accurately predict biological and toxicological effects of drugs. The agreement provides for reimbursement of costs that we incur to perform specified work that is designed to meet the objectives of the agreement. We recognize grant revenues as we perform the work and incur reimbursable costs. Funding for awards under this program is subject to the availability of funds as determined annually in the federal appropriations process.

Research and Development Expense

Since our inception, we have focused our activities on our drug discovery and development programs. We expense research and development expenses as they are incurred. Research and development expenses represented approximately 81% of our total operating expenses for each of the years ended December 31, 2002, 2003 and 2004 and 77% of our total operating expenses for the nine months ended September 30, 2005.

Research and development expense includes expenses associated with:

- the employment of personnel involved in our drug discovery and development activities;
- research and development facilities and equipment;
- the screening, identification and optimization of product candidates;
- the development and enhancement of Pentad;
- formulation and process synthesis;
- production of clinical materials, including fees paid to contract manufacturers;
- preclinical animal studies, including the costs to engage third-party research organizations;
- clinical trials, including fees paid to contract research organizations to monitor and oversee some of our trials;
- quality assurance activities;
- compliance with FDA regulatory requirements;
- purchased in-process research and development;
- consulting, license and sponsored research fees paid to third parties;
- depreciation of capital assets used to develop our products; and
- stock options or other stock-based compensation granted to personnel in research and development functions.

We use our employee and infrastructure resources across several projects. Consistent with our focus on the development of a class of drugs with potential uses in multiple indications, many of our costs are not attributable to a specifically identified project. Instead, these costs are directed to broadly applicable research efforts. Accordingly, we do not account for internal research and development costs on a project-by-project basis. As a result, we cannot state precisely the total costs incurred for each of our clinical and preclinical projects on a project-by-project basis.

The following table shows, for the periods presented, total payments that we made to third parties for preclinical study support, clinical supplies and clinical trial services for TC-1734, mecamylamine hydrochloride and TC-2696:

Product Candidate	Year ended December 31, 2002	Year ended December 31, 2003	Year ended December 31, 2004	Nine months ended September 30, 2005
		(in thousands)		
TC-1734	$ 976	$3,557	$4,135	$ 5,953
Mecamylamine hydrochloride	—	—	—	450
TC-2696	—	893	1,145	751
Total	$ 976	$4,450	$5,280	$ 7,154

At the end of 2004, we discontinued the development of two product candidates following the completion of Phase II clinical trials. We made total payments to third parties of $2.7 million for the year ended December 31, 2002, $2.1 million for the year ended December 31, 2003, $4.3 million for the year ended December 31, 2004 and $70,000 for the nine months ended September 30, 2005 in connection with these discontinued programs.

We expect to continue to incur substantial research and development expenses for the foreseeable future. We anticipate that these expenses will increase substantially as we continue to advance our clinical stage product candidates through the development process, to advance additional product candidates into clinical trials and to invest in promising product opportunities in our research programs. Because we have licensed TC-1734 to AstraZeneca and AstraZeneca will assume substantially all future development costs for TC-1734, we expect generally to focus our future research and development efforts on our other clinical stage product candidates and preclinical programs.

Our expenditures on current and future preclinical and clinical development programs are subject to numerous uncertainties in timing and cost to completion. We test compounds in numerous preclinical studies for safety, toxicology and efficacy. We then conduct clinical trials for those product candidates that we determine to be the most promising. If we do not establish a collaboration covering the development of a particular product candidate, we fund these trials ourselves. As we obtain results from clinical trials, we may elect to discontinue or delay trials for some product candidates in order to focus our resources on more promising product candidates. Completion of clinical trials by us or our collaborators may take several years or more, but the length of time generally varies substantially according to the type, complexity, novelty and intended use of a product candidate. The cost of clinical trials may vary significantly over the life of a project as a result of a variety of factors, including:

- the number of patients who participate in the trials;
- the number of sites included in the trials;
- the length of time required to enroll trial participants;
- the duration of patient follow-up;
- the costs of producing supplies of the product candidates needed for clinical trials and regulatory submissions;
- the efficacy and safety profile of the product candidate; and
- the costs and timing of, and the ability to secure, regulatory approvals.

We have not received FDA or foreign regulatory marketing approval for any of our product candidates that are in development. In order to achieve marketing approval, the FDA or foreign regulatory agencies must conclude that our or our collaborators' clinical data establishes the safety and efficacy of the product candidates. Furthermore, our strategy includes entering into collaborations with third parties to participate in the development and commercialization of some of our product candidates. In situations in which third parties have control over the preclinical development or clinical trial process for a product candidate, the estimated completion date is largely under control of that third party and not under our control. We cannot forecast with any degree of certainty which of our product candidates will be subject to future collaborations or how such arrangements would affect our development plans or capital requirements.

As a result of the uncertainties discussed above, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate revenues from the commercialization and sale of any of our development stage product candidates.

General and Administrative Expense

General and administrative expense consists principally of salaries and other related costs for personnel in executive, finance, accounting, business development and human resource functions. Other general and administrative expenses include expenses associated with stock options and other stock-based compensation granted to personnel in those functions, facility costs not otherwise included in research and development expense, patent related costs, and professional fees for consulting, legal and accounting services. We expect that general and administrative expense will increase in 2006 and subsequent years due to increased payroll, expanded infrastructure and increased consulting, legal, accounting and investor relations expenses associated with being a public company.

Cost of Product Sales

Cost of product sales are those costs related directly to the sale of Inversine and are principally comprised of cost of goods sold, FDA product license fees, distribution expenses, product royalty obligations and product liability insurance.

Purchased In-process Research and Development Expense

Purchased in-process research and development expense consists of an allocated portion of the purchase price for the marketing rights to Inversine and related assets that we acquired in August 2002. We expensed the entire allocated portion as of the date of acquisition. We have not recorded purchased in-process research and development expense in any period other than 2002.

Interest and Dividend Income

Interest and dividend income consists of interest and dividends earned on our cash, cash equivalents and short-term investments.

Interest Expense

Interest expense consists of interest incurred to finance equipment, office furniture and fixtures.

Income Taxes

We have incurred net operating losses since our incorporation in 1997 and consequently have not paid federal, state or foreign income taxes in any period. We had net operating loss carryforwards of approximately $63.3 million for federal income tax purposes and $71.0 million for state income tax purposes as of December 31, 2004. Utilization of the net operating loss carryforwards and credits may be subject to a substantial annual limitation due to ownership change limitations provided by Section 382 of the Internal Revenue Code of 1986, as amended, and similar state provisions. As a result of a series of stock issuances, we had such an ownership change on November 30, 2002 and we could experience additional ownership changes as a result of this offering or in the future. When an ownership change, as defined by Section 382, occurs, an annual limitation is imposed on a company's use of net operating loss and credit carryforwards attributable to periods before the change. For financial reporting purposes, we have recorded a valuation allowance to fully offset the deferred tax asset related to these carryforwards because realization of the benefit was uncertain.

Results of Operations

Nine Months ended September 30, 2005 and September 30, 2004

Revenue. Revenue decreased by $639,000 to $941,000 for the nine months ended September 30, 2005, from $1.6 million for the comparable nine-month period in 2004. The decrease was attributable in part to the conclusion at the end of 2004 of our research collaboration agreement with Aventis, from which we derived $209,000 in research fees in the nine months ended September 30, 2004, and no research fee revenue in 2005. In addition, we recognized $202,000 in deferred license fees that we received as upfront fees under our collaboration agreements with Aventis and Dr. Falk Pharma in the nine months ended September 30, 2004. Because we concluded our research obligations under our collaboration agreements with both Aventis and Dr. Falk Pharma in the fourth quarter of 2004, we recognized the remaining unamortized deferred license fee balance at that time and recognized no deferred license fee revenue for the nine months ended September 30, 2005.

In future periods, we are eligible to receive research fees, license fees and milestone payments under our collaboration agreement with AstraZeneca. The amount of research fees, license fees and milestone fees will depend on the extent of our research activities and the timing and achievement of development, regulatory and first commercial sale milestone events.

Net sales of Inversine decreased by $80,000 to $504,000 in the nine months ended September 30, 2005, from $584,000 for the comparable nine-month period in 2004. We do not promote sales of Inversine.

Grant revenues decreased by $148,000 to $438,000 for the nine months ended September 30, 2005, from $585,000 for the comparable nine-month period in 2004. Our grant revenues are derived from work performed under a cooperative agreement awarded to us in the third quarter of 2003 by the National Institute of Standards and Technology through its Advanced Technology Program to fund the development of sophisticated molecular simulation software. As of September 30, 2005, we were eligible to receive up to an additional $742,000 of funding under this award through the third quarter of 2006.

Research and Development Expense. Research and development expense increased by $826,000 to $18.6 million for the nine months ended September 30, 2005, from $17.8 million for the comparable nine-month period in 2004. The increase was principally attributable to an increase of $2.8 million in expenses related to the clinical development, formulation and manufacturing of TC-1734, an increase of $409,000 in clinical development expenses for mecamylamine hydrochloride, an increase of $171,000 in expenses related to the preclinical development of TC-2216 and an increase of $1.4 million in salaries and infrastructure costs for the nine months ended September 30, 2005, as compared to the comparable nine-month period in 2004. These increases were partially offset by a decrease in external costs resulting from our discontinuation in the fourth quarter of 2004 of clinical programs for two of our product candidates. One of these candidates, which was in development for the treatment of ADHD, resulted in a decrease in external costs of $2.4 million for the nine months ended September 30, 2005, as compared to the comparable nine-month period in 2004. The other product candidate, which was in development for the treatment of ulcerative colitis, resulted in a decrease in external costs of $1.6 million for the nine months ended September 30, 2005, as compared to the comparable nine-month period in 2004.

For the nine months ended September 30, 2005, we estimate that approximately 32% of our total research and development expenses were payments made to third parties in connection with our development of TC-1734, 7% were payments made to third parties in connection with our development of mecamylamine hydrochloride and TC-2216 and 4% were payments made to third parties in connection with our development of TC-2696. We spent the remaining 57% of our total research and development expenses on salaries, benefits and infrastructure costs associated with our internal research and development capabilities, including clinical programs, preclinical programs and research efforts, and on payments to third parties in connection with preclinical programs.

General and Administrative Expense. General and administrative expense increased by $1.5 million, or 40%, to $5.3 million for the nine months ended September 30, 2005, from $3.8 million for the comparable nine-month period in 2004. This increase resulted primarily from the recognition of $1.6 million in 2005 for expenses incurred in connection with a public offering that we terminated in the first quarter of 2005. We did not incur any similar expenses in 2004.

Cost of Product Sales. Cost of product sales was $244,000 for the nine months ended September 30, 2005, as compared to $28,000 for the comparable nine-month period in 2004. All of these costs related to sales of Inversine. The lower cost of product sales for the 2004 period resulted from a successful outcome of our request for a waiver of FDA product and establishment fees that had been assessed by the FDA in 2003 and 2002 in the aggregate amount of $505,000. In July 2004, the FDA informed us that our fee waiver request had been granted in full. We had accrued the costs for these FDA fees in our financial statements beginning with our acquisition of Inversine in August 2002, as there was no assurance that our fee waiver request would be granted. The cost of product sales in 2005 reflects our costs related to sales of Inversine net of the waiver of product and establishment fees granted by the FDA for 2004. We have petitioned the FDA for a waiver of the product and establishment fees for 2005 and plan to petition again in future years, but there are no assurances that any of our waiver requests will be allowed. If our request for a fee waiver had not been granted for 2004, our cost of product sales would have increased by approximately $300,000 for the nine months ended September 30, 2005.

Interest and Dividend Income. Interest and dividend income increased by $542,000 to $898,000 for the nine months ended September 30, 2005, from $356,000 for the comparable nine-month period in 2004. The increase was attributable to substantially higher short-term interest rates and higher levels of cash and short-term investments throughout the 2005 period.

Interest Expense. Interest expense increased by $100,000 to $196,000 for the nine months ended September 30, 2005, from $96,000 for the comparable nine-month period in 2004. This increase is attributable to higher indebtedness under a credit facility used to finance capital equipment purchases, primarily laboratory equipment.

Years ended December 31, 2004 and December 31, 2003

Revenue. Revenue increased by $1.2 million, or 48%, to $3.7 million for the year ended December 31, 2004, from $2.5 million for 2003. The increase of $1.2 million resulted principally from the acceleration in recognition of $1.6 million of deferred license fee revenue and an increase in grant revenue of $646,000, partially offset by a decrease in research fee revenue of $965,000.

The acceleration in recognition of $1.6 million of deferred license fee revenue represented the remaining unamortized balance of upfront payments that we received when we entered into collaboration agreements with Aventis and Dr. Falk Pharma and were amortizing over the period of our expected research obligations under the agreements. In the fourth quarter of 2004, we concluded our research obligations under our collaboration agreement with Aventis and our collaboration agreement with Dr. Falk Pharma.

Grant revenue increased by $646,000 to $717,000 in 2004 as a result of a full year of work performed under a cooperative agreement awarded to us in the third quarter of 2003 by the National Institute of Standards and Technology through its Advanced Technology Program to fund the development of sophisticated molecular simulation software.

Research fee revenue decreased to $338,000 in 2004, from $1.3 million in 2003. The decrease of $965,000 resulted from less activity in 2004 under our collaboration agreement with Aventis relating to Aventis compounds as we completed the research requested by Aventis. The research term of that collaboration agreement with Aventis expired on December 31, 2004.

Research and Development Expense. Research and development expense increased by $4.6 million, or 25%, to $22.8 million for the year ended December 31, 2004, from $18.2 million for 2003. The increase was primarily attributable to the costs associated with having four product candidates in clinical trials for most of 2004, compared to only two product candidates in clinical trials for most of 2003.

For the year ended December 31, 2004, we estimate that approximately 18% of our total research and development expenses were payments made to third parties in connection with our development of TC-1734, 5% were payments made to third parties in connection with our development of TC-2696 and 19% were made to third parties in connection with the two discontinued clinical development programs. We spent the remaining 58% of our total research and development expenses on salaries, benefits, and infrastructure costs associated with our internal research and development capabilities, including clinical programs, preclinical programs and research efforts, and on payments to third parties in connection with preclinical programs.

General and Administrative Expense. General and administrative expense increased by $1.6 million, or 44%, to $5.2 million for the year ended December 31, 2004, from $3.6 million for 2003. This increase resulted from our investment in development of the administrative infrastructure necessary to enable us to expand our operations, to support our development efforts and to fulfill the additional reporting and regulatory requirements applicable to a public company. The increase was principally attributable to increased expenses of $705,000 related to expansion of our business development staff and an increase in spending on business development pursuits, $431,000 of additional patent related expenses and increases in our legal and other professional fees.

Cost of Product Sales. Cost of product sales decreased by $545,000 to $198,000 for the year ended December 31, 2004, from $743,000 for 2003. All of these costs related to sales of

Inversine. The decrease in cost of product sales resulted from a successful outcome in 2004 of our request for a waiver of FDA product and establishment fees that had been assessed by FDA in 2003 and 2002. In July 2004, the FDA informed us that our fee waiver request had been granted in full. We had accrued the costs for these FDA fees in our financial statements since our acquisition of Inversine in August 2002, as there was no assurance that our fee waiver request would be granted.

Interest and Dividend Income. Interest and dividend income decreased by $286,000 to $505,000 for the year ended December 31, 2004, from $791,000 for 2003. The decrease was primarily attributable to lower levels of cash and short-term investments. We expect that interest income will increase in 2005 as compared to 2004 primarily as a result of the increase in our cash following the completion of the sale of $32.9 million in shares of our series C convertible preferred stock in December 2004, net of offering expenses, and higher short-term interest rates.

Interest Expense. Interest expense increased to $133,000 for the year ended December 31, 2004, from $123,000 in 2003.

Years ended December 31, 2003 and December 31, 2002

Revenue. Revenue increased to $2.5 million for the year ended December 31, 2003, from $2.3 million for 2002. The increase resulted primarily from the inclusion of a full year of Inversine sales in 2003 of $815,000, compared to a partial year of Inversine sales in 2002 of $243,000. We began selling Inversine in December 2002. License fee revenues decreased to $270,000 in 2003 from $635,000 in 2002 primarily as a result of revisions to the estimated research terms used as the basis for revenue recognition of the non-refundable upfront license fees that we received in our collaborations with Aventis and Dr. Falk Pharma.

Research and Development Expense. Research and development expense increased by $2.0 million, or 12%, to $18.2 million for the year ended December 31, 2003, from $16.2 million for 2002. The increase resulted principally from increased spending of $2.9 million on our clinical programs and increased personnel and infrastructure costs of $539,000 associated with the expansion of our internal clinical development and regulatory affairs capabilities. This was offset in part by a decrease of $1.8 million resulting from the conclusion in 2002 of a program to screen several of our preclinical candidates to select those to advance into clinical trials.

During the year ended December 31, 2003, we estimate that approximately 20% of our total research and development expenses were payments made to third parties in connection with our development of TC-1734, 5% were payments made to third parties in connection with our development of TC-2696 and 12% were made to third parties in connection with the two discontinued clinical development programs. We spent the remaining 63% of our total research and development expense on salaries, benefits, and infrastructure costs associated with our internal research and development capabilities, including clinical programs, preclinical programs and research efforts, and on payments to third parties in connection with preclinical programs.

General and Administrative Expense. General and administrative expense decreased by $536,000, or 13%, to $3.6 million for the year ended December 31, 2003, from $4.1 million for 2002. This decrease resulted principally from a decrease of $330,000 from the costs incurred in 2002 associated with our relocation to a new leased facility, severance costs of $257,000 and a reduction in patent related costs in 2003 compared to 2002. In 2003 we increased our spending on the development of the administrative infrastructure necessary to enable us to expand our operations, support our development efforts and facilitate the additional reporting and regulatory requirements related to becoming a public company.

Cost of Product Sales. Cost of product sales increased by $499,000 to $743,000 for the year ended December 31, 2003, from $244,000 for 2002. The increase in cost of product sales for 2003 resulted primarily from increased sales of Inversine.

Interest and Dividend Income. Interest and dividend income increased by $703,000 to $791,000 for the year ended December 31, 2003, from $88,000 for 2002. The increase resulted from substantially higher average cash balances during 2003 as a result of the funds we received from the sale of shares of our series C convertible preferred stock. We raised $45.5 million in this financing in November 2002 and $13.8 million in March 2003.

Interest Expense. Interest expense was $123,000 for the year ended December 31, 2003 compared to $103,000 for 2002.

Liquidity and Capital Resources

Sources of Liquidity

Since we became an independent company in 2000, we have financed our operations and internal growth primarily through private placements of convertible preferred stock. As of September 30, 2005, we had derived aggregate net proceeds of $121.9 million from these private placements. We have received additional funding from upfront license fees and payments for research and development services under collaboration agreements, equipment and building lease incentive financing, government grants and interest income. As of September 30, we had received $9.9 million under our collaboration agreements. As of December 31, 2004, we had ceased conducting research under collaboration agreements under which we previously received research support payments.

In December 2005, we entered into a collaboration agreement with AstraZeneca relating to TC-1734. Upon effectiveness of the collaboration agreement, AstraZeneca has agreed to pay us an initial fee of $10.0 million and we will begin conducting research for which we are eligible to receive research fees. AstraZeneca has also agreed to make an additional payment to us of $20.0 million if it decides to conduct a Phase II clinical trial of TC-1734 following the completion of additional safety and product characterization studies that AstraZeneca will conduct at its expense to generate further data with respect to TC-1734. We expect AstraZeneca to complete these safety and product characterization studies within approximately 12 to 15 months after the agreement becomes effective.

If AstraZeneca terminates our agreement upon completion of any or all the additional safety and product characterization studies, we would be required to reimburse AstraZeneca for the amount of all research fees that it paid to us under the a4ß2 research collaboration that we and AstraZeneca have agreed to conduct under the agreement while AstraZeneca conducted the studies. In addition, we would be required to pay AstraZeneca an additional $5.0 million as compensation for assigning to us the data and any intellectual property generated in the studies.

On December 31, 2004, we received loan proceeds of $1.25 million from The Stanley Medical Research Institute in connection with a development agreement relating to the development of one of our compounds for the treatment of the cognitive deficits in schizophrenia. In August 2005, we repaid the loan in full in anticipation of entering into our strategic collaboration agreement with AstraZeneca. We and The Stanley Medical Research Institute terminated the development agreement in December 2005 after we entered into our collaboration agreement with AstraZeneca.

We began generating revenues from product sales of Inversine in December 2002. To date, the net contribution from Inversine sales has not been a significant source of cash and we do not expect it to be a significant source in the future.

Our cash, cash equivalents and short-term investments were $43.0 million as of December 31, 2003, $53.1 million as of December 31, 2004 and $30.7 million as of September 30, 2005.

Cash Flows

Net cash used for operating activities was $20.7 million for the nine months ended September 30, 2005, primarily reflecting our net loss of $22.5 million partially offset by $803,000 in prepaid expenses primarily attributable to our recognition of payments made in 2004 in connection with a public offering that we terminated in the first quarter of 2005, $603,000 in depreciation and amortization expense and $569,000 in stock-based employee compensation expense. Net cash used for operating activities was $25.0 million for the year ended December 31, 2004. Net cash used for operating activities for 2004 consisted primarily of a net loss of $24.0 million, which included acceleration of recognition of deferred license fee revenue of $1.9 million that we received when we entered into collaboration agreements with Aventis and Dr. Falk Pharma. Net cash used for operating activities was $19.3 million for the year ended December 31, 2003, primarily reflecting a net loss occurring for this period of $19.4 million. Net cash used for operating activities was $17.1 million for the year ended December 31, 2002, reflecting a net loss of $21.1 million partially offset by non-cash charges for acquired in-process research and development of $2.7 million and depreciation and amortization of $1.0 million.

Net cash used in investing activities was $237,000 for the nine months ended September 30, 2005, $622,000 for the year ended December 31, 2004 and $545,000 for the year ended December 31, 2003. These amounts exclude cash flows from the purchase and sale of investments and were primarily to purchase equipment for use in expanding our internal research and development activities. Investing activities for the year ended December 31, 2002, exclusive of cash flows from the purchase and sale of investments, included the use of $1.3 million for the purchase of equipment and furniture, the use of $3.5 million for the purchase of the marketing rights to Inversine and related assets from Layton Bioscience, Inc. and the receipt of a $2.0 million rent incentive from the owner of our facilities in connection with our entering into a lease with a minimum five-year term.

Net cash used in financing activities was $1.4 million for the nine months ended September 30, 2005 and consisted principally of the repayment of a $1.25 million convertible promissory note to The Stanley Medical Research Institute and $824,000 in principal repayments on an equipment financing loan facility, partially offset by $612,000 in proceeds from the issuance of shares of our series C convertible preferred stock in May 2005. Net cash provided by financing activities was $35.9 million for the year ended December 31, 2004 and consisted principally of $32.9 million in net proceeds from the issuance of shares of our series C convertible preferred stock in December 2004, $2.0 million received under an equipment financing loan facility and $1.25 million received from The Stanley Medical Research Institute in return for our issuance of a convertible promissory note in an equal principal amount, partially offset by $731,000 of principal repayments on equipment financing. As of December 31, 2004, we did not have any borrowing facility or line of credit. Net cash provided by financing activities for the year ended December 31, 2003 was $13.4 million and consisted principally of net proceeds of $13.8 million from the issuance of shares of our series C convertible preferred stock and proceeds of $239,000 received in connection with the purchase of our common stock upon the exercise of stock options, partially offset by $637,000 of principal repayments on equipment financing. Net cash provided by financing activities for the year ended December 31, 2002 was

$48.2 million and consisted principally of net proceeds of $45.5 million from the issuance of shares of our series C convertible preferred stock and proceeds of $3.0 million from long-term debt, comprised of a $2.5 million equipment financing loan repayable over 48 months and a $500,000 incentive loan from the City of Winston-Salem that requires no repayments and carries no interest charges for the initial five years, partially offset by $325,000 of equipment financing principal repayments.

In May 2002, we borrowed $2.5 million from R.J. Reynolds Tobacco Holdings, Inc. to finance equipment and other fixed assets that we had previously purchased. The borrowing bears a fixed interest rate of 6.6%, is payable in 48 equal monthly installments and matures in May 2006. In January 2004, we amended the terms of our loan facility to permit us to borrow up to an additional $2.0 million in 2004 in up to three separate borrowings. Each borrowing would bear a fixed interest rate equal to a theoretical four-year U.S. Treasury Rate on the disbursement date plus 3.5%, be payable in 48 equal monthly installments and be secured by specified tangible fixed assets determined sufficient by the lender at the time of disbursement. We borrowed $1.0 million in April 2004 and $973,000 in December 2004 under the amended loan facility to finance equipment. The April 2004 borrowing bears a fixed interest rate of 5.87%, is payable in 48 equal monthly installments and matures in April 2008. The December 2004 borrowing bears a fixed interest rate of 6.89%, is payable in 48 monthly installments and matures in January 2009. All borrowings under the loan facility are secured by specified tangible fixed assets. As of September 30, 2005, the outstanding principal balance under the loan facility was $1.7 million.

On December 6, 2004, we sold 27,272,728 shares of convertible preferred stock to 11 of our existing stockholders for net proceeds of $32.9 million. On May 13, 2005, we sold an additional 496,132 shares of convertible preferred stock to another of our existing stockholders for net proceeds of $600,300. On December 15, 2004, we entered into a development agreement with The Stanley Medical Research Institute, a nonprofit organization that supports the research and development of treatments for schizophrenia. In connection with this agreement, we issued a $1.25 million convertible promissory note to The Stanley Medical Research Institute. In August 2005, we repaid the promissory note in full. We and The Stanley Medical Research Institute terminated the development agreement in December 2005 after we entered into our collaboration agreement with AstraZeneca.

Funding Requirements

We have incurred significant losses since our inception. As of September 30, 2005, we had an accumulated deficit of $155.3 million. We expect to continue to incur substantial operating losses for the foreseeable future. Our future capital requirements are difficult to forecast and will depend on many factors, including:

- the scope, progress, results and cost of preclinical development and laboratory testing and clinical trials;
- the timing, receipt and amount of milestone and other payments from AstraZeneca and potential future collaborators;
- the costs, timing and outcome of regulatory review;
- the number and characteristics of product candidates that we pursue;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property-related claims;
- the costs of establishing sales and marketing functions and of establishing arrangements for manufacturing;

- the rate of technological advancements for the indications that we target;
- our ability to establish strategic collaborations and licensing or other arrangements on terms favorable to us;
- the costs to satisfy our obligations under existing and potential future collaborations;
- the timing, receipt and amount of sales or royalties, if any, from our potential products; and
- the extent and scope of our general and administrative expenses.

We anticipate that implementing our strategy will require substantial increases in our capital expenditures and other capital commitments as we expand our clinical trial activity, as our product candidates advance through the development cycle, and as we invest in additional product opportunities and research programs and expand our infrastructure. Because we have licensed TC-1734 to AstraZeneca and AstraZeneca will assume substantially all development costs for TC-1734, we expect generally to focus our future research and development efforts on our other clinical stage product candidates and preclinical programs. We do not expect our existing capital resources and the net proceeds from this offering to be sufficient to enable us to fund the completion of the development of any of our other product candidates. We expect that our existing capital resources, together with the net proceeds from this offering, will be sufficient to fund our operations through mid-2008. However, our operating plan may change as a result of many factors, including those described above. In particular, our operating plan may change if AstraZeneca decides not to proceed with the further development of TC-1734 following its completion of any or all of the safety and product characterization studies that it will conduct and terminates our agreement. In that event, we would be required to reimburse AstraZeneca for the amount of all research fees that it paid to us under the a4ß2 research collaboration while it conducted the studies and to pay to AstraZeneca an additional $5.0 million as compensation for assigning to us the data and any intellectual property generated in the studies. We may need additional funds sooner than planned to meet operational needs and capital requirements for product development.

We do not expect to generate sufficient cash from our operations to sustain our business for the foreseeable future. We expect our continuing operating losses to result in increases in our cash required to fund operations over the next several quarters and years. To the extent our capital resources are insufficient to meet future capital requirements, we will need to finance future cash needs through public or private equity offerings, debt financings or corporate collaboration and licensing arrangements. Additional equity or debt financing, or corporate collaboration and licensing arrangements, may not be available on acceptable terms, if at all. If adequate funds are not available, we may be required to delay, reduce the scope of or eliminate our research and development programs, reduce our planned commercialization efforts, or obtain funds through arrangements with collaborators or others that may require us to relinquish rights to certain drug candidates that we might otherwise seek to develop or commercialize independently. Additionally, any future equity funding may dilute the ownership of our equity investors.

We cannot estimate the completion dates and costs of our current internal research and development programs due to inherent uncertainties in outcomes of clinical trials and regulatory approvals of our product candidates. We cannot be certain that we will be able to successfully complete our research and development projects or successfully find collaboration or distribution partners for our product candidates. Our failure to complete our research and development projects could have a material adverse effect on our financial position or results of operations.

To date, inflation has not had a material effect on our business.

Contractual Obligations

The following table summarizes our significant contractual obligations and commercial commitments as of December 31, 2004:

	Payments due by period				
Contractual Obligations	**Total**	**2005**	**2006-2008**	**2009-2010**	**After 2010**
			(in thousands)		
Long-term debt obligations	$ 4,557	$ 1,113	$ 3,083	$ 202	$ 159
Operating lease obligations	3,836	1,508	2,328	—	—
Other contractual obligations	2,512	2,483	29	—	—
Total	$ 10,905	$ 5,104	$ 5,440	$ 202	$ 159

The amounts of long-term debt obligations reflected in the above table include obligations pursuant to a convertible promissory note in the original principal amount of $1.25 million that we issued to The Stanley Medical Research Institute in December 2004. In August 2005, we repaid the promissory note in full. The amounts of other contractual obligations reflected in the above table include obligations to purchase product candidate material contingent on the delivery of the material and to compensate clinical investigators and clinical trial sites contingent on the performance of services in connection with clinical trials. The amount of other contractual obligations for 2005 reflected in the above table also includes annual maintenance fees or other fixed payments required under our technology license agreements. Our technology license agreements are generally terminable by us on short notice. As a result, the annual maintenance fees or other fixed payments under those agreements are not included in other contractual obligations in the above table after 2005. The amounts of other contractual obligations for all periods reflected in the above table exclude contingent royalty payments that we may be required to pay under our technology license agreements and other contingent payments that we may become required to make under our technology license agreements upon achievement of specified development, regulatory or commercial milestones.

Quantitative and Qualitative Disclosures about Market Risk

The primary objective of our investment activities is to preserve our capital to fund operations. We also seek to maximize income from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of cash equivalents and short-term investments in a variety of securities of high credit quality. As of September 30, 2005, we had cash, cash equivalents and short-term investments of $30.7 million consisting of cash and highly liquid investments deposited in a highly rated financial institution in the United States. A portion of our investments may be subject to interest rate risk and could fall in value if market interest rates increase. However, because our investments are short-term in duration, we believe that our exposure to interest rate risk is not significant and a 1% movement in market interest rates would not have a significant impact on the total value of our portfolio. We actively monitor changes in interest rates.

We contract for the conduct of some of our clinical trials and other research and development and manufacturing activities with contract research organizations, investigational sites and manufacturers in Europe and India. We may be subject to exposure to fluctuations in foreign exchange rates in connection with these agreements. We do not hedge our foreign currency exposures. We have not used derivative financial instruments for speculation or trading purposes.

Recent Accounting Pronouncements

In June 2005, the Financial Accounting Standards Board issued Statement No. 154, *Accounting Changes and Error Corrections, a replacement of APB Opinion No. 20, Accounting Changes, and FASB Statement No. 3, Reporting Accounting Changes in Interim Financial Statements,* or SFAS 154. SFAS 154 requires retrospective application to prior periods' financial statements for all voluntary changes in accounting principle, unless impracticable. SFAS 154 is effective for accounting changes and corrections of errors made in fiscal years beginning after December 15, 2005. SFAS 154 will have no immediate impact on our financial statements, though it would impact our presentation of future voluntary accounting changes if such changes occur.

BUSINESS

Overview

We are a biopharmaceutical company engaged in the design, discovery and development of a new class of drugs to treat multiple diseases and disorders of the central nervous system by selectively targeting neuronal nicotinic receptors, or NNRs. NNRs are found on nerve cells throughout the nervous system and serve as key regulators of nervous system activity. We trace our scientific lineage to a research program initiated by R.J. Reynolds Tobacco Company in 1982 to study the activity and effects of nicotine, a compound that interacts non-selectively with all nicotinic receptors. Since that time, we have developed a deep understanding of the biological characteristics and functions of NNRs and have learned that compounds that interact with NNRs have the potential to achieve positive medical effects by modulating their activity. We have built an extensive patent estate covering the structure or therapeutic use of small molecules designed to regulate the central nervous system by selectively affecting specific NNR subtypes.

We are developing our most advanced product candidates as treatments for target indications in three therapeutic areas: cognitive impairment, depression and anxiety, and pain. Within these areas, we have three product candidates in clinical development and two preclinical product candidates.

Cognitive Impairment

TC-1734. Our lead product candidate is a novel small molecule that we refer to as TC-1734. In December 2005, we entered into a collaborative research and license agreement with AstraZeneca AB for the development and worldwide commercialization of TC-1734 as a treatment for Alzheimer’s disease, cognitive deficits in schizophrenia and potentially other conditions marked by cognitive impairment such as attention deficit hyperactivity disorder, commonly referred to as ADHD, age associated memory impairment, commonly referred to as AAMI, and mild cognitive impairment, commonly referred to as MCI. In 2004, we completed two Phase II clinical trials of TC-1734, one in AAMI and one in MCI. We are currently conducting a Phase II clinical trial of TC-1734 in AAMI to further assess the effects of TC-1734 on cognition in a cognitively impaired elderly population. We are responsible for completing this trial independently. We expect the results of this trial in AAMI to be available in the first half of 2006. We also expect AstraZeneca to initiate two Phase II clinical trials of TC-1734 in the first half of 2007, one in mild to moderate Alzheimer’s disease and one in cognitive deficits in schizophrenia.

Our agreement with AstraZeneca relating to TC-1734 becomes effective upon expiration or early termination of the Hart-Scott-Rodino waiting period applicable to the agreement. AstraZeneca has agreed to pay us an initial fee of $10 million upon effectiveness of the agreement. AstraZeneca has also agreed to make an additional payment to us of $20 million if it decides to conduct a Phase II clinical trial of TC-1734 following the completion of additional safety and product characterization studies that AstraZeneca will conduct at its expense to generate further data with respect to TC-1734. We expect AstraZeneca to complete these safety and product characterization studies within approximately 12 to 15 months after the agreement becomes effective. Under the agreement, we are eligible to receive other payments of up to $249 million, contingent upon the achievement of development, regulatory and first commercial sale milestones for TC-1734 for Alzheimer’s disease, cognitive deficits in schizophrenia and ADHD, and royalties on future product sales. If TC-1734 is developed under the agreement for indications other than Alzheimer’s disease, cognitive deficits in schizophrenia and ADHD, we would also be eligible to receive payments contingent upon the achievement of development, regulatory and first commercial sale milestones for TC-1734 for those indications.

Depression/Anxiety

Mecamylamine hydrochloride and TC-5214. Mecamylamine hydrochloride is the active ingredient in Inversine, which is our only product approved by the U.S. Food and Drug Administration, or FDA, for marketing. Inversine is approved for the management of moderately severe to severe essential hypertension, a high blood pressure disorder. However, we believe that Inversine is prescribed predominantly for the treatment of neuropsychiatric disorders, including Tourette's syndrome, autism and bipolar disorder. We are currently conducting a Phase II clinical trial of mecamylamine hydrochloride as an add-on therapy in patients with major depressive disorder. We plan to conduct an interim analysis of data from this trial in January 2006 to determine whether it would be advisable to increase the number of patients in the trial in order to obtain a definitive trial result. If we do not increase the number of patients for the trial following the interim analysis, we expect the results of this trial to be available in the third quarter of 2006. Our preclinical product candidate TC-5214 is one of the molecular components of mecamylamine hydrochloride. We are evaluating the development of TC-5214 as an add-on therapy for depression.

TC-2216. TC-2216 is a novel small molecule that we are developing as an oral treatment for depression and anxiety disorders. TC-2216 is currently a preclinical product candidate. We plan to conduct the additional preclinical safety studies necessary to support the filing in the second half of 2006 of an investigational new drug application, or IND, for clinical trials of TC-2216.

Pain

TC-2696. TC-2696 is a novel small molecule that we are developing as an oral treatment for acute post-operative pain. Depending on clinical trial results, available resources and other considerations, we may pursue development of TC-2696 for other classes of pain in addition to or instead of acute post-operative pain. In 2004, we completed a Phase I single rising dose clinical trial of TC-2696. We are currently conducting a Phase I multiple rising dose clinical trial to further assess the safety and tolerability profile of TC-2696. We expect the results of this trial to be available in the first half of 2006.

Upon effectiveness of our agreement with AstraZeneca relating to TC-1734, we and AstraZeneca have agreed to initiate a preclinical research collaboration designed to discover and develop additional compounds that, like TC-1734, act on the α4β2 NNR. Under the agreement, AstraZeneca is responsible for funding the research collaboration, which has an initial term of four years and can be extended by mutual agreement. In addition to our α4β2 research collaboration with AstraZeneca, we have a preclinical program focused on identifying and developing compounds that selectively target the α7 NNR, which we believe may have application in the treatment of conditions such as schizophrenia, cognitive impairment and inflammation. We have selected a lead compound that we refer to as TC-5619 that acts selectively on the α7 NNR. We plan to conduct the additional preclinical studies that would be needed to support the filing in 2007 of an IND for clinical trials of TC-5619. We have additional preclinical programs in areas in which we believe drugs that target specific NNR subtypes can be exploited for medical benefit, such as smoking cessation and obesity.

We develop product candidates using our proprietary databases and computer-based molecular design technologies, which we refer to collectively as Pentad. Pentad relies on extensive biological data for a library of diverse compounds that we have developed and gathered over more than 20 years. Together with our proprietary assays and novel screening methods, Pentad enables us to efficiently identify, prioritize, characterize and optimize novel compounds designed to selectively target specific NNR subtypes in an effort to achieve desired medical results and limit adverse side effects. We used Pentad to design or optimize TC-1734, TC-2696, TC-2216 and TC-5619.

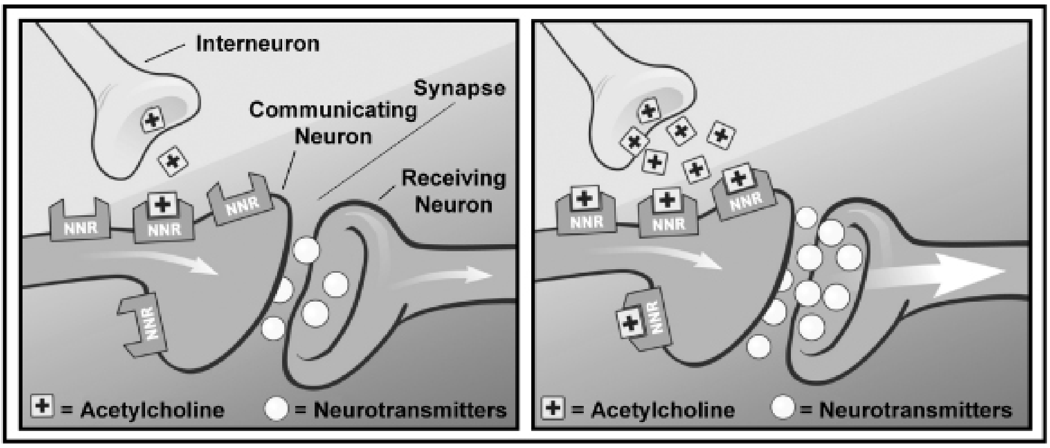
Role of NNRs in the Nervous System

The human nervous system is a massive communications network that sends and receives information throughout the body via billions of specialized nerve cells known as neurons. Neurons continually gather information about the body's internal and external environment and send signals to the brain. These signals pass from one neuron to another across a gap between a communicating neuron and a receiving neuron known as a synapse. Electrical impulses of a communicating neuron are converted into chemicals called neurotransmitters that are released by the communicating neuron and bind to specialized proteins known as receptors located across the synapse on the receiving neuron to enable the signal to continue. The major neurotransmitters in the brain are dopamine, serotonin, norepinephrine, glutamate, gamma-aminobutyric acid, or GABA, and acetylcholine.

NNRs are a class of receptors found in the nervous system that play a critical role in modulating the release of neurotransmitters to regulate nervous system activity. When the neurotransmitter acetylcholine is released from a nearby neuron, called an interneuron, and binds to an NNR on a communicating neuron, the flow of neurotransmitters from the communicating neuron to a receiving neuron is adjusted by the NNR. This action, known as neuromodulation, results in a greater release of neurotransmitters across the synapse when the nervous system is understimulated and a lesser release of neurotransmitters across the synapse when the nervous system is overstimulated. As neuromodulators, NNRs serve as the nervous system's self-adjusting "volume knob."

The nervous system will not operate properly if the relative levels of key neurotransmitters in the brain are not maintained in a normal balance. A disruption in this balance can cause many common nervous system diseases and disorders. We believe that compounds that target NNRs to trigger their activity can be used to treat these diseases and disorders.

The following diagrams illustrate the role of NNRs in neuromodulation. In the illustration on the left, the release of a limited amount of acetylcholine from the interneuron causes the NNRs to release a limited amount of neurotransmitters across the synapse. In the illustration on the right, the release of more acetylcholine from the interneuron causes the NNRs to release a greater amount of neurotransmitters.



NNRs are comprised of five protein subunits that are arranged like staves of a barrel around a central pore. Each different combination of five subunits represents an NNR subtype. There are several subtypes, each of which is identified by Greek letters. Scientific evidence has established that individual NNR subtypes have particular functions in the body that are relevant to a number of debilitating diseases and disorders, as set forth below.

NNR Subtype	Primary Functions Impacted	Diseases or Disorders Potentially Implicated
a4_2ß2_3	cognition	Alzheimer's disease; cognitive deficits in schizophrenia; AAMI; MCI; ADHD
	pain perception	acute, chronic and neuropathic pain
a7_5	sensory gating cognition inflammation	schizophrenia; cognitive impairment
a6ß3	motor control	Parkinson's disease

Our scientists and their former colleagues at R.J. Reynolds Tobacco Company have played a prominent role in the growth of knowledge about NNRs, as well as the effects of compounds that mimic the action of acetylcholine and interact with different NNR subtypes. For example, we believe that nicotine's well-documented abilities to enhance attention, learning and memory result primarily from its interaction with the a4ß2 NNR and the a7 NNR in the brain. Many published studies evaluating the effects of nicotine in humans and animals, as well as published studies showing the prevalence of diseases such as Alzheimer's disease and Parkinson's disease in non-smokers as compared to smokers, suggest the therapeutic effects of compounds such as nicotine that interact with NNRs. However, despite their positive effects, these compounds have historically not been desirable as therapies because they have not been sufficiently selective. This means that these compounds interact not only with NNRs, but also with nicotinic receptors in the muscles and ganglia that are associated with adverse effects such as increased heart rate, high blood pressure, irregular heartbeat, nausea, vomiting and a dangerous slowing of breathing known as respiratory depression.

Based on our years of focus on NNRs and the expertise we have built over that time, we are developing product candidates that are designed to interact selectively with specific NNR subtypes to promote positive medical effects and limit adverse side effects.

Our Business Strategy

Our goal is to become a leader in the discovery, development and commercialization of novel drugs that selectively target NNRs in order to treat diseases and disorders where there is significant medical need and commercial potential. To achieve this goal, we are pursuing the following strategies:

- *Develop and commercialize drugs that selectively target specific NNR subtypes.* Based on our understanding of the role of NNRs in the nervous system, we believe that drugs designed to selectively target specific NNR subtypes can have positive medical effects with limited or no adverse side effects. We use our scientific expertise and Pentad to identify compounds that selectively target specific NNR subtypes as potential treatments for diseases and disorders of the central nervous system.
- *Collaborate selectively to develop and commercialize product candidates.* In December 2005, we entered into a collaborative research and license agreement with AstraZeneca for the development and worldwide commercialization of TC-1734 as a treatment for

Alzheimer's disease, cognitive deficits in schizophrenia and potentially other conditions marked by cognitive impairment. Under the agreement, we and AstraZeneca have also agreed to initiate a preclinical research collaboration designed to discover and develop additional compounds that, like TC-1734, act on the a4ß2 NNR. We intend to selectively enter into additional collaboration agreements with leading pharmaceutical and biotechnology companies to assist us in furthering the development of our product candidates. In particular, we intend to enter into these third-party arrangements for target indications in which our potential collaborator has particular expertise or that involve a large, primary care market that must be served by large sales and marketing organizations. In entering into these collaboration agreements, our goal will be to maintain co-promotion or co-commercialization rights in the United States and, in some cases, other markets. Under our collaboration agreement with AstraZeneca, we have the option to co-promote TC-1734 and any compound discovered in the research collaboration under the agreement in the United States to specified classes of specialist physicians.

- *Remain at the forefront of the commercialization of NNR research*. We have established ourselves as a leader in NNR research over the last 20 years. Our scientists and their former colleagues at RJR have published more than 150 NNR-related articles in leading scientific journals and more than 200 abstracts. Our leadership position in this area is also reflected in our extensive patent estate that includes 76 issued or pending United States patents and patent applications and numerous foreign counterparts. We intend to continue to invest significant resources to build upon our NNR expertise and to expand our intellectual property portfolio. We augment our own research by collaborating with commercial and academic institutions that seek access to our proprietary knowledge and compounds.
- *Identify and prioritize indications in which drugs that selectively target specific NNR subtypes can be exploited for medical benefit*. We have identified numerous indications in which NNRs have been implicated and for which we believe that drugs that selectively target specific NNR subtypes can provide a medical benefit. We prioritize our product development opportunities in an effort to sustain our product pipeline for indications in which there is a significant medical need and commercial potential.
- *Build a specialized sales and marketing organization.* We intend to build an internal sales and marketing organization for target indications in which specialists heavily influence the market, particularly neurology and psychiatry. We believe that we can effectively serve these markets with a specialized sales force, enabling us to retain greater value from our product candidates that receive marketing approval than if we relied on a third party's sales force.

Opportunities in Our Target Indications

Because NNRs are so widespread in the body, we believe that there are a number of areas in which compounds that target NNRs could provide a therapeutic benefit, including:

- diseases and disorders of the central nervous system, commonly referred to as the CNS;
- smoking cessation;
- obesity; and
- inflammation.

Our primary product development focus is on diseases and disorders of the CNS, which represent a major segment of the global healthcare environment. Espicom Business

Intelligence, a provider of business information for the pharmaceutical and other industries, estimates the total worldwide CNS pharmaceutical market was $65 billion in 2004. Three of the top ten selling drugs in the world in 2004, Eli Lilly's Zyprexa, Pfizer's Zoloft and Wyeth's Effexor, treat diseases and disorders of the CNS. However, despite their commercial success, many current CNS drugs are only moderately effective or are accompanied by significant side effects or other drawbacks. Accordingly, we believe that substantial opportunities exist for new therapies that address CNS diseases and disorders. We are currently conducting Phase II clinical trials of TC-1734 in AAMI and mecamylamine hydrochloride in major depressive disorder. We are also currently conducting a Phase I multiple rising dose clinical trial of TC-2696, our product candidate for pain. We expect AstraZeneca to initiate Phase II clinical trials of TC-1734 in Alzheimer's disease and cognitive deficits in schizophrenia in the first half of 2007.

Alzheimer's Disease

Alzheimer's disease, the most common form of dementia, is a debilitating brain disorder for which there is no cure. The disease progresses in stages from mild to moderate to severe and gradually destroys a person's memory and ability to learn, reason, make judgments, communicate and carry out daily activities. Mild Alzheimer's disease is characterized by mild forgetfulness and difficulty acquiring basic information and communicating. Patients generally exhibit the symptoms of mild Alzheimer's disease for two to four years before progressing to the moderate stage. Moderate Alzheimer's disease is characterized by forgetfulness, failure to recognize friends and family, disorientation regarding time and place and personality changes. Patients generally exhibit the symptoms of moderate Alzheimer's disease for up to ten years before progressing to the severe stage. Severe Alzheimer's disease is characterized by difficulty performing simple tasks and activities associated with daily living. Patients with severe Alzheimer's disease require continuous care and generally do not survive for more than three years.

The Business Insights Healthcare Report estimates that Alzheimer's disease affects approximately 13.5 million people in the world's seven major pharmaceutical markets, which are the United States, France, Germany, Italy, Spain, the United Kingdom and Japan, including approximately 4.5 million people in the United States. That report notes that epidemiological studies indicate that an estimated 5% of persons over age 65 and an estimated 24% of persons over age 85 suffer from the disease. Espicom Business Intelligence estimates that the worldwide market for Alzheimer's disease therapies was approximately $3.0 billion in 2004.

The treatment of Alzheimer's disease is currently dominated by a class of drugs called acetylcholinesterase inhibitors, which includes Aricept, Reminyl and Exelon. The treatment most recently approved by the FDA is Namenda, which has a different mechanism of action than acetylcholinesterase inhibitors and is the only product approved for the treatment of moderate to severe Alzheimer's disease. We believe that acetylcholinesterase inhibitors have limitations in that only about 25% of Alzheimer's disease patients who take them show symptomatic improvement and that they have not been demonstrated to substantially delay the progressive deterioration and death of cells in the brain that can lead to more severe impairment and debilitation.

Cognitive Deficits in Schizophrenia

Schizophrenia is a chronic, severe and disabling form of psychosis. The disease is characterized by symptoms such as delusions, hallucinations, the inability to disregard familiar stimuli, sometimes referred to as sensory gating, disorganized speech, grossly disorganized or catatonic behavior and prolonged loss of emotion, feeling, volition or drive. In addition, schizophrenia is often marked by impairment in cognitive functions, such as attention, vigilance, memory, and reasoning, that plays a primary role in the inability of schizophrenic patients to function normally.

The Business Insights Healthcare Report estimates that schizophrenia affects over 9 million people in the world's seven major pharmaceutical markets, including approximately 3.7 million people in the United States. Scientists have estimated that up to 75% of schizophrenic patients are cognitively impaired. A report published by Wood Mackenzie, a provider of business information for the pharmaceutical and other industries, estimates that the worldwide market for anti-psychotic drugs was approximately $11.8 billion in 2004.

Traditional treatments for schizophrenia are not effective to treat cognitive deficits in schizophrenia. While it has been reported that more recently developed treatments for schizophrenia, known as atypical anti-psychotics, may have some effect on cognitive impairment, it has also been reported that there is little evidence that the effect is lasting and leads to an improvement in daily functioning. Also, atypical anti-psychotics may cause agranulocytosis, an acute disease characterized by significant loss of white blood cells that prevent infection, as well as agitation, anxiety, muscle tremor, drowsiness, dizziness, headache, insomnia, weight gain and diabetes. There are currently no drugs approved for cognitive deficits in schizophrenia.

AAMI

The term age associated memory impairment, or AAMI, describes a common condition characterized by gradual memory loss or other cognitive impairment that generally occurs with normal aging. A person who is at least 50 years of age and scores at least one standard deviation below the mean established for young adults on a standardized memory test without evidence of dementia, neurological illness or other medical cause may be classified with AAMI. AAMI is not currently listed in *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, or DSM-IV, the manual published by the American Psychiatric Association to establish diagnostic criteria. However, DSM-IV does list the term "age related cognitive decline," which is often used by the medical community interchangeably with AAMI, as an "objectively identified decline in cognitive functioning consequent to the aging process that is within normal limits given the person's age." Although estimates of the prevalence of AAMI in the elderly vary greatly because of varying methodologies and definitions of AAMI, one published study indicates that AAMI may affect as many as 38% of people over age 65. Based on a 2000 report of the Federal Interagency Forum on Aging-Related Statistics, this represents over 13 million people in the United States alone. The Federal Interagency Forum report projects that the number of people in the United States age 65 or older will double by 2030. There is currently no product approved by the FDA for the treatment of AAMI.

Depression/Anxiety

Depression is a severe psychiatric mood disorder. It is characterized by a wide range of symptoms that cause significant impairment in daily functioning, such as persistent despondence, loss of interest in normal activities, changes in appetite, difficulty in sleeping, agitation, apathy or feelings of guilt. The most common forms of depression are major depressive disorder and dysthymia, which is less severe.

Anxiety disorders are generally characterized by symptoms of unfounded chronic, exaggerated worry and tension. There are several different types of anxiety disorders, including
panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, social phobia

and generalized anxiety disorder. People diagnosed with depression are also often diagnosed with an anxiety disorder.

Datamonitor, a provider of business information for the pharmaceutical and other industries, estimates that depression affects nearly 36 million people in the seven major pharmaceutical markets, including approximately 13 million people in the United States. According to the National Institute of Mental Health, anxiety disorders affect approximately 19 million people in the United States. Wood Mackenzie estimates that the worldwide market for anti-depressants was approximately $16.9 billion in 2004.

Depression is thought to be associated with the disruption and imbalance in the brain of the neurotransmitters dopamine, norepinephrine and serotonin. Anxiety disorders are similarly thought to be associated with the disruption and imbalance in the brain of these same neurotransmitters, as well as acetylcholine. Medications currently used to treat depression, such as selective serotonin reuptake inhibitors, dual uptake inhibitors, and tricyclics, are designed to increase the levels of one or more of those neurotransmitters. However, these drugs may take two to four weeks to be effective, if at all, and may cause side effects like nausea, increased sweating, fatigue and sexual dysfunction that are experienced before any benefit. Moreover, experts have estimated that approximately 20% to 30% of patients with depression do not respond to anti-depressant medications. Medications other than anti-depressants often used to treat anxiety disorders include benzodiazepines and azapirones. Azapirones may not be immediately effective. Prolonged use of a benzodiazepine can result in a tolerance to the drug, ultimately making it ineffective. Benzodiazepines may also increase falls, and cause confusion and memory problems in the elderly.

Pain

Pain occurs when base nerve endings known as pain receptors are activated and a pain signal is transmitted through the nervous system to the brain. There are two general categories of pain, nociceptive and neuropathic. With nociceptive pain, the pain signal starts with damage to tissue and is typically accompanied by inflammation. With neuropathic pain, the pain signal results from inflammation of the peripheral nerves or other injury to the nervous system itself. A common form of neuropathic pain is sciatica, which is characterized by compression of the sciatic nerve resulting in leg and back pain. Neuropathic pain also arises from diabetes, cancer and exposure to chemotherapy or radiation. Both nociceptive and neuropathic pain can be either acute or chronic.

According to the Business Insights Healthcare Report, the worldwide market for pain therapies was approximately $40 billion in 2004. That report estimates that approximately 80 million people in the world’s seven major pharmaceutical markets suffer annually from acute nociceptive pain following a surgical procedure. Datamonitor estimates that 39 million people worldwide suffer annually from some form of neuropathic pain.

There is no single product available to treat all types of pain, and we believe that there are limitations to the existing treatments for each individual type of pain. Acute pain is typically treated with a class of drugs known as opioids. Prolonged use of opioids, however, may result in a tolerance to the drug, ultimately making it ineffective. In addition, the use of opioids may result in addiction and abuse. As a result, physicians are often reluctant to prescribe opioids for an extended period of time or at all. Chronic pain is most often treated with a class of drugs known as non-steroidal anti-inflammatory drugs. These drugs are often not sufficiently effective. In a nationwide survey of over 1,000 adults conducted in the United States in August 2003, only 58% of chronic pain sufferers rated their prescription medications as very or somewhat effective. No class of drugs, including opioids and non-steroidal anti-inflammatory drugs, has demonstrated consistent effectiveness in treating neuropathic pain.

Our Product Development Pipeline

We are developing our most advanced product candidates as treatments for target indications in three therapeutic areas: cognitive impairment, depression and anxiety, and pain. Within these areas, we have three product candidates in clinical development and two preclinical product candidates. In addition to these product candidates, we have preclinical programs in areas in which we believe that NNRs can be exploited for medical benefit. Mecamylamine hydrochloride, our product candidate currently in a Phase II clinical trial as an add-on therapy in patients with major depressive disorder, is approved in the United States as Inversine for the management of moderately severe to severe essential hypertension. Except for Inversine for the management of hypertension, neither the FDA nor any foreign regulatory authority has approved any of our product candidates for marketing.

The following table summarizes our product development pipeline.

Area of Therapeutic Focus	Product Candidate	Target Indication	Status of Development	Commercial Rights
Cognitive Impairment	TC-1734	Alzheimer's disease	Phase II trial in MCI complete; initiation of Phase II trial in mild to moderate Alzheimer's disease expected in the first half of 2007	AstraZeneca
		Cognitive deficits in schizophrenia	Initiation of Phase II trial in cognitive deficits in schizophrenia expected in the first half of 2007	AstraZeneca
		AAMI	Initial Phase II trial complete; separate Phase II trial ongoing; results expected in the first half of 2006	AstraZeneca
Depression/Anxiety	Mecamylamine hydrochloride	Major depressive disorder	Phase II trial ongoing; results expected in the third quarter of 2006	Targacept
	TC-5214	Depression	Preclinical	Targacept
	TC-2216	Depression and anxiety disorders	Preclinical	Targacept
Pain	TC-2696	Acute post-operative pain	Initial Phase I trial complete; separate Phase I trial ongoing; results expected in the first half of 2006	Targacept

Under our collaboration agreement with AstraZeneca, we expect AstraZeneca to initiate additional safety and product characterization studies to generate further data with respect to TC-1734 in the first quarter of 2006 before deciding whether to proceed with the planned Phase II clinical trials of TC-1734 in Alzheimer's disease and cognitive deficits in schizophrenia. We expect AstraZeneca to complete these safety and product characterization studies within approximately 12 to 15 months after the agreement becomes effective. Our agreement with AstraZeneca becomes effective upon expiration or early termination of the Hart-Scott-Rodino waiting period applicable to the agreement.

We are currently conducting our Phase II clinical trial of TC-1734 in the United States. We previously conducted two Phase II clinical trials of TC-1734 in the United Kingdom. We are currently conducting our Phase I clinical trial of TC-2696 in France. We also previously conducted our initial Phase I clinical trial of TC-2696 in France. We are currently conducting our Phase II clinical trial of mecamylamine hydrochloride in the United States and India.

Cognitive Impairment

We are developing TC-1734 in collaboration with AstraZeneca as an oral treatment for Alzheimer's disease, cognitive deficits in schizophrenia and potentially other conditions marked by cognitive impairment, such as ADHD, AAMI and MCI.

TC-1734

TC-1734 is a novel small molecule. We are currently conducting a Phase II clinical trial of TC-1734 in AAMI to further assess its effects on cognition in a cognitively impaired elderly population. In 2004, we completed a Phase II clinical trial of TC-1734 in 71 elderly persons with AAMI and a Phase II clinical trial of TC-1734 in 36 elderly persons classified with MCI, a condition marked by cognitive impairment that is more severe than AAMI but less severe than Alzheimer's disease. We had previously evaluated TC-1734 in 84 healthy volunteers in four Phase I clinical trials.

While the exact causes of Alzheimer's disease, AAMI and MCI are unknown, the aging process is generally accompanied by a decline of cognitive function linked to a progressive deterioration and death of cells in the brain. This is known as neurodegeneration. If neurodegeneration reaches a more advanced stage, such as in Alzheimer's disease, a person becomes debilitated and unable to care for himself or herself. In addition, published third-party studies have shown that patients with Alzheimer's disease have deficient levels of acetylcholine and other key neurotransmitters in the brain. We believe that these neurotransmitter levels are also deficient, perhaps to a lesser degree, in persons with schizophrenia, AAMI and MCI.

Published third-party studies have shown a reduced number of a4ß2 NNRs in persons with dementia, suggesting the involvement of a4ß2 in cognition. In our preclinical animal studies, TC-1734 triggered activity of a4ß2, enhanced the release of acetylcholine, enhanced memory and showed meaningful separation between the doses at which positive effects on memory and side effects were first seen. In two preclinical in vitro studies that we conducted, TC-1734 protected neuronal cells from deterioration and death, a process known as neuroprotection. Based on these results and published studies that link neuroprotection to exposure to nicotine, a non-selective activator of all NNRs with particularly strong activity at a4ß2, we believe that TC-1734 has the potential to prevent or delay neurodegeneration.

In other published third-party studies, nicotine administered by injection or by patch improved attention and learning in Alzheimer's disease patients. In addition, studies have shown that Alzheimer's disease is more prevalent in non-smokers than in smokers. We believe that these studies suggest the potential of drugs that target NNRs to treat Alzheimer's disease.

In addition to Alzheimer's disease and cognitive deficits in schizophrenia, we and AstraZeneca plan to evaluate potential additional clinical development of TC-1734 for other indications such as ADHD, AAMI and MCI.

Clinical Development of TC-1734

Phase I Clinical Trials. During 2003, we completed four Phase I clinical trials of TC-1734 in 84 healthy volunteers in which the compound was well tolerated. The results of these trials are summarized below.

- In a single rising dose trial with 48 volunteers, the compound was well tolerated in doses of up to 320mg. We also observed an acceleration in brainwaves thought to be associated with positive effects on attention, suggesting that the compound had reached the brain.
- In a multiple rising dose trial with 24 volunteers, 50mg, 100mg and 200mg doses of TC-1734 were administered over a 10-day period. We observed a dose-dependent positive effect on attention at the end of the trial measured by the ability of the volunteers to focus on a particular task to the exclusion of other tasks.
- In a pharmacokinetic trial, six elderly volunteers were given a single 80mg dose to assess the compound's absorption, distribution, metabolism and excretion. We observed positive effects on memory and learning, including improved episodic memory based on word recall and picture recognition assessments. These effects lasted up to 48 hours after a single oral dose.
- In a food interaction trial, six volunteers were administered an 80mg dose with or without having eaten and the compound was well tolerated.

Completed Phase II Clinical Trials. In 2004, we completed two double blind, placebo-controlled Phase II clinical trials of TC-1734. One trial evaluated 71 elderly persons classified with AAMI and the other trial evaluated 36 elderly persons classified with MCI. We conducted the trials at multiple sites in the United Kingdom under clinical trial exemptions, the United Kingdom equivalent to an IND. The primary objective of each trial was to assess the safety and tolerability of TC-1734 in elderly subjects compared to placebo. Secondary objectives of each trial were to assess the efficacy of TC-1734 in improving cognitive function and changes in mood state. We did not observe any clinically significant effect on mood state in either trial.

In the AAMI trial, the subjects were divided into four dose groups, 50mg, 100mg, 125mg and 150mg. In the MCI trial, the subjects were divided into two dose groups, 50mg and 100mg. In both trials, each subject was initially dosed either with the applicable dose of TC-1734 or a placebo daily over a three-week period. Then, after a two-week period without being dosed, each subject was changed to be dosed with either a placebo or TC-1734, as the case may be, daily for another three-week period. We anticipated that the two-week period without dosing would allow each subject to return to a pre-treatment state prior to the beginning of the second three-week dosing period and eliminate any carryover effect of the treatment in the first dosing period on a subject's performance in the second dosing period. Each subject took TC-1734 or a placebo before eating on the day of dosing. During the trials, routine safety measures were recorded and pharmacokinetic assessments were made for each subject. In addition, subjects were assessed for changes in cognitive function before dosing and at one, two and four hours after dosing on the first day of the three-week dosing period and then again on the last day of the dosing period. Subjects were also assessed for mood state on the first and last day of the three-week dosing period. The trials were double blind, meaning that neither the subjects nor the clinical investigators knew during the trials which subjects were receiving TC-1734 and which were receiving the placebo.

In the 50mg, 100mg and 125mg arms of the AAMI trial, TC-1734 was well tolerated, with no serious adverse events reported. In the 150mg dose group, three out of eight subjects treated with TC-1734 experienced side effects such as headache, lightheadedness, dizziness and vomiting and dropped out of the trial. Because of these side effects, we ceased dosing new subjects at 150mg.

We used a computer-based test battery developed by CDR Ltd. in the AAMI and MCI trials to test for changes in cognitive function. This test battery includes measures of attention, speed of cognitive processes and memory that assess the ability to react to stimuli, recognize words and pictures and recall words. These measures are then used to make composite assessments on the following five factors:

- power of attention, which assesses the intensity of concentration;
- continuity of attention, which assesses the ability to sustain concentration;
- working memory, or short-term memory, which assesses the ability to retain for a short period of time information that has not been previously learned;
- episodic memory, or long-term memory, which assesses the ability to store, hold for an extended period of time and retrieve information of an episodic nature, such as an event, name, object, scene or appointment; and
- speed of memory, which assesses the time it takes to recall an item from memory.

CDR has indicated that its battery has been used to assess cognitive performance in over 500 clinical trials worldwide. We also used the CDR test battery in our Phase I clinical trials of TC-1734. We selected it because of its comprehensive measures and CDR’s extensive database of test results in unimpaired persons that enable assessment of clinical relevance.

The CDR test data from the AAMI and MCI trials included in this prospectus are presented on a per protocol basis. This means that, for each trial, only data from subjects who complied with at least 80% of the dosing schedule and who completed the cognitive test battery assessments on the first and last day of both three-week dosing periods are included in the efficacy analysis. The data are presented on this basis because we believe that including partial data from subjects who did not satisfy the compliance criteria would require the interpolation of a substantial amount of unavailable data and prevent an appropriate statistical analysis of the results of the trial as designed. On this basis, the AAMI data includes 20 subjects in the 50mg dose group, 20 subjects in the 100mg dose group, 19 subjects in the 125mg dose group and five subjects in the 150mg dose group. In some cases, dosing in the first three-week dosing period may have had an effect on performance on one or more factors in the cognitive test battery in the second three-week dosing period. This is referred to as treatment-by-period interaction and is identified by a statistical analysis of a dose group’s performance on a particular test factor in the first dosing period versus the dose group’s performance on that test factor in the second dosing period. In instances in which our statistical analysis indicated that a treatment-by-period interaction might have occurred for a particular dose group and a particular test factor, we have included in the results described in this prospectus only the first dosing period for that dose group for that test factor. As a result, only half of the data for that dose group for that test factor are included in the results.

Compared to subjects who received placebo, subjects who received TC-1734 in the 50mg dose group showed improvements on four of the five factors: power of attention; continuity of attention; episodic memory; and speed of memory. These results were statistically significant. A clinical trial result is statistically significant if it is unlikely to have occurred by chance. The statistical significance of clinical trial results is determined by a widely used statistical method that establishes the p-value of the results. Under this method, a p-value of 0.05 or less represents statistical significance. In the 50mg dose group, the result on the power of attention factor had a p-value of 0.001. In addition, the result on the continuity of attention factor had a p-value of 0.001, the result on the episodic memory factor had a p-value of 0.019, and the result on the speed of memory factor had a p-value of 0.010, in each case including only the first dosing period due to treatment-by-period interaction. These effects were consistent with the effects seen in our Phase I trials. Subjects in the 50mg dose group who received placebo performed better than subjects who received TC-1734 on the working memory factor. This result was not statistically significant.

The positive effects that we observed in the 50mg dose group were less pronounced in the other dose groups. In the 100mg dose group, we observed improvement in subjects who received TC-1734 only on the episodic memory factor. The result was statistically significant with a p-value of 0.022. Subjects in the 100mg dose group who received placebo performed better than subjects who received TC-1734 on the speed of memory factor at one of the time points evaluated and the result was statistically significant. In the 125mg dose group, we observed improvements in subjects who received TC-1734 on two of the factors at one of the time points evaluated, in each case including only the first dosing period due to treatment-by-period interaction. The result on the working memory factor, with a p-value of 0.034, was statistically significant. We observed a strong trend in favor of TC-1734, but not statistical significance, on the episodic memory factor, with a p-value of 0.080. The result on the speed of memory factor includes only the first dosing period due to treatment-by-period interaction. Subjects in the 125mg dose group who received placebo performed better than subjects who received TC-1734 on the speed of memory factor and the result was statistically significant. In the 150mg dose group, we observed improvement on four of the factors for the five subjects who completed the trial and received TC-1734. The results on the continuity of attention factor, with a p-value of 0.049, and the speed of memory factor, with a p-value of 0.018, were statistically significant. We observed a strong trend in favor of TC-1734, but not statistical significance, on the power of attention factor at one of the time points evaluated, with a p-value of 0.081, and on the working memory factor, with a p-value of 0.094. The results of the AAMI trial suggest that TC-1734 is well tolerated at a dose range of up to 125mg, that 150mg is the maximum tolerated dose of TC-1734 for this trial design and that the compound had positive effects on at least one aspect of cognition assessed by the CDR test battery at each tolerated dose tested.

To generate additional data related to the tolerability of TC-1734, we also tested eight elderly persons classified with AAMI at a dose of 150mg, after having eaten, using the same trial design. This enabled us to assess the impact of food on the tolerability of TC-1734 by comparing it in subjects dosed at 150mg who had eaten and in subjects dosed at 150mg who had not eaten. On a per protocol basis, we evaluated six subjects dosed at 150mg who had eaten. As we expected, the results indicated that the 150mg dose of TC-1734 was better tolerated in subjects who had eaten than in subjects who had not eaten. We observed no serious adverse events. In this dose group, we observed improvement in subjects who received TC-1734 on the continuity of attention factor at one of the time points evaluated, and the result was statistically significant with a p-value of 0.028. We also observed improvement in subjects who received TC-1734 on the speed of memory factor, including only the first dosing period due to treatment-by-period interaction. The result on the speed of memory factor was statistically significant, with a p-value of 0.0460. In addition, we observed a strong trend in favor of TC-1734, but not statistical significance, in this dose group on the episodic memory factor, with a p-value of 0.100.

As in the AAMI trial, TC-1734 was well tolerated in the MCI trial, with only one serious adverse event reported. A subject who had a history of an abnormally slow heart rate lost consciousness and was hospitalized approximately one-and-one-half weeks following the end of the dosing phase of the trial. We do not believe that this adverse event was related to TC-1734. In the 100mg dose group of the trial, subjects who received TC-1734 showed improvement on the episodic memory factor, and the result was statistically significant with a p-value of 0.044. We also observed a strong trend in favor of TC-1734, but not statistical significance, in this dose group on the working memory factor, with a p-value of 0.070, and on the speed of memory factor at one of the time points evaluated, with a p-value of 0.100. The result on the speed of memory factor includes only the first dosing period due to treatment-by-period interaction. Subjects in the 50mg dose group of the trial who received TC-1734 did not show improvement. Subjects who received placebo performed better than subjects who received TC-1734 on the working memory and speed of memory factors and those results were statistically significant. The result on the speed of memory factor includes only the first dosing period due to treatment-by-period interaction.

Ongoing Phase II Clinical Trial. We are currently conducting a double-blind, placebo-controlled Phase II clinical trial of TC-1734 in AAMI. The trial is designed to provide additional evidence as to whether TC-1734 improves cognitive performance in cognitively impaired elderly persons. We are conducting the trial at 16 sites in the United States. We have recruited 193 subjects into the trial, and it is fully enrolled. The trial design provides for three dose groups, 25mg of TC-1734, 50mg of TC-1734 and placebo. Each group is dosed once daily for 16 weeks. Subjects in the 50mg dose group receive 25mg for the first two weeks of dosing, 37.5mg for the next two weeks of dosing and 50mg for the remaining 12 weeks of dosing.

In the trial, each subject is being assessed using the CDR test battery for changes in cognitive function before dosing and at two, four and five hours after dosing on the first day of the 16-week dosing period, at eight weeks and then again on the last day of the 16-week dosing period. There are three co-primary efficacy endpoints for the trial:

- improvement on the power of attention factor of the CDR test battery as compared to placebo;
- improvement on the episodic memory factor of the CDR test battery as compared to placebo; and
- improvement in subject global impression, a standard seven-point overall cognitive improvement scale in which each subject rates himself on attention, memory and speed of thinking.

In addition, we are evaluating each subject's change from baseline on a number of other tests and scales as secondary endpoints. To obtain additional information regarding the correlation between the amount of TC-1734 present in the body and the compound's effects, we are making pharmacokinetic assessments at various points during the trial.

As of December 31, 2005, five serious adverse events were reported in connection with this trial. Because this trial is double blind, we do not yet know whether the subjects who experienced these events were dosed with TC-1734 or placebo. Three of the five subjects were diagnosed with cancer, one with breast cancer, one with lung cancer and one with melanoma, after being assigned to a dose group. The fourth subject was diagnosed with pancreatitis, or inflammation of the pancreas, during a follow-up visit after the 16-week dosing period. The fifth subject was diagnosed with a myocardial infarction, commonly known as a heart attack, after being dosed for approximately 12 weeks.

The design for this trial is adaptive, which means that interim analyses are permitted to be undertaken at prescribed intervals, and with limited effect on the statistical power of the trial, to assess whether the number of subjects included in the trial is adequate to achieve statistical significance in the trial's outcome measures. We engaged an independent statistician to conduct an interim analysis on data from the first 50 subjects who had completed the trial. In September 2005, the independent statistician informed us that the partial data considered was too small to enable him to make a recommendation whether to increase the number of subjects in the trial. The independent statistician also informed us that, based on the partial data analyzed, none of the primary efficacy endpoints had yet been met with statistical significance, although the data suggested a more or less consistent effect in favor of TC-1734 as compared to placebo across parameters and time points. The independent statistician subsequently conducted a second interim analysis on data from the first 100 subjects who had completed the trial to determine whether it would be advisable to increase the number of subjects in the trial in order to obtain a definitive trial result. In January 2006, the independent statistician recommended that we complete the trial without increasing the number of subjects. We expect the results of the trial to be available in the first half of 2006.

Plans for Future Development in Alzheimer's Disease. We believe that the effects that we observed in our completed Phase II clinical trials of TC-1734 indicate that TC-1734 has the potential to be an effective treatment for Alzheimer's disease. Our belief is based in part on the results of our Phase II clinical trial of TC-1734 in persons with MCI and the suspected relationship between MCI and Alzheimer's disease. Researchers have estimated that between 10% and 15% of persons with MCI are diagnosed with Alzheimer's disease each year. In addition, 80% of persons with MCI who participated in a third-party study were diagnosed with Alzheimer's disease within six years of being diagnosed with MCI. These data suggest that there may be a disease progression from MCI to Alzheimer's disease. Moreover, scientists have suggested that episodic memory is the earliest deficit that an Alzheimer's disease patient suffers. Published third-party studies have shown that tests that assess episodic memory best distinguish persons with Alzheimer's disease from unimpaired elderly persons. As described above, we observed positive effects on the episodic memory factor in some of the dose groups in both of our previous Phase II clinical trials of TC-1734 in persons with AAMI and MCI.

We expect AstraZeneca to initiate a double-blind, placebo controlled Phase II clinical trial of TC-1734 for the treatment of mild to moderate Alzheimer's disease in the first half of 2007. The planned trial design includes approximately 790 patients who meet DSM-IV criteria for Alzheimer's disease and who score within specified ranges on the Mini-Mental Status Exam and the global Clinical Dementia Rating scale, standardized tests often used to characterize the severity of Alzheimer's disease. We expect that patients will be randomly assigned to a dose group of 25mg, 50mg or 100mg of TC-1734, to a dose group of donepezil, a commonly prescribed treatment for mild to moderate Alzheimer's disease, or to placebo. The planned co-primary outcome measures of the trial are the Alzheimer's Disease Assessment Scale-cognitive subscale, or ADAS-Cog, the measure most often used to assess the efficacy of drugs for Alzheimer's disease, and a clinician interview-based impression of change, or CIBIC, scale. We anticipate that a cognitive test battery would also be included in the trial as a secondary measure.

Plans for Future Development in Cognitive Deficits in Schizophrenia. We believe that TC-1734 also has the potential to be an effective treatment for cognitive deficits in schizophrenia. In a 2004 survey of 46 neuroscientists and neuropharmacologists conducted in connection with a National Institute of Mental Health initiative known as Measurement and Treatment Research to Improve Cognition in Schizophrenia, or MATRICS, designed to support the development of pharmacological agents for improving the cognitive deficits in schizophrenia, deficits in attention and vigilance were identified most often as the most important cognitive deficit in schizophrenia. As described above, we observed positive effects on attention in two of the dose groups in our completed Phase II clinical trial of TC-1734 in AAMI.

We expect AstraZeneca to initiate a double-blind, placebo controlled Phase II clinical trial of TC-1734 as a therapy for the treatment of cognitive deficits in schizophrenia together with an approved therapy for the psychosis symptoms of schizophrenia in the first half of 2007. In the trial, we expect that TC-1734 will be administered together with one or more representative marketed drugs from the drug class known as atypical anti-psychotics. The planned trial design includes between 400 and 600 patients who meet DSM-IV criteria for schizophrenia. We expect that patients will be randomly assigned to a dose group of 25mg, 50mg or 100mg of TC-1734, or placebo. The planned primary outcome measure of the trial is a cognitive test battery that we expect MATRICS to identify. A number of other cognitive scales are planned as secondary measures.

Plans for Future Development in AAMI. In letters that we have received from the FDA in connection with the protocol for our ongoing Phase II trial of TC-1734 for the treatment of AAMI, the FDA informed us that it believes it is questionable whether AAMI satisfies the criteria necessary for AAMI to be recognized as a distinct clinical condition. The FDA also informed us that it is unclear whether our Phase II clinical trial design and efficacy endpoints are appropriate for measuring the clinical effect of TC-1734 in AAMI. In particular, the FDA informed us that it is unclear whether the power of attention factor of the CDR test battery is an appropriate outcome measure to use for assessing the effect of a drug on AAMI, in which the only claimed deficit is an impairment of memory. However, we believe that the results of our Phase II clinical trials of TC-1734 in AAMI and MCI and the neuroprotective effect that we observed in preclinical in vitro studies of TC-1734 suggest the potential of TC-1734 as an early treatment for progressive cognitive impairment. Based on feedback that we have received from researchers whom we believe to be leaders in this medical area, we believe that acceptance of the possibility and viability of a treatment for cognitive impairment associated with normal aging may be emerging in the medical community. AstraZeneca has agreed that it may pursue additional development and commercialization of TC-1734 for the treatment of AAMI at such time as it determines that a favorable regulatory environment exists for the introduction of products for the treatment of AAMI to the market. Even if the FDA were ultimately to be unwilling to recognize AAMI as a distinct clinical condition, we believe that our ongoing Phase II AAMI trial could benefit us and AstraZeneca in our efforts to gain marketing approval of TC-1734 for Alzheimer’s disease if the trial further establishes the safety profile of TC-1734 and further demonstrates its cognitive effects in an expanded number of cognitively impaired elderly persons.

Other TC-1734 Development Studies. In our completed clinical trials of TC-1734 and in our ongoing Phase II clinical trial of TC-1734 in AAMI, we used and are using a particular salt form of TC-1734 that we refer to as the 112 salt. We have developed an alternate salt form of TC-1734 that we refer to as the 226 salt that we and AstraZeneca plan to use in all future clinical trials of TC-1734 and to serve as the commercial form. We believe that the 226 salt will cost less to make than the 112 salt. We also believe that the 226 salt will be more soluble than the 112 salt. In the fourth quarter of 2005, we completed a bioavailability study in which a single dose of the 112 salt and a single dose of the 226 salt were administered to 12 healthy volunteers. In this study, we determined that levels of TC-1734 observed in the blood following administration of the two salts were substantially equivalent.

In addition, our agreement with AstraZeneca provides for AstraZeneca to conduct safety and product characterization studies at its expense to generate further data with respect to

TC-1734 before deciding whether to proceed with the planned Phase II clinical trials of TC-1734 in mild to moderate Alzheimer's disease and cognitive deficits in schizophrenia. These studies consist of:

- in vitro studies to assess whether TC-1734, when administered at a therapeutically-relevant dose, activates a particular protein that can activate an enzyme known as CYP1A1 that is considered by some scientists to increase susceptibility to cancer;
- a small clinical trial to characterize the cardiovascular effects of various doses of TC-1734 in persons who are extensive metabolizers and in persons who are poor metabolizers of TC-1734;
- a single-dose study in dogs to further assess TC-1734's cardiovascular effects; and
- small clinical trials to evaluate the interaction and combined effects of TC-1734 with each of paroxetine, a known inhibitor of a key enzyme involved in TC-1734's primary metabolic pathway, donepezil, a commonly prescribed treatment for mild to moderate Alzheimer's disease, and multiple commonly prescribed treatments for schizophrenia.

The drug interaction trials are designed to determine whether the metabolism or safety of TC-1734 or any of these commonly prescribed treatments is adversely affected when administered with the other drug. A drug that is generally safe when taken alone may be not be safe or may not be as safe when taken together with other drugs.

Depression/Anxiety

We are currently conducting a clinical trial of mecamylamine hydrochloride as an add-on therapy in patients with major depressive disorder. In addition, we have two preclinical product candidates for depression, TC-5214, which is one of the molecular components of mecamylamine hydrochloride, and TC-2216, which we are developing both for depression and for anxiety disorders.

Mecamylamine hydrochloride

Mecamylamine hydrochloride is the active ingredient in Inversine, which is currently our only marketed product. Inversine is approved in the United States for the management of moderately severe to severe essential hypertension. We believe that Inversine is prescribed predominantly for the treatment of neuropsychiatric disorders, including Tourette's syndrome, autism and bipolar disorder, in children and adolescents at a lower dose than is used for hypertension. Inversine has been approved for marketing since the 1950s. We acquired marketing rights to the product in August 2002 from Layton Bioscience, Inc., which had previously acquired the rights from Merck & Co., Inc. In connection with our acquisition, we assumed Layton's obligations under the agreement pursuant to which Layton acquired the rights from Merck. Pursuant to that agreement, we pay Merck an amount each year based on annual sales of Inversine, subject to a specified annual maximum. Our annual payment obligation to Merck expires in 2008.

Preliminary results of a clinical trial conducted by researchers at Yale University and reported in 2004 showed that mecamylamine hydrochloride had anti-depressant effects in patients who were not fully responding to fluoxetine hydrochloride, a commonly prescribed anti-depressant marketed as Prozac, when used as an add-on therapy to fluoxetine hydrochloride as compared to when patients were treated with fluoxetine hydrochloride and a placebo. In addition, in a third-party preclinical study published in 2004, rats lacking the ß2 NNR subunit did not respond to a known anti-depressant. We believe that this study suggests a correlation between abnormal ß2 activity and depression. We also believe that mecamylamine hydrochloride may act to normalize the activity of ß2.

Based in part on these results, we are currently conducting a clinical trial of mecamylamine hydrochloride as an add-on therapy to citalopram hydrobromide, a commonly prescribed anti-depressant marketed as Celexa, in patients with major depressive disorder. We are conducting the trial at one site in the United States and nine sites in India. The trial design provides for two phases. In the first phase, patients with a diagnosis of depression are administered 20mg to 40mg doses of citalopram over six weeks and evaluated based on improvement on the Hamilton Rating Scale, an accepted rating scale for depression, to determine whether they are responding favorably. We enrolled 349 patients into the first phase of the trial. Patients who do not respond favorably or do not respond in full are enrolled into the second phase of the trial. The second phase is double blind and placebo controlled and is designed to include approximately 160 patients. As of December 31, 2005, we have enrolled 156 patients into the second phase of the trial. In the second phase, patients are randomly assigned into dose groups of mecamylamine hydrochloride or placebo, in each case together with the established dose of citalopram, over eight weeks. Each patient that is assigned to receive mecamylamine hydrochloride is administered a 5mg dose daily for the first two weeks of the trial. Based on the investigating physician's assessment of tolerability and therapeutic response, the physician can elect to increase the dose to 7.5mg for the next two weeks or to maintain the dose at 5mg. Following the second two-week period, the investigating physician can again elect to increase the dose to 10mg for the remaining four weeks or to maintain the existing dose. The primary efficacy endpoint of the trial is improvement on the Hamilton Rating Scale as compared to placebo. We are also using several other rating scales as secondary measures.

As of December 31, 2005, one serious adverse event was reported in connection with the second phase of this trial. Because the trial is double blind, we do not yet know whether the patient who experienced the event was dosed with mecamylamine hydrochloride and citalopram or with placebo and citalopram. The patient was hospitalized due to nausea, weakness and vertigo after being dosed for approximately six weeks. While hospitalized, the patient experienced low blood pressure, abnormal heart contractions and a slow heart rate.

We plan to conduct an interim analysis of data from the trial in January 2006 to determine whether it would be advisable to increase the number of patients in the trial in order to obtain a definitive trial result. If we do not increase the number of patients for the trial following the interim analysis, we expect the results of the trial to be available in the third quarter of 2006.

TC-5214

TC-5214 is one of the enantiomers of mecamylamine hydrochloride. Enantiomers are chemical substances that are mirror images of each other and have the same chemical but potentially different biological properties. We have licensed from the University of South Florida Research Foundation rights under a pending patent application that, if issued, would provide us with coverage for the composition of TC-5214 for use as a pharmaceutical. TC-5214 has shown anti-depressant effects in several preclinical rodent models. If the results of our ongoing Phase II clinical trial of mecamylamine hydrochloride as an add-on therapy for major depressive disorder are favorable, we plan to consider accelerating the development of TC-5214 as an add-on therapy for depression in lieu of further advancement of mecamylamine hydrochloride.

TC-2216

TC-2216 is a novel small molecule that we are developing as an oral treatment for depression and anxiety disorders. Depression and anxiety disorders often occur together, and anti-depressants are often also used to treat anxiety disorders. TC-2216 showed greater potency in our preclinical studies than, and anti-depressant effects comparable to, selective serotonin reuptake inhibitors and tricyclics, which are commonly used treatments for depression. In other preclinical studies that we conducted, TC-2216 showed anxiety-relieving effects. In addition, in our preclinical in vitro studies, we found TC-2216 to act on the a4ß2 NNR to modulate the release of neurotransmitters that are involved in mood and to avoid interaction with nicotinic receptors in the muscles and ganglia that are associated with side effects. We plan to conduct the additional preclinical safety studies necessary to support the filing in the second half of 2006 of an IND for clinical trials of TC-2216.

A number of reported studies in humans and animals have linked nicotine to improvements in symptoms of depression. In one of these studies, nicotine administered via patch produced short-term improvements in symptoms in patients with depression based on a significant reduction in scores on the Hamilton Rating Scale after the second day. Because many current anti-depressants do not take effect for two to four weeks, the rapid onset of action of nicotine suggests a potentially significant advantage for drugs that target NNRs to treat depression.

Pain

We are developing TC-2696 for acute post-operative pain. Depending on clinical trial results, available resources and other considerations, we may pursue development of TC-2696 for other classes of pain in addition to or instead of acute post-operative pain.

TC-2696

TC-2696 is a novel small molecule that we are developing as an oral treatment for acute post-operative pain. We have completed a Phase I clinical trial of TC-2696. TC-2696 demonstrated pain-relieving effects in models of acute, chronic and inflammatory nociceptive pain and of neuropathic pain with comparable or higher potency in preclinical animal models than morphine or indomethacin, the generally accepted standards of comparison. In these studies, the compound was rapidly absorbed and demonstrated an acceptable toxicology profile.

In our preclinical in vitro studies of TC-2696, we found the compound to be a potent activator of the a4ß2 NNR and to avoid interaction with nicotinic receptors in the muscles and ganglia that are associated with side effects. Published studies conducted by third parties have shown that compounds that activate a4ß2 have pain-relieving effects in animals. We believe these effects are caused in part by the activation of NNRs that are abundant in CNS pathways to block the transmission of pain signals to the brain. In contrast, opioids act through a different mechanism of action. In our preclinical animal studies, TC-2696 did not result in tolerance following repeated administration. This suggests a potential advantage of TC-2696 compared to existing treatments for acute post-operative pain.

Clinical Development of TC-2696

Completed Phase I Clinical Trial. In 2004, we completed a placebo-controlled Phase I single rising dose clinical trial of TC-2696 conducted to determine its safety and tolerability profile in healthy volunteers. The trial was conducted in France with 44 healthy volunteers divided into dose groups of 2mg, 5mg, 10mg, 20mg, 50mg, 100mg, 150mg and 200mg. In the trial, TC-2696 was well tolerated at doses of up to 150mg. At 150mg, we observed mild to moderate dizziness and lightheadedness. At 200mg, we observed nausea, vomiting and elevated blood pressure and heart rate.

We included a surrogate measure in our Phase I clinical trial of TC-2696 to provide an indication of the potential efficacy of this product candidate as a treatment for pain. The surrogate measure involved the use of a metal probe, which emitted increasing amounts of heat. We asked participants to indicate when the heat became painful. We then assessed the amount of heat that was necessary at various time intervals following dosing with TC-2696 for participants to feel pain as compared to the amount of heat that was necessary for participants dosed with placebo to feel pain. Using this surrogate measure, we observed a drug effect in participants at one or more time intervals in each of the 5mg, 10mg, 50mg and 150mg dose groups.

Ongoing Phase I Clinical Trial. We are currently conducting a Phase I multiple rising dose clinical trial to further assess the safety and tolerability profile of TC-2696. The trial design provides for 24 healthy volunteers to be randomized into three dose groups, 25mg, 50mg and 100mg. In each dose group, six subjects receive TC-2696 twice per day and two subjects receive placebo. As of December 31, 2005, we have completed the dosing phase of the trial for both the 25mg and 50mg dose groups. TC-2696 was generally well tolerated in both of these dose groups. All of the volunteers in the 25mg dose group and all but two of the volunteers in the 50mg dose group completed the trial. Of the two volunteers in the 50mg dose group who did not complete the trial, one discontinued participation due to elevated heart rate and dizziness and the other discontinued participation due to anguish and malaise. Because we replaced one of these two discontinued volunteers, seven total subjects in the 50mg dose group completed the trial. In the 100mg dose group, we suspended further dosing after two of three volunteers discontinued participation in the trial due to dizziness, nausea and, in one case, vomiting. Both of these volunteers had received a single dose of TC-2696 prior to discontinuing participation in the trial. We did not see comparable effects at 100mg in our completed single rising dose trial of TC-2696. Based on in vitro metabolism studies of TC-2696 that we subsequently conducted, we currently believe that the different effects of 100mg in our single rising dose trial and our multiple rising dose trial may be due to the primary metabolic pathway of TC-2696 and genetic differences with respect to that pathway. We are currently exploring potential causes of the different effects and plan to evaluate whether to continue dosing at 100mg following the completion of our analysis.

In addition to assessing safety and tolerability, we are also using the same surrogate measure that we used in our completed Phase I single rising dose trial of TC-2696 in this Phase I multiple rising dose trial to provide an indication of the potential efficacy of this product candidate as a treatment for pain. We expect the results of this trial to be available in the first half of 2006. If the results are favorable, we plan to advance TC-2696 into Phase II clinical development.

Discontinued Clinical Development

In December 2004, we discontinued clinical development of two compounds that were not designed using our Pentad drug discovery technology. We elected to discontinue development of our compound TC-5231, which we had been developing as a treatment for attention deficit hyperactivity disorder, after we determined that, while well tolerated in the trial population of children and adolescents between the ages of 6 and 17, it failed to meet defined efficacy endpoints in a Phase II clinical trial. TC-5231 is a low-dose reformulation of mecamylamine hydrochloride, the active ingredient in our product Inversine.

We and Dr. Falk Pharma elected to discontinue development of our compound TC-2403, which we had been developing in collaboration with Dr. Falk Pharma in an enema formulation as a treatment for ulcerative colitis, after we determined that it failed to meet defined efficacy endpoints in a Phase II clinical trial. Pursuant to the terms of a collaboration agreement that we entered into with Dr. Falk Pharma, we shared the development costs of TC-2403 evenly with Dr. Falk Pharma.

Our Preclinical Research Programs

We focus our preclinical research efforts in areas in which we believe NNRs can be exploited for medical benefit and on indications for which we believe we can efficiently develop marketable product candidates. In selecting our target indications, we have considered a number of factors, including:

- the availability of preclinical or clinical data that suggest the relevance of NNRs to the indication;
- the size of the potential market opportunity for the indication;
- the projected development time required for a product candidate for the indication to reach the market;
- input received from scientific and medical experts in the indication at meetings that we convene; and
- the existence of well-defined clinical endpoints to assess the efficacy of a product candidate in the treatment of the indication.

Based on our consideration of these factors, we currently have a preclinical research collaboration under our agreement with AstraZeneca to discover and develop additional compounds that act on the a4ß2 NNR. We also have a preclinical research program focused on identifying and developing compounds that selectively target the a7 NNR and other preclinical research programs in smoking cessation and obesity, in addition to our preclinical product candidates for depression. Our current research objective is to file at least one IND or foreign equivalent each year beginning in 2006.

a7

A number of published studies have indicated an association between the a7 NNR and schizophrenia. Schizophrenia is a chronic, severe and disabling form of psychosis. In a 2004 survey of 46 cognitive neuroscientists and neuropharmacologists conducted in connection with the MATRICS initiative, a7 was selected more often than any other target as the target of most interest in the development of treatments for cognitive deficits in schizophrenia. Other published studies have suggested an association between the a7 NNR and cognitive function. Accordingly, we believe that the compounds that act selectively on the a7 NNR, or that act selectively on both the a7 and a4ß2 NNRs, may be useful in treating either or both of schizophrenia and cognitive impairment. We also believe that compounds that act on the a7 NNR may be exploited to treat inflammation.

We have selected a lead compound that we refer to as TC-5619 that acts selectively on the a7 NNR. We plan to conduct the additional preclinical studies necessary to support the filing in 2007 of an IND for clinical trials of TC-5619. If we seek to exploit TC-5619 as a treatment for Alzheimer's disease, cognitive deficits in schizophrenia, other conditions marked by cognitive impairment or schizophrenia, we have the right prior to filing an IND to offer to AstraZeneca the right to develop and commercialize TC-5619 under the terms of the agreement. If we do not offer TC-5619 to AstraZeneca, we are generally not permitted to develop or commercialize TC-5619 for any of these indications. However, we would be permitted to pursue the development and commercialization of TC-5619 for other indications.

Smoking Cessation

Due primarily to nicotine's addictive effects, it is very difficult to quit smoking. Published animal studies have linked nicotine's addictive effects to the release of dopamine in regions in the brain involved in feelings of reward and pleasure. Although the specific NNR implicated in the regulation of dopamine is not fully characterized, several reported studies suggest that the a6, a4 and ß4 NNRs may be involved. These studies have shown that selectively blocking a6, a4 or ß4 reduced the rewarding effects of nicotine in mice. Other studies have shown that mice deficient in the ß2 NNR failed to respond to nicotine and had reduced activity in the brain regions associated with reward and pleasure. We are evaluating a number of compounds in a variety of animal models of smoking cessation and nicotine dependence for advancement in our smoking cessation program.

Obesity

A number of published studies have demonstrated that non-smokers generally weigh significantly more than smokers, and nicotine is believed to be responsible. These studies have also shown that smokers gain weight when they stop smoking. Moreover, reported studies with animals have shown that food intake and body weight gain are reduced following repeated administration of nicotine and that the effects are reversed when the nicotine administration is stopped.

As part of our evaluation of our compounds for other indications, we also assess each compound for a preliminary signal of its ability to induce weight loss. We are collecting this data and currently plan to conduct additional preclinical evaluation of the most promising compounds for obesity in 2006.

Our Drug Discovery Technologies—Pentad

We use proprietary databases and computer-based molecular design technologies to identify promising product candidates. We refer to these technologies collectively as Pentad.

We designed Pentad to predict the likelihood that novel compounds will interact with various NNRs, the degree of the interaction and the potential of these compounds to be developed as drugs based on projected pharmacokinetic profiles. Pentad consists of sophisticated computer-based simulation methodologies and extensive biological data from a library of diverse compounds that we have developed and gathered over more than 20 years. To date, we have applied Pentad specifically in the discovery and optimization of NNR-targeted therapeutics, but we believe it has application to a wide range of targets.

Pentad's virtual screening enables us to more rapidly identify clinically-viable compounds than we believe could be achieved using traditional laboratory synthesis and screening methods. This allows us to reduce drug development time by focusing our resources on compounds that we believe have a greater likelihood of clinical success. We used Pentad to design or optimize TC-1734, TC-2696, TC-2216 and TC-5619.

Our use of Pentad to design new classes of compounds selective for the a7 NNR is an example of its capabilities. We conducted virtual screening of nearly 11,000 compounds and, based on the results, synthesized 115 of them. In preclinical tests, 43 of the synthesized compounds were highly selective to the a7 NNR, showed low binding affinity for NNRs involved in side effects, were bioavailable and passed the blood-brain barrier. We identified the

43 compounds in only six months and are currently evaluating many of these compounds, including TC-5619, as part of our schizophrenia program.

Strategic Collaborations

AstraZeneca AB

In December 2005, we entered into a collaborative research and license agreement with AstraZeneca AB under which we granted AstraZeneca exclusive development and worldwide commercialization rights to TC-1734 as a treatment for specified indications. Effectiveness of the agreement is subject to expiration or early termination of the Hart-Scott-Rodino Act waiting period applicable to the agreement. Under the agreement, AstraZeneca has agreed to pursue development and commercialization of TC-1734 as a treatment for Alzheimer's disease and cognitive deficits in schizophrenia. AstraZeneca has also agreed to pursue development and commercialization of TC-1734 as a treatment for ADHD if TC-1734 achieves the primary efficacy endpoints in a Phase II clinical trial for Alzheimer's disease or cognitive deficits in schizophrenia or a Phase III clinical trial of TC-1734 is otherwise initiated for Alzheimer's disease or cognitive deficits in schizophrenia. In addition, AstraZeneca can develop and commercialize TC-1734 for AAMI, MCI, any other indication that is deemed a cognitive disorder under the agreement and schizophrenia. We and AstraZeneca have also agreed to initiate a preclinical research collaboration under the agreement.

Payment Terms. AstraZeneca has agreed to pay us an initial fee of $10 million upon effectiveness of the agreement. AstraZeneca has also agreed to make an additional payment of $20 million to us if it decides to conduct a Phase II clinical trial of TC-1734 following the completion of additional safety and product characterization studies that AstraZeneca will conduct at its expense to generate further data with respect to TC-1734. These studies are described in greater detail under "—Cognitive Impairment—Clinical Development of TC-1734—Other TC-1734 Development Studies." We are eligible to receive other payments of up to $249 million, contingent upon the achievement of development, regulatory and first commercial sale milestones for TC-1734 for Alzheimer's disease, cognitive deficits in schizophrenia and ADHD, and stepped double-digit royalties on future TC-1734 product sales. If TC-1734 is developed under the agreement for indications other than Alzheimer's disease, cognitive deficits in schizophrenia and ADHD, we would also be eligible to receive payments, contingent upon the achievement of development, regulatory and first commercial sale milestones for TC-1734 for those indications. Under the terms of a sponsored research agreement and subsequent license agreement, we are required to pay the University of Kentucky Research Foundation a low single digit percentage of any of these payments, including royalties, that we receive from AstraZeneca relating to TC-1734.

AstraZeneca's obligation to pay royalties to us for each compound subject to the collaboration expires on a country-by-country basis on the later of expiration of our patent rights that provide exclusivity for that compound in that country or twelve years after the first commercial sale in that country of either that compound or any related compound that meets specified criteria. If AstraZeneca obtains a patent covering the composition of a compound that is derived within a specified period from a compound that is subject to the collaboration, the term of AstraZeneca's patent would also be taken into account in determining the term of AstraZeneca's obligation to pay royalties to us for that derived compound. The U.S. patent rights to TC-1734 expire between 2016 and 2018. We also have a pending U.S. patent application that, if issued, would expire in 2025. The corresponding foreign patent rights expire between 2017 and 2019. We also have foreign patent applications that, if issued, would expire between 2017 and 2025. Royalty rates are subject to reduction under the agreement in specified circumstances, including in any country if the licensed compound is no longer subject to adequate patent protection in that country or if AstraZeneca licenses patent rights from any third party under circumstances in which the product that we license to AstraZeneca might infringe the third party's patent rights.

Research Collaboration. The agreement provides for a research collaboration under which we and AstraZeneca will conduct research designed to discover and develop additional compounds that, like TC-1734, act on the a4ß2 NNR. AstraZeneca has the right to exclusively license a specified number of these compounds, together with metabolites of these compounds and derivatives and other compounds related to these compounds that meet specified criteria for the same indications for which AstraZeneca has development and commercialization rights for TC-1734. Under the agreement, we are eligible to receive additional payments of up to $145 million, contingent upon the achievement of development, regulatory and first commercial sale milestones for each compound discovered and developed as part of the research collaboration, and stepped royalties on future product sales. The initial term of the research collaboration is four years and can be extended by mutual agreement. AstraZeneca can terminate the research collaboration upon at least six months notice effective three years after the research term begins.

Research Fees. While AstraZeneca is conducting the additional safety and product characterization studies on TC-1734, AstraZeneca has agreed to pay us research fees equal to 50% of our research expenses in the collaboration, subject to a specified limit. If our agreement with AstraZeneca continues in effect following the completion of the safety and product characterization studies, AstraZeneca has agreed to pay us additional research fees equal to the remaining 50% of our research expenses incurred while those studies were conducted and thereafter additional research fees equal to 100% of our research expenses in the collaboration, subject to specified limits. If the agreement continues in effect following the completion of the safety and product characterization studies, we would be entitled to receive a minimum of $23.7 million in aggregate research fees over the four-year term of the research collaboration. Based on the current budget for the research collaboration, we expect to receive approximately $26.4 million in aggregate research fees under the agreement.

Development and Commercialization Costs. AstraZeneca is responsible for the clinical development and commercialization of TC-1734 and any compounds that arise out of the research collaboration that it elects to advance and has agreed to assume substantially all development costs, except for costs to complete our ongoing Phase II clinical trial of TC-1734 in AAMI. We have the option to co-promote TC-1734 and any compound discovered in the research collaboration in the United States to specified classes of specialist physicians. If we exercise our co-promotion option, AstraZeneca is required to provide training to our sales force and compensate us for our detailing efforts following regulatory approval.

Exclusivity Rights and Restrictions. Neither we nor AstraZeneca are permitted outside of the collaboration to develop or commercialize compounds that act on the a4ß2 NNR and meet pre-defined criteria for Alzheimer's disease, cognitive deficits in schizophrenia, other conditions marked by cognitive impairment, schizophrenia or any indication for which AstraZeneca has development and commercialization rights under the agreement. This restriction on AstraZeneca lapses 30 months after the end of the research term. This restriction on us will lapse if AstraZeneca commences clinical development outside of the collaboration for a compound that acts on the a4ß2 NNR and meets pre-defined criteria.

We are entitled to offer to AstraZeneca the right to develop and commercialize (1) any compound for which AstraZeneca has development and commercialization rights for specified indications under the agreement or (2) any other compound that meets pre-defined criteria for cognitive activity, is in the same chemical family and acts on the same NNR or NNRs as any compound for which AstraZeneca has development and commercialization rights for specified indications under the agreement for any indication for which AstraZeneca does not have development and commercialization rights under the agreement. If we do not offer this right to AstraZeneca for a compound that acts on any NNR other than the a4ß2 NNR, we are not permitted to develop or commercialize the compound for any indication for which AstraZeneca has development and commercialization rights under the agreement. If we offer a compound to AstraZeneca, AstraZeneca could license the compound from us, together with metabolites of the compound and derivatives and other compounds related to the compound that meet specified criteria, under terms specified in the agreement. Alternatively, AstraZeneca could negotiate a development plan with us pursuant to which we would conduct development intended to provide a pre-defined indication of efficacy. AstraZeneca could license the compound from us after we complete the additional development. For each compound licensed by AstraZeneca through this process, we are eligible to receive payments of up to $266 million, contingent upon the achievement of development, regulatory and first commercial sale milestones, as well as stepped royalties on future product sales. If AstraZeneca elects not to license the compound, we are permitted to develop and commercialize the compound for any indication, except that, if we had offered the compound to AstraZeneca for schizophrenia, we will not be able to develop or commercialize the compound for any cognitive disorder. The agreement limits the number of compounds that we are permitted to offer to AstraZeneca through this process. We are generally not permitted to develop or commercialize compounds that act on any NNR for any indication for which AstraZeneca has development and commercialization rights under the agreement except through this process.

If AstraZeneca commences clinical development outside of the collaboration of a compound that acts on any NNR other than the a7 NNR and meets other pre-defined criteria, the restriction on our right to develop and commercialize compounds that act on any NNR, other than the a4ß2 NNR, for any indication for which AstraZeneca has development and commercialization rights under the agreement will lapse.

If, in the future, we seek a strategic collaborator to develop or commercialize compounds for depression, anxiety or bipolar disorder, AstraZeneca has a right of first negotiation with us. If we and AstraZeneca do not agree on terms on which we would collaborate for these indications, for the following three years we would only be permitted to enter into a collaboration for those indications on more favorable terms than the terms offered by AstraZeneca.

Termination. AstraZeneca can terminate the agreement if it determines in its sole discretion within 15 months after the effective date of the agreement not to proceed with the further development of TC-1734 based on the results of the additional safety and product characterization studies that it conducts and all other factors relevant to TC-1734. In that event, we will be required to reimburse AstraZeneca for the amount of all research fees that it paid to us under the a4ß2 research collaboration while it conducted those studies and to pay AstraZeneca an additional $5 million as compensation for assigning to us the data and any intellectual property generated in the studies. AstraZeneca can also terminate the agreement without cause upon 90 days notice given any time after the earlier of the end of the research term and four years after the research term begins. We can terminate the agreement within 30 days after the end of the period in which AstraZeneca can terminate the agreement based on its determination not to proceed with the further development of TC-1734 if AstraZeneca has not notified us that it has decided to conduct a Phase II clinical trial of TC-1734. Either we or AstraZeneca can terminate the agreement in the event of the bankruptcy or uncured material breach of the other party. However, if a breach by AstraZeneca is limited to any specific compound or specified key market, we can terminate the agreement only with respect to that compound or key market. If a competitor of AstraZeneca acquires control of us, AstraZeneca can terminate the agreement or specified provisions of the agreement, including our right to participate on the committee overseeing development under the agreement and our co-promotion rights.

Aventis Pharma SA

In January 2002, we entered into a collaborative research, development and commercialization agreement with Aventis relating to the development and commercialization of Aventis compounds for Alzheimer's disease and other CNS disorders. The research term of the agreement expired in December 2004. No Aventis compounds were advanced into clinical development during the research term or within six months after expiration of the research term. As a result, we are not eligible to receive any further payments under the agreement.

There are two series of compounds that Aventis initially selected for advancement under the agreement, but ultimately elected not to develop under the agreement. Under the terms of the agreement, these Aventis compounds are available to us for in-licensing for use in indications other than the treatment or prevention of CNS disorders or for use in specified CNS indications if Aventis is not developing its own product for those indications, subject to our making milestone and royalty payments to Aventis. Our right to in-license these compounds expires on June 30, 2007. We do not currently expect to exercise our in-licensing rights.

In addition, in January 2002, we had also entered into an amended and restated collaborative research and license agreement with Aventis for the development and commercialization of specified Targacept compounds, including TC-1734, for the treatment or prevention of Alzheimer's disease. This agreement terminated effective January 2, 2005. While the agreement was in effect, both we and Aventis were restricted from developing or commercializing compounds with specified activity at the a4ß2 or a7 NNRs for Alzheimer's disease, except under either the agreement or our other collaboration agreement with Aventis described above.

The Stanley Medical Research Institute

On December 15, 2004, we entered into a development agreement for one of our compounds with The Stanley Medical Research Institute, or SMRI, a nonprofit organization that supports research and development of treatments for schizophrenia. We and The Stanley Medical Research Institute terminated the development agreement in December 2005 after we entered into our collaboration agreement with AstraZeneca.

Patents and Proprietary Rights

We actively seek to protect the proprietary technology that we consider important to our business, including chemical species, compositions and forms, their methods of use and processes for their manufacture, as well as modified constructs of naturally-expressed receptors, in the United States and other key pharmaceutical markets. We also rely upon trade secrets and contracts to protect our proprietary information.

As of January 10, 2006, our patent estate includes 58 patents issued in the United States and 18 patent applications pending in the United States, including four U.S. patent applications that have been allowed but have not yet issued, and numerous issued patents and pending patent applications in countries other than the United States. Our issued patents and pending patent applications in the United States include composition of matter coverage on a number of different structural families of compounds. The actual protection afforded by a patent varies from country to country and depends upon many factors, including the type of patent, the scope of its coverage and the availability of legal remedies in a particular country.

Individual patents extend for varying periods depending on the date of filing of the patent application or the date of patent issuance and the legal term of patents in the countries in which they are obtained. In the United States, The United States Drug Price Competition and Patent Term Restoration Act of 1984, known as the Hatch-Waxman Act, permits a patent extension term of up to five years as compensation for patent term lost during the FDA regulatory review process. Patent extension cannot extend the remaining term of a patent beyond a total of 14 years. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of an NDA, plus the time between the submission date of an NDA and the approval of that application. Only one patent applicable to an approved drug is eligible for the extension, and the extension must be applied for prior to expiration of the patent. The United States Patent and Trademark Office, in consultation with the FDA, reviews and approves applications for patent term extension. We expect to consider applying for patent term extensions for some of our current patents, to add patent life beyond the expiration date, depending on the expected length of clinical trials and other factors involved in the filing of a new drug application.

We consider the following United States patents that we own or license to be most important to the protection of our most advanced product candidates.

Area of Therapeutic Focus	Product Candidate	Patent Scope	Patent Expiration
Cognitive Impairment	TC-1734	Composition of matter for TC-1734	June 2018
		Composition of matter for a family of compounds that includes TC-1734	April 2016
		Methods of use of a family of compounds that includes TC-1734 for treatment and prevention of CNS disorders	February 2017
Depression/Anxiety	Mecamylamine hydrochloride	Methods of use of mecamylamine for nicotine-responsive psychiatric disorders, including depression	September 2017
	TC-5214	Methods of use of S-mecamylamine for neuropsychiatric disorders, including depression	December 2019
	TC-2216	Composition of matter for a family of compounds that includes TC-2216	June 2023
Pain	TC-2696	Composition of matter for TC-2696 (allowed)	June 2018
		Composition of matter for a family of compounds that includes TC-2696	April 2016
		Method of use of a family of compounds that includes TC-2696 for eliciting an analgesic effect	August 2017

In addition to these patents and patent applications, we have later-expiring patents relating to some of these product candidates that cover a particular form or composition, use as part of combination therapy or method of preparation or use. These patents could provide additional or a longer period of protection. We also have patent applications pending that seek equivalent or substantially comparable protection for our product candidates in key international markets.

License Agreements

We are parties to four license agreements that are important to our business.

University of South Florida Research Foundation

Pursuant to a license agreement with the University of South Florida Research Foundation, or USFRF, we hold an exclusive worldwide license to patents and patent applications owned by USFRF for use in the development and commercialization of mecamylamine hydrochloride and other specified compounds. The licensed patents and patent applications include an issued patent covering methods of use for the treatment of depression, ADHD, Tourette's syndrome and nicotine-responsive neuropsychiatric disorders and pending patent applications covering the pharmaceutical composition of the molecular components of mecamylamine hydrochloride. Under the agreement, we are obligated to pay to USFRF:

- an annual license fee until a new drug application or its equivalent is filed to cover the use of a product subject to the license to treat a neuropsychiatric disorder;
- an annual fee to maintain our rights of first refusal to acquire rights to the licensed patents and patent applications beyond the scope of our current license;
- royalties on net sales of products subject to the license or a percentage of royalties received from a sublicensee;
- aggregate payments of up to $200,000 based on the achievement of specified regulatory milestones; and
- a percentage of other amounts that we receive from a sublicensee.

The aggregate annual license fees are creditable, up to a specified amount per year, against future royalties.

We are required to use commercially reasonable efforts to develop or to market and sell a product covered by the agreement. In particular, we are required to spend a specified minimum amount on research and development of products covered by the agreement each year until we receive marketing approval for a covered product. If USFRF believes that we are not meeting our diligence obligation, it is entitled to terminate the agreement following a cure period. If we do not agree with USFRF's determination, we can submit the matter to binding arbitration. In addition, if we have not received marketing approval of a product covered by the agreement on or before December 31, 2012, USFRF can make our license nonexclusive.

We may terminate the agreement at any time. If not earlier terminated, the agreement will terminate upon expiration of the last to expire of the licensed patent rights.

Virginia Commonwealth University Intellectual Property Foundation

Pursuant to a license agreement with Virginia Commonwealth University Intellectual Property Foundation, or VCUIPF, we hold a non-exclusive worldwide license to patents covering a method of use of a family of compounds that includes TC-2696 for eliciting an analgesic effect. Under the agreement, we are obligated to pay to VCUIPF:

- an annual license fee and an additional annual fee to maintain the right at any time to convert the license into an exclusive license for an additional fee;
- royalties on net sales of products subject to the license or a percentage of amounts received from a sublicensee; and
- aggregate payments of up to $900,000 based on the achievement of specified development and regulatory milestones.

We are required to use reasonable efforts to bring one or more products covered by the agreement to market. We may terminate the agreement at any time with 90 days notice. If the agreement is not earlier terminated, our obligation to pay royalties under the agreement will terminate upon expiration of the licensed patent rights.

Wake Forest University Health Sciences

Pursuant to a license agreement with Wake Forest University Health Sciences, or WFUHS, we hold an exclusive worldwide license to patents covering a method of use of a family of compounds that includes TC- 2696 for the treatment of chronic or female-specific pain. Under the agreement, we paid WFUHS a non-refundable upfront license fee of $25,000 and are obligated to pay to WFUHS:

- royalties on net sales of products subject to the license or, if less, a percentage of amounts received from a sublicensee;
- aggregate payments of up to $878,000 per product subject to the license based on the achievement of specified development and regulatory milestones; and
- a percentage of other amounts that we receive from a sublicensee.

We are required to use commercially reasonable efforts to pursue the development of at least one product covered by the agreement and to bring at least one such product to market. We may terminate the agreement at any time with 60 days notice. If not earlier terminated, the agreement will terminate upon expiration of the last to expire of the licensed patent rights.

University of Kentucky Research Foundation

Pursuant to a sponsored research agreement, the University of Kentucky Research Foundation, or UKRF, agreed to assign to R.J. Reynolds Tobacco Company UKRF's rights to inventions that resulted in patents related to TC-1734, TC-2696 and other earlier-stage compounds in our portfolio. These patents were subsequently assigned by RJR to us in August 2000. Under the sponsored research agreement and a subsequent license agreement with UKRF, we are obligated to pay royalties to UKRF based on amounts received from any licensee of these patents, including AstraZeneca. In addition, under the license agreement, RJR paid UKRF an upfront license fee of $20,000.

Trade Secrets

In addition to patents, we rely upon unpatented trade secrets and know-how and continuing technological innovation to develop and maintain our competitive position. For example, we maintain Pentad as an unpatented trade secret. We seek to protect our proprietary information, in part, using confidentiality agreements with our commercial partners, collaborators, employees and consultants and invention assignment agreements with our employees. We also have confidentiality agreements or invention assignment agreements with some of our commercial partners and consultants. These agreements are designed to protect our proprietary information and, in the case of the invention assignment agreements, to grant us ownership of technologies that are developed through a relationship with a third party. These agreements may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our commercial partners, collaborators, employees and consultants use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Sales and Marketing

We currently have limited sales and distribution capabilities and limited experience in marketing and selling pharmaceutical products. Our current strategy is to selectively enter into collaboration agreements with third parties for target indications in which our potential collaborator has particular expertise or that involve a large, primary care market that must be served by large sales and marketing organizations. In entering into these collaboration agreements, our goal will be to maintain co-promotion or co-commercialization rights in the United States and, in some cases, other markets. In order to implement our strategy successfully, we must develop a specialized sales and marketing organization with sufficient technical expertise. Our product currently available in the market, Inversine, is distributed by a third party pursuant to an exclusive distribution agreement.

Manufacturing

All of our product candidates are compounds of low molecular weight, commonly referred to as small molecules. We have selected these compounds in part for their ease of synthesis and the low cost of their starting materials. All of our current product candidates are manufactured in a simple synthetic process from readily available starting materials. We expect to continue to develop drug candidates that can be produced cost-effectively by third-party contract manufacturers.

We are able to manufacture the quantities of our product candidates necessary for relatively short preclinical toxicology studies ourselves. We believe that this allows us to accelerate the drug development process by not having to rely on a third party for all of our manufacturing needs. However, we do rely and expect to continue to rely on a number of contract manufacturers to produce enough of our product candidates for use in more lengthy preclinical research. We also depend on these contract manufacturers to manufacture our product candidates in accordance with current good manufacturing practices, or cGMP, for use in clinical trials. We will ultimately depend on contract manufacturers for the manufacture of our products for commercial sale, as well as for process development. Contract manufacturers are subject to extensive governmental regulation.

Third parties currently manufacture Inversine and its active ingredient for us. Also, we have entered into a development and production agreement with Siegfried Ltd. Under this agreement, Siegfried has agreed to provide us with process development services and clinical trial material at specified rates for product candidates that we elect to introduce into the agreement. We have also agreed, following marketing approval or anticipated marketing approval of any product candidate for which Siegfried performs services under the agreement, to negotiate for a separate multi-year commercial supply agreement with Siegfried for a substantial percentage of our contracted supply needs for that product candidate, except in limited circumstances. Beginning in February 2006, either we or Siegfried can terminate the agreement at any time on 12 months notice or immediately in the event of an uncured material breach by the other party.

Competition

Our industry is subject to rapid and intense technological change. We face, and will continue to face, worldwide competition from biotechnology, biopharmaceutical and pharmaceutical companies, research institutions, government agencies and academic institutions. Many of these competitors are established in the CNS field and are developing and commercializing pharmaceutical products that would compete with our product candidates that are approved for marketing. Many of our competitors and potential competitors have more resources than we do and have already successfully developed and marketed drugs. Mergers and acquisitions in the pharmaceutical industry may result in even greater resources being concentrated in our competitors.

We also face substantial competition from therapies designed to target NNRs. We are aware of several prominent pharmaceutical companies with product candidates designed to target NNRs in development, including Pfizer, with an NNR-targeted compound for which it has filed an NDA for smoking cessation, Sanofi-Aventis, with an NNR-targeted compound that has completed a Phase II clinical trial for smoking cessation, and Abbott Laboratories, with an NNR-targeted compound in Phase II for Alzheimer’s disease, ADHD and schizophrenia and a second NNR-targeted compound in Phase I for pain. In addition, we believe that other companies have active NNR-based research programs, including Merck & Co., AstraZeneca, Eli Lilly, Memory Pharmaceuticals, Critical Therapeutics and NeuroSearch A/S. We expect to face increased competition in the future if NNR-targeted therapeutics are further validated and if companies initiate or grow NNR-based programs or otherwise enter the CNS market.

In addition, there are several pharmaceutical companies in the United States and globally that currently market and sell drugs for indications that we are targeting. There is currently no approved product either for cognitive deficits in schizophrenia or AAMI. We believe that the primary competitive products for use in indications that we are currently targeting include:

- for mild to moderate Alzheimer’s disease, acetylcholinesterase inhibitors such as Aricept from Pfizer/Eisai, Reminyl from Johnson & Johnson and Exelon from Novartis and for moderate to severe Alzheimer’s disease, Namenda from Forest Laboratories, which acts by regulating the neurotransmitter glutamate;
- for pain, non-steroidal anti-inflammatory drugs such as Celebrex from Pfizer and opioids such as OxyContin from Purdue Pharma;
- for depression, selective serotonin reuptake inhibitors such as Prozac from Eli Lilly, Paxil/Seroxar from GlaxoSmithKline, Zoloft from Pfizer, Celexa from Forest Laboratories and Lexapro from Forest Laboratories and the dual uptake inhibitor Effexor from Wyeth;

- for schizophrenia, anti-psychotics such as Seroquel from AstraZeneca, Zyprexa from Eli Lilly, Risperdal from Johnson & Johnson, Geodon from Pfizer and Abilify from Bristol-Myers Squibb; and
- for smoking cessation, Zyban from GlaxoSmithKline.

Many of these products have well-known brand names, are distributed by large pharmaceutical companies with substantial resources and have achieved widespread acceptance among physicians and patients. Furthermore, pharmaceutical and biotechnology companies are currently developing additional treatments for the indications that we are targeting that may be approved for marketing and sale prior to any approval of our product candidates.

We expect to compete based upon, among other things, the efficacy of our products and favorable side effect profiles. Our ability to compete successfully will depend on our continued ability to attract and retain skilled and experienced scientific, clinical development and executive personnel, to identify and develop viable product candidates and to exploit these products and compounds commercially before others are able to develop competitive products. In addition, our ability to compete may be affected by insurers and other third-party payors encouraging the use of generic products. This may have the effect of making branded products less attractive from a cost perspective to buyers.

Government Regulation

Drug Regulation in the United States

The research, preclinical and clinical testing, manufacture and marketing of drug products are extensively regulated by the FDA and other governmental authorities in the United States. The Federal Food, Drug and Cosmetic Act and other federal and state statutes and regulations regulate the research, development, testing, manufacture, storage, record keeping, labeling, promotion and marketing and distribution of drug products.

The steps ordinarily required before a new drug may be marketed in the United States include:

- preclinical laboratory tests, preclinical studies in animals and formulation studies;
- the submission of an IND to the FDA, or comparable documents to regulatory bodies in foreign countries in which clinical trials are to be held, which must become effective before clinical trials may begin;
- adequate and well-controlled clinical trials to establish the safety and efficacy in humans of the drug for each indication;
- the submission of a new drug application, or NDA, to the FDA using the Common Technical Document, a format for non-clinical, clinical and quality data acceptable to regulatory authorities in the United States, European Union and Japan; and
- FDA review and approval of the NDA before any commercial sale or shipment of the drug.

Preclinical tests typically include laboratory evaluation of product chemistry, formulation and stability, as well as animal studies to evaluate toxicity and metabolism. Preclinical tests are regulated by the FDA under its good laboratory practice regulations. The results of preclinical tests are submitted to the FDA as part of an IND. The FDA requires a 30-day waiting period after the filing of an IND before clinical testing in humans may begin. If the FDA has not advised otherwise within this 30-day period, the proposed trial may begin. If the FDA has comments or questions, they must be resolved to the satisfaction of the FDA before the trial can begin. In addition, the FDA may halt proposed or ongoing clinical trials at any time, in which event the trial cannot commence or recommence without FDA authorization and then only under terms authorized by the FDA. The IND application process may be extremely costly and substantially delay development of product candidates. Moreover, positive results in preclinical tests do not ensure positive results in clinical trials.

Clinical trials involve the administration of the drug to healthy volunteers or patients under the supervision of a qualified principal investigator. Clinical trials must be conducted in compliance with federal regulations and requirements and under established protocols. These protocols detail the objectives of the clinical trial, the parameters to be used in monitoring safety, the efficacy criteria to be evaluated and the analyses to be relied on. The study protocol and informed consent information for patients in clinical trials must also be approved by an institutional review board at each institution where the clinical trials are conducted.

Clinical evaluation involves a time-consuming and costly process, ordinarily involving the following three phases:

- Phase I clinical trials are typically conducted with a small number of healthy human volunteers as subjects to determine an early safety and tolerability profile, including side effects associated with increasing doses, a maximum tolerated dose and pharmacokinetics.
- Phase II clinical trials are typically well-controlled and conducted with groups of patients afflicted with the disease or condition for which the investigational drug is being tested in order to determine, among other things, potential efficacy preliminarily, and an expanded safety profile that identifies short term side effects and risks.
- Phase III clinical trials are typically large-scale, geographically diverse, adequate and well-controlled and conducted with patients afflicted with a target disease or condition after obtaining preliminary evidence suggesting effectiveness. Phase III clinical trials are intended to collect additional data on effectiveness and safety necessary to evaluate the overall risk-benefit profile of the drug and provide an adequate basis for labeling.

The FDA, the study sponsor and the institutional review boards reviewing each clinical trial site closely monitor the progress of each of the three phases of clinical trials that are conducted in the United States. They may change or terminate the testing based upon the data accumulated to that point and their assessment of the relative risks and benefits to the patient.

Upon successful completion of Phase III trials, a company may submit an NDA including the results of preclinical studies and clinical trials and data relating to the product candidate’s chemistry, pharmacology, manufacture, safety and effectiveness to the FDA in order to obtain approval to market the product in the United States. This submission is expensive, both in terms of studies and analyses required to generate and compile the requisite data and the significant user fees required for NDA submission.

The FDA has 60 days from its receipt of an NDA to determine if it will accept the filing for a substantive review. The FDA may refuse the filing, which would result in the loss of 25% of the application user fee. If the FDA accepts the filing, it begins an in-depth review. Under current performance goals, the FDA has either six or ten months to review and act on the NDA, depending upon whether the review is classified by the FDA as priority or standard. The FDA often extends the review timeline by requesting additional information or clarification. The FDA may refer issues to an advisory committee for review, evaluation and recommendation as to whether the application should be approved, but the FDA is not bound by any recommendation of an advisory committee.

If the FDA's evaluation of the NDA and the manufacturing facilities are favorable, the FDA may issue an approval letter, or, in many cases, an approvable letter followed by an approval letter. An approvable letter usually contains a number of conditions that must be met in order to secure final approval. If the FDA decides that the conditions have been met, it will issue an approval letter. An approval letter makes a drug available for physicians to prescribe in the United States, but authorizes commercial marketing of the drug only for specific indications. After a drug has been approved for a particular indication, other trials and studies may be conducted to explore its use for treatment of new indications. The drug may not be labeled or promoted for a new indication without a supplemental NDA approval by the FDA.

The FDA may also refuse to approve an NDA, or may issue a not approvable letter. A not approvable letter outlines the deficiencies in the submission and often requires additional testing or information. Even if the applicant completes the additional testing and submits additional information, the FDA may ultimately decide that the application does not satisfy the regulatory criteria for approval.

Satisfaction of FDA pre-market approval requirements for new drugs typically takes several years. The actual time required may vary substantially based upon the type, complexity and novelty of the product or target disease. Government regulation may delay or prevent marketing of potential products for a considerable period of time and require costly procedures. Success in early stage clinical trials does not assure success in later stage clinical trials. Data obtained from clinical activities is not always conclusive and may be susceptible to varying interpretations that could delay, limit or prevent regulatory approval.

Even if a drug receives regulatory approval, the FDA may require post-marketing studies, sometimes referred to as Phase IV studies, to monitor the effects of approved drugs and may limit further marketing based on the results of these post-marketing studies. Moreover, the FDA may impose restrictions on the drug or withdraw its approval if a company does not stay in compliance with pre- and post-market regulatory standards or if problems relating to safety or effectiveness of the drug occur after it reaches the marketplace. The FDA has broad post-market regulatory and enforcement powers, including the ability to levy fines and civil penalties, suspend or delay issuance of approvals, seize or recall products and withdraw approvals.

Once an NDA is approved, the product it covers becomes a listed drug that can, in turn, be cited by potential competitors in support of approval of an abbreviated new drug application, or ANDA. An ANDA provides for marketing of a drug product that is therapeutically equivalent to a marketed drug. This means, among other things, that it has the same active ingredients in the same strengths and dosage form as the listed drug, is labeled for the same conditions of use and has been demonstrated to be bioequivalent to the listed drug, unless specified differences are approved pursuant to a suitability petition. There is generally no requirement, other than the requirement for evidence of bioequivalence, for an ANDA applicant to conduct or submit results of preclinical tests or clinical trials to establish the safety or efficacy of its drug product. Drugs approved in this way are commonly referred to as generic equivalents to the listed drug, are listed as such by the FDA and can typically be substituted by pharmacists under prescriptions written for the original listed drug.

Federal law provides for a period of three years of exclusivity following approval of a drug that contains previously approved active ingredients but is approved in a new dosage, dosage form or route of administration, or for a new use if new clinical trials were required to support the approval. During this three-year exclusivity period, the FDA cannot grant approval of an ANDA for a generic version of the listed drug. However, the FDA can approve generic equivalents of that listed drug based on other listed drugs with the same active ingredient, such as a generic that is the same in every way but its indication for use, and thus the value of this exclusivity may be limited. Federal law also provides a period of five years of exclusivity following approval of a drug that does not contain any previously approved active ingredients. During the five-year exclusivity period, no ANDA for a generic version of the listed drug can be submitted unless the submission accompanies a challenge to a listed patent, in which case the submission may be made four years following the original product approval.

In addition, applicants submitting an ANDA for a drug that has listed patents are required to make one of four certifications regarding each listed patent, which may include certifying that one or more listed patents are invalid or not infringed. If an applicant certifies invalidity or non-infringement, it is required to provide notice of its filing to the new drug application sponsor and the patent holder. If the patent holder then initiates a suit for patent infringement against the ANDA applicant within 45 days of receipt of the notice, the FDA cannot grant effective approval of the ANDA until either 30 months has passed or there has been a court decision holding that the patents in question are invalid or not infringed. The first of the ANDA applicants submitting substantially complete applications certifying that listed patents for a particular product are invalid or not infringed may qualify for an exclusivity period of 180 days, which runs from the date the generic product is first marketed. Until any effective 180-day exclusivity expires, the FDA cannot grant effective approval of subsequently submitted ANDAs.

The manufacturers of approved drugs and their manufacturing facilities are subject to continuous review and periodic inspections by the FDA and must comply with the FDA's current good manufacturing process, or cGMP, regulations. A manufacturer will be subject to possible legal or regulatory action, such as suspension of manufacturing, seizure of product or recall of a product, if it does not comply with the FDA's rules. We intend to contract with third parties to manufacture our products, and our ability to control their compliance with FDA requirements will be limited.

We must also notify the FDA of any change in an approved product beyond variations already allowed in the approval. Changes to the product, its labeling or its manufacturing could require prior FDA approval and may require further clinical investigations to support the change. Such approvals may be expensive and time-consuming, and if not approved, the product will not be allowed to be marketed as modified.

The FDA also administers a number of complex regulations and policies regarding advertising, promotion and labeling of marketed pharmaceuticals. These regulations and policies include requirements that affect direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the internet. Failure to abide by the FDA's regulations can result in penalties, including the issuance of a warning letter mandating the correction of deviations from FDA standards or the publication of corrective advertising, as well as civil and criminal investigations and prosecutions.

From time to time, legislation is drafted and introduced in the U.S. Congress that could significantly change the statutory provisions governing the approval, manufacturing and marketing of drug products. In addition, the FDA regulations and guidance are often revised or reinterpreted in ways that may significantly affect our business and our products. It is impossible to predict whether legislative changes will be enacted, or FDA regulations, guidance or interpretations changed, or what the impact of these changes, if any, may be.

Fast Track Designation

Congress enacted the Food and Drug Administration Modernization Act of 1997, or FDAMA, in part, to ensure the timely availability of safe and effective drugs, biologics and medical devices by expediting the FDA review process for some new products. FDAMA establishes a statutory program for the approval of a so-called fast track product, defined as a new drug or biologic intended for the treatment of a serious or life-threatening condition that demonstrates the potential to address unmet medical needs for that condition. Under the fast track program, the sponsor of a new drug or biologic may request the FDA to designate the drug or biologic as a fast track product at any time during clinical development of the product. Fast track designation provides for an expedited review of a product, which is intended to accelerate FDA approval. Although we have not yet requested fast track designation for any of our product candidates, we may seek fast track designation in the future. We will never be sure that we will obtain fast track designation. We cannot predict the ultimate impact, if any, of the fast track process on the timing or likelihood of FDA approval of any of our potential products.

Drug Regulation Outside the United States

In addition to U.S. regulations, we are subject to a variety of foreign regulations governing clinical trials and potential commercial sales and distribution of our products and product candidates. Even if we obtain FDA approval for a product, we must obtain approval of a product by the regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product in those countries. The approval process varies from country to country, and the time may be longer or shorter than that required for FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

Under European Union regulatory systems, we may submit marketing authorizations either under a centralized or decentralized procedure. The centralized procedure provides for the grant of a single marketing authorization that is valid for all European Union member states. The decentralized procedure provides for mutual recognition of national approval decisions. Under this latter procedure, the holder of a national marketing authorization may submit an application to the remaining member states. Within 90 days of receiving the applications and assessment report, each member state must decide whether to recognize approval.

Third-Party Reimbursement

In the United States, European Union and elsewhere, sales of pharmaceutical products depend in part on the availability of reimbursement to the patient from third-party payors, such as government health administrative authorities, managed care providers and private insurance plans. Third-party payors are increasingly challenging the prices charged for medical products and services and examining their cost-effectiveness. For example, the European Union generally provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement. It is possible that none of our product candidates that receive marketing approval will be considered cost-effective or that reimbursement to patients will not be sufficient to allow us to maintain price levels that enable us to realize a satisfactory return on our investment in product development.

Price Controls

In the United States there have been, and we expect that there will continue to be, a number of federal and state proposals to implement governmental pricing control on pharmaceutical products. In some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the European Union generally provides options for its member states to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. We do not know whether any country that has price controls will allow favorable pricing arrangements for any of our product candidates.

Employees

As of December 31, 2005, we had 77 full-time employees, 35 of whom are Ph.D.s, M.D.s or both. Our management believes that relations with our employees are good. None of our employees is represented under a collective bargaining agreement.

Property and Facilities

We lease approximately 40,000 square feet of laboratory and office space located in the Piedmont Triad Research Park in Winston-Salem, North Carolina. We have rights exercisable until March 31, 2006 to lease additional space in this facility. The term of our lease expires August 1, 2007, and we have a renewal option for an additional five-year term. If we elect to renew the lease, we will have rights to lease additional space in this facility during the renewal term. The current monthly payment under our lease is approximately $123,000. We believe that our leased facilities, together with our rights to lease additional space, are adequate to satisfy our current needs.

Legal Proceedings

We are not currently a party to any material legal proceedings.

Table of Contents

MANAGEMENT

Executive Officers and Directors

The name, age and position of our executive officers and directors as of December 31, 2005 are as follows:

Name	Age	Position
Mark Skaletsky (1) (2)	57	Chairman of the Board of Directors
J. Donald deBethizy, Ph.D.	55	Chief Executive Officer, President and Director
Merouane Bencherif, M.D., Ph.D.	51	Vice President, Preclinical Research
Jeffrey P. Brennan	48	Vice President, Business and Commercial Development
William S. Caldwell, Ph.D.	51	Vice President, Drug Discovery and Development
Geoffrey C. Dunbar, M.D.	58	Vice President, Clinical Development and Regulatory Affairs
Alan A. Musso	43	Vice President, Chief Financial Officer, Treasurer and Secretary
M. James Barrett, Ph.D. (1)	63	Director
Charles A. Blixt (2) (3)	54	Director
Errol B. De Souza, Ph.D. (2) (3)	52	Director
Ann F. Hanham, Ph.D.	53	Director
Elaine V. Jones, Ph.D. (1) (2)	50	Director
John P. Richard (3)	48	Director

(1) Member of the Compensation Committee.
(2) Member of the Governance and Nominating Committee.
(3) Member of the Audit Committee.

Mark Skaletsky has been a member of our board of directors since February 2001 and has been our Chairman since January 2002. Since March 2001, he has been the chairman and chief executive officer of Trine Pharmaceuticals, Inc., formerly Essential Therapeutics, Inc., a privately held drug discovery and development company. From May 1993 to January 2001, Mr. Skaletsky was the president and chief executive officer of GelTex Pharmaceuticals, Inc., a publicly traded pharmaceutical company. Mr. Skaletsky is a member of the boards of directors of Alkermes, Inc., ImmunoGen, Inc. and Advanced Magnetics, Inc., each of which is a publicly traded company. Essential Therapeutics and its wholly owned subsidiaries filed for protection under Chapter 11 of the United States Bankruptcy Code in May 2003. The plan of reorganization for Essential Therapeutics became effective in October 2003 by order of the United States Bankruptcy Court for the District of Delaware, and Essential Therapeutics was renamed Trine Pharmaceuticals, Inc. in November 2003.

J. Donald deBethizy, Ph.D. has been our Chief Executive Officer and a member of our board of directors since August 2000. Dr. deBethizy has been our President since March 1997. From March 1985 to March 1997, Dr. deBethizy worked for R.J. Reynolds Tobacco Company in various capacities, most recently as vice president of product evaluation, research and development. Dr. deBethizy has been an adjunct professor in the Department of Physiology and Pharmacology at Wake Forest University School of Medicine since October 1991 and has been an adjunct professor of toxicology in the Integrated Toxicology Program at Duke University since May 1988.

Merouane Bencherif, M.D., Ph.D. has been our Vice President, Preclinical Research since August 2002. He was our Vice President, Biological Sciences from August 2000 to August 2002 and our Senior Manager and Director of Pharmacology and Clinical Sciences from February

1999 to August 2000. From July 1993 to February 1999, Dr. Bencherif worked for R.J. Reynolds Tobacco Company's Research and Development (Pharmacology) Department in various capacities as a scientist, most recently as a master scientist from March 1998 to February 1999. Dr. Bencherif was an adjunct assistant professor from March 1996 to March 2002 and, since March 2002, has been an associate professor in the Department of Physiology and Pharmacology at Wake Forest University School of Medicine.

Jeffrey P. Brennan has been our Vice President, Business and Commercial Development since September 2003. From September 2000 to May 2003, Mr. Brennan was vice president, commercial development at Sanofi-Synthélabo Inc., a publicly traded global pharmaceutical company based in Paris, France. From November 1996 to September 2000, Mr. Brennan served as vice president, business development at Sanofi-Synthélabo.

William S. Caldwell, Ph.D. has been our Vice President, Drug Discovery and Development since August 2000. From January 1999 to August 2000, Dr. Caldwell was our Director, Chemistry and Operations.

Geoffrey C. Dunbar, M.D. has been our Vice President, Clinical Development and Regulatory Affairs since June 2001. From January 1997 to June 2001, Dr. Dunbar was vice president, clinical development—neurosciences at Bristol-Myers Squibb Company, a publicly traded global pharmaceutical company.

Alan A. Musso has been our Vice President, Chief Financial Officer, Treasurer and Secretary since February 2002. From February 2001 to February 2002, Mr. Musso was vice president and chief financial officer of Osiris Therapeutics, Inc., a privately held biotechnology company. From April 1997 to February 2001, Mr. Musso was the chief financial officer for Cato Research & Cato Holding Company, a privately held global contract research organization. Mr. Musso also was the chief financial officer of Vascular Genetics, Inc., a privately held gene therapy company, from October 1997 to February 2000. In addition, Mr. Musso was employed by Pfizer Inc., a publicly traded global pharmaceutical company, from April 1989 to December 1994, first as a senior auditor and then as a general accounting manager for one of Pfizer's manufacturing facilities. Mr. Musso is a certified public accountant and a certified management accountant.

M. James Barrett, Ph.D. has been a member of our board of directors since December 2002. Since September 2001, Dr. Barrett has been a general partner of New Enterprise Associates, a venture capital firm that focuses on the medical and life sciences and information technology industries. From 1997 to 2001, he was chairman and chief executive officer of Sensors for Medicine and Science, Inc., a privately held company that he founded and which develops optical chemical sensing technologies. He continues to serve as its chairman and is a member of the boards of directors of the publicly traded companies MedImmune, Inc., Pharmion Corporation and Inhibitex, Inc.

Charles A. Blixt has been a member of our board of directors since August 2000. Since January 1998, he has been executive vice president and general counsel of R.J. Reynolds Tobacco Company. Since June 1999, he has held positions of increasing responsibility with R.J. Reynolds Tobacco Holdings, Inc. and is currently president and a director. R.J. Reynolds Tobacco Holdings, Inc. is the parent company of R.J. Reynolds Tobacco Company. Since August 2004, he has been executive vice president, general counsel and assistant secretary of Reynolds American Inc.

Errol B. De Souza, Ph.D. has been a member of our board of directors since January 2004. Since March 2003, he has been president, chief executive officer and a director of Archemix Corporation, a privately held biotechnology company. From September 2002 to March 2003, he was president, chief executive officer and a director of Synaptic Pharmaceutical Corporation, a publicly traded biopharmaceutical company that was acquired by H. Lundbeck A/S in March 2003. From December 1999 to September 2002, he was senior vice president and site head of U.S. drug innovation & approval (research and development) of Aventis Pharma SA, a pharmaceutical company formed by the merger of Hoechst Marion Roussel and Rhone-Poulenc Rorer Inc. From September 1998 until December 1999, Dr. De Souza was senior vice president and global head, lead generation of Hoechst Marion Roussel. In 1992, Dr. De Souza co-founded Neurocrine Biosciences, Inc., a publicly traded biopharmaceutical company. Dr. De Souza is a member of the boards of directors of IDEXX Laboratories, Inc. and Palatin Technologies, Inc., each of which is a publicly traded company.

Ann F. Hanham, Ph.D. has been a member of our board of directors since September 2005. Ms. Hanham has been with Burrill & Company LLC, a merchant bank, since February 2000. Since January 2004, she has been a managing director, from January 2001 to January 2004, she was a director and from February 2000 to January 2001, she was an associate at Burrill & Company LLC.

Elaine V. Jones, Ph.D. has been a member of our board of directors since August 2000. Since August 2003, she has been a general partner of EuclidSR Associates, L.P., which is the general partner of EuclidSR Partners, L.P., a venture capital fund that focuses on life sciences and information technology companies. Dr. Jones was an investment manager from June 1999 to September 2001, and was a vice president from September 2001 to August 2003, for S.R. One, Limited, a venture capital subsidiary of SmithKline Beecham.

John P. Richard has been a member of our board of directors since November 2002. In June 2005, he became a partner of Georgia Venture Partners, a biotechnology venture capital firm. In addition, since April 1999, he has been an independent biotechnology consultant. He also has been Senior Business Advisor to GPC Biotech AG, a drug discovery and development company based in Munich, Germany and traded on the Frankfurt Stock Exchange, since April 1999. Prior to April 1999, Mr. Richard served as executive vice president, business development of SEQUUS Pharmaceuticals, Inc., a publicly traded biotechnology company that became a wholly owned subsidiary of ALZA Corporation in March 1999.

Board Composition

Our board of directors consists of eight members, each of whom was elected in accordance with the terms of a stockholders agreement that will terminate upon the completion of this offering. With the exception of Dr. deBethizy, all of our directors are “independent directors” within the meaning of NASDAQ regulations. There are no family relationships among any of our directors or executive officers.

Following the completion of this offering, our board of directors will consist of eight members divided into three classes:

- Class I, for a term expiring at the first annual meeting of stockholders following January 1, 2007;
- Class II, for a term expiring at the second annual meeting of stockholders following January 1, 2007; and
- Class III, for a term expiring at the third annual meeting of stockholders following January 1, 2007.

At each annual meeting of stockholders after the initial classification, or at a special meeting in lieu of an annual meeting, a class of directors will be elected to serve for a three-year term to succeed the directors of the same class whose terms are then expiring. Our Class I directors will be Elaine V. Jones and Charles A. Blixt. Our Class II directors will be M. James Barrett, John P. Richard and J. Donald deBethizy. Our Class III directors will be Ann F. Hanham, Errol B. De Souza and Mark Skaletsky.

Board Committees

Audit Committee

The members of our audit committee are Messrs. Blixt, De Souza and Richard. Mr. Blixt chairs the committee. The audit committee assists the board of directors in its oversight of our accounting, financial reporting and internal control functions. Specific responsibilities of our audit committee include:

- oversight of the audits of our financial statements and our internal control over financial reporting;
- monitoring the performance of our independent auditors, including determining whether to engage or dismiss the independent auditors and to assess the independent auditors' qualifications and independence;
- oversight of our compliance with legal and regulatory requirements, including approval of related party transactions and establishment of procedures for the receipt, retention and treatment of complaints regarding accounting, internal accounting controls and auditing matters; and
- preparing the report required to be included in our annual proxy statement in accordance with Securities and Exchange Commission rules and regulations.

Compensation Committee

The members of our compensation committee are Mr. Skaletsky and Drs. Barrett and Jones. Mr. Skaletsky chairs the committee. The purpose of our compensation committee is to discharge the responsibilities of our board of directors relating to compensation of our executive officers. Specific responsibilities of our compensation committee include:

- establishing and periodically reviewing our compensation philosophy and the adequacy of compensation plans and programs for our executive officers and other employees;
- establishing compensation arrangements and incentive goals for our executive officers and administering compensation plans;
- reviewing the performance of our executive officers and awarding incentive compensation and adjusting compensation arrangements as appropriate based upon performance; and
- preparing the report on executive compensation for inclusion in our annual proxy statement in accordance with Securities and Exchange Commission rules and regulations.

Governance and Nominating Committee

The members of our governance and nominating committee are Messrs. Skaletsky and Blixt and Drs. De Souza and Jones. Mr. Skaletsky chairs the committee. Specific responsibilities of our governance and nominating committee include:

- identifying individuals qualified to serve as directors, recommending to our board of directors nominees for election at our annual meetings of stockholders and recommending to our board of directors individuals to fill vacancies on the board;

- making recommendations to the board of directors concerning the criteria for board membership and the size, composition and compensation of the board of directors and its committees;
- assisting the board of directors in establishing and maintaining effective corporate governance practices and procedures; and
- conducting an annual review of the effectiveness of the board of directors and its committees.

Compensation Committee Interlocks and Insider Participation

None of our executive officers serve as a member of the board of directors or compensation committee, or other committee serving an equivalent function, of any other entity that has one or more of its executive officers serving as a member of our board of directors or our compensation committee. None of the members of our compensation committee has ever been our employee.

Director Compensation

In the past, each of our directors who is not our employee, or his or her designee, has received a nonqualified stock option to purchase 3,333 shares of our common stock upon his or her initial election to our board of directors. Additionally, upon each non-employee director's annual reelection, he or she, or his or her designee, has been granted a nonqualified stock option to purchase 1,000 shares of common stock. However, our chairman received a nonqualified stock option to purchase 4,666 shares upon his or her initial election and a nonqualified stock option to purchase 1,666 shares upon his or her annual reelection. Each of these options:

- has a ten-year term;
- has an exercise price of $0.08 per share; and
- vests one year after the date of grant if the director attended at least 75% of the regular board meetings held during that year.

In lieu of any such nonqualified stock option, each non-employee director could elect to receive a restricted stock award for the same number of shares of stock at a purchase price of $0.08 per share. Each non-employee director who is not affiliated with one of our investors or a group of our investors has received, in addition to the equity compensation described above, cash compensation in the amount of $15,000 per year as an annual retainer, except that the chairman of the board has received an annual cash retainer of $25,000. Each director is reimbursed for expenses incurred in connection with his or her attendance at meetings of the board of directors and its committees. We have not historically paid any additional compensation for service on any committees of the board of directors.

In December 2005, we amended stock options to purchase 6,000 shares of our common stock that had been granted to our directors who are not our employees, or their designees, in order to address taxation issues that arise due to recently enacted Internal Revenue Code Section 409A and related guidance. As amended, the affected stock options are not exercisable after March 15, 2007.

We have adopted a new director compensation program that will become effective concurrently with the completion of this offering. Each non-employee director will receive an annual cash retainer of $20,000 payable in quarterly installments. Each member of a committee of the board will receive an additional annual cash retainer of $2,500, the chairman of our audit committee will receive an additional annual cash retainer of $7,500 and the chairman of each of our compensation and governance and nominating committees will each receive an additional annual cash retainer of $2,500. Each non-employee director also will receive a nonqualified stock option to purchase 25,000 shares of common stock upon initial election as a director and a nonqualified stock option to purchase 7,500 shares of common stock upon annual reelection. The chairman of the board will receive a nonqualified stock option to purchase 10,000 shares of common stock upon initial election as chairman, in addition to the option to purchase 25,000 shares of common stock upon initial election as a director, and a nonqualified stock option to purchase 12,500 shares of common stock upon annual reelection. For more information, please see “Management—Stock Option and Other Compensation Plans—2006 Stock Incentive Plan.”

Executive Compensation

The following table sets forth information for the periods indicated regarding compensation awarded to, earned by or paid to our chief executive officer and our five other most highly compensated executive officers who were serving as executive officers as of December 31, 2005. We refer to these officers in this prospectus as our named executive officers.

Summary Compensation Table

		Annual Compensation		Long-Term Compensation	
Name and Principal Position	**Year**	**Salary**	**Bonus**	**Shares Underlying Options (#)**	**All Other Compensation**
J. Donald deBethizy, Ph.D.	2005	$310,000	$105,400	174,000	$ 14,000(1)
President and Chief Executive Officer	2004	283,250	90,640	—	13,000(1)
	2003	275,000	66,000	262,578(2)	12,000(1)
Merouane Bencherif, M.D., Ph.D.	2005	200,000	51,000	50,000	12,092(1)
Vice President, Preclinical Research	2004	170,000	40,800	—	12,518(1)
	2003	161,000	38,640	78,083(2)	11,485(1)
Jeffrey P. Brennan (3)	2005	234,000	59,670	40,000	14,000(1)
Vice President, Business and Commercial	2004	225,000	54,000	—	111,748(4)
Development	2003	75,000	13,500	22,533(2)	4,500(1)
William S. Caldwell, Ph.D.	2005	193,752	49,407	42,000	12,073(1)
Vice President, Drug Discovery and Development	2004	170,000	40,800	—	11,947(1)
	2003	161,750	29,115	71,251(2)	11,314(1)
Geoffrey C. Dunbar, Ph.D.	2005	264,316	67,401	54,000	14,000(1)
Vice President, Clinical Development and	2004	254,150	60,996	—	13,000(1)
Regulatory Affairs	2003	246,750	44,415	89,119(2)	12,000(1)
Alan A. Musso	2005	205,000	52,275	48,000	14,000(1)
Vice President, Chief Financial Officer, Treasurer	2004	190,000	45,600	—	13,000(1)
and Secretary	2003	181,731(5)	32,400	71,156(2)	12,000(1)

(1) Consists of our contributions under the Targacept Retirement Savings Plan, our 401(k) plan.
(2) A portion of these options reflects grants made on January 26, 2004 under our 2000 equity incentive plan in lieu of a cash bonus for fiscal year 2003.
(3) Mr. Brennan joined us in September 2003.
(4) Consists of $12,190 of contributions under our 401(k) plan and reimbursement of $99,558 in relocation expenses.
(5) Salary amount includes compensation of $1,731 in lieu of accrued vacation.

Stock Options

The following table sets forth information regarding grants of stock options to purchase shares of our common stock to our named executive officers during the year ended December 31, 2005.

The potential realizable values set forth in the following table are calculated based on the term of the option at the time of grant and reflect gains that could be achieved for the options if exercised at the end of the option term. The 5% and 10% assumed annual rates of compounded stock price appreciation are required by the Securities and Exchange Commission and do not represent our estimate or projection of our future stock price performance. Actual gains, if any, on stock option exercises depend on the future performance of the common stock and the date on which the options are exercised.

Option Grants in Last Fiscal Year

Name	Number of Securities Underlying Options Granted	Percentage of Total Options Granted to Employees in Fiscal Year	Exercise Price Per Share	Expiration Date	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Terms (1)	
					5%	10%
J. Donald deBethizy, Ph.D.	174,000	26.9%	$ 1.75	3/29/2015	$	$
Merouane Bencherif, M.D., Ph.D.	50,000	7.7	1.75	3/29/2015		
Jeffrey P. Brennan	40,000	6.2	1.75	3/29/2015		
William S. Caldwell, Ph.D.	42,000	6.5	1.75	3/29/2015		
Geoffrey C. Dunbar, Ph.D.	54,000	8.4	1.75	3/29/2015		
Alan A. Musso	48,000	7.4	1.75	3/29/2015		

(1) The dollar amounts under these columns are the result of rates set by the Securities and Exchange Commission and, therefore, are not intended to forecast possible future appreciation, if any, in the price of the underlying common stock. The potential realizable values at 5% and 10% appreciation are calculated using an assumed initial public offering price of $ per share and assuming that the market price appreciates from this price at the indicated rate for the entire term of each option and that each option is exercised at the exercise price and sold on the last day of its term at the assumed appreciated price.

Option Exercises and Year-End Option Values

The following table sets forth information regarding the number of shares of our common stock issued upon option exercises by our named executive officers during the year ended December 31, 2005 and the value realized by our named executive officers. The table also sets forth information regarding the number and value of unexercised stock options held by our named executive officers as of December 31, 2005. There was no public trading market for our common stock as of December 31, 2005. Accordingly, as permitted by the rules of the Securities and Exchange Commission, we have calculated the value of the unexercised in-the-money options at fiscal year end by determining the difference between the exercise price per share and an assumed fair market value of our common stock as of December 31, 2005 equal to an assumed initial offering price of $ per share.

Aggregated Option Exercises in Last Fiscal Year and Fiscal Year-End Option Values

Name	Number of Shares Acquired on Exercise	Value Realized	Number of Securities Underlying Unexercised Options Held at December 31, 2005		Value of Unexercised In-the-Money Options at December 31, 2005	
			Exercisable	Unexercisable	Exercisable	Unexercisable
J. Donald deBethizy, Ph.D.	—	—	242,293	183,698	$	$
Merouane Bencherif, M.D., Ph.D.	—	—	102,772	52,470		
Jeffrey P. Brennan	—	—	32,755	29,778		
William S. Caldwell, Ph.D.	—	—	96,063	44,363		
Geoffrey C. Dunbar, Ph.D.	—	—	89,599	56,147		
Alan A. Musso	399	$ 1,728	88,777	49,579		

Employment Agreements

We have entered into employment agreements with each of our named executive officers. Each employment agreement continues until terminated by either party to the agreement, with the exception of Mr. Brennan's employment agreement, which is set to expire on December 31, 2007.

Under the terms of these employment agreements, Dr. deBethizy is employed as our Chief Executive Officer and President at a minimum annual base salary of $225,000; Dr. Dunbar is employed as our Vice President, Clinical Development and Regulatory Affairs at a minimum annual base salary of $246,750; Mr. Brennan is employed as our Vice President, Business and Commercial Development at a minimum annual base salary of $225,000; Mr. Musso is employed as our Vice President and Chief Financial Officer at a minimum annual base salary of $180,000; Dr. Bencherif is employed as our Vice President, Preclinical Research at a minimum annual base salary of $135,000; and Dr. Caldwell is employed as our Vice President, Drug Discovery and Development at a minimum annual base salary of $135,000. For 2006, the base salary of Dr. deBethizy is $; the base salary of Dr. Dunbar is $; the base salary of Mr. Brennan is $; the base salary of Mr. Musso is $; the base salary of Dr. Bencherif is $; and the base salary of Dr. Caldwell is $.

The employment agreements provide that the annual base salaries of each of the named executive officers will be reviewed and are subject to increase in accordance with our policies and procedures, and in addition, will be increased annually as necessary to be consistent with the median base salaries of employees in similar positions at comparable companies as described in the then current Radford Biotechnology Compensation Report.

In addition to annual base salary, each named executive officer is eligible to receive awards under our 2000 equity incentive plan and earn an annual bonus equal to a percentage of his annual base salary. The employment agreements provide that Dr. deBethizy is eligible to earn an annual bonus of up to 35% of his annual base salary; each of Dr. Dunbar and Mr. Brennan is eligible to earn an annual bonus of up to 30% of his annual base salary; and each of Mr. Musso and Drs. Bencherif and Caldwell is eligible to earn an annual bonus of up to 25% of his annual base salary. In 2001, our board of directors increased the annual bonus for Dr. deBethizy to up to 40% of his annual base salary. In 2002, our board of directors increased the annual bonus for each of Drs. Bencherif and Caldwell to up to 30% of his annual base salary and in 2003 increased the annual bonus for Mr. Musso to up to 30% of his annual base salary. Our board of directors or compensation committee, in their discretion, may increase the annual bonus for each named executive officer beyond these percentages.

Under the terms of the employment agreements, the named executive officers cannot disclose any of our proprietary information during the periods of their employment. In addition, the employment agreements prohibit the named executive officers from soliciting, on behalf of themselves or any entity other than us, any of our customers or clients for the period of employment and nine months following termination of employment, and in the case of Dr. deBethizy, one year following termination. Furthermore, any inventions, discoveries, improvements and developments made by the named executive officers during their employment with us become and remain our property.

If a named executive officer's employment terminates for any reason, the named executive officer is entitled to receive a lump sum equal to any base salary, bonus and other compensation earned and due but not paid through the effective date of termination. In addition, if we terminate a named executive officer's employment other than for just cause or a named executive officer terminates his employment for good reason, in each case as that term is defined in his agreement, he is entitled to receive:

- severance, payable monthly, equal to his then current base salary for twelve months in the case of Dr. deBethizy and nine months for all other named executive officers, following termination or, if shorter, until he secures other employment;
- acceleration of unvested options to purchase capital stock or restricted stock—Dr. deBethizy is entitled to twelve months acceleration, Mr. Brennan is entitled to nine months acceleration and all other named executive officers are entitled to six months acceleration;
- continuation of the health and life insurance benefits coverage provided to him as of the date of termination for the period during which he receives severance; and
- up to $10,000 in outplacement counseling services.

Stock Option and Other Compensation Plans

2000 Equity Incentive Plan

We maintain a 2000 equity incentive plan, which we refer to as our 2000 plan, that our board of directors and stockholders have approved. As of December 31, 2005, an aggregate of 1,878,888 shares of common stock had been authorized for issuance under our 2000 plan, of which options to purchase an aggregate of 1,610,009 shares of common stock were outstanding at a weighted average exercise price of $2.88 per share, 14,665 shares of common stock were issued and outstanding in the form of restricted stock and 54,465 shares of common stock were available for future grant. Upon completion of this offering, 36,393 shares of common stock subject to unvested options outstanding as of December 31, 2005 will immediately vest.

Our 2000 plan provides for the grant of a variety of stock-based awards, including incentive stock options, nonqualified stock options, stock appreciation rights, performance awards, bonus stock and restricted stock, to our employees, directors, independent contractors, consultants and advisors.

Administration of the Plan. Our 2000 plan is administered by the compensation committee of our board of directors, which, among other things, determines the terms and recipients of grants under the 2000 plan.

Options. Recipients of stock options under our 2000 plan have the right to purchase a stated number of shares of common stock at a stated exercise price, subject to any other terms and conditions that may be stated in connection with the option grant. We may grant options at an exercise price equal to, less than or greater than the fair market value of our common stock on the date of grant, except that we may not grant incentive stock options at an option price less than 100% of the fair market value of our common stock on the date of grant (or 110% of the fair market value for incentive stock options granted to optionees holding more than 10% of the voting power of all shares of our capital stock). Grant recipients may pay the exercise price of stock options by various methods permitted under our 2000 plan. Unless modified with respect to any particular grant:

- an employee who is terminated for any reason other than death, disability or cause will have 90 days to exercise options vested as of the termination date;
- an employee who terminates due to death or disability will have one year, or until the end of the respective option periods, if sooner, to exercise options that are vested as of the termination date;
- an employee who is terminated for cause will forfeit all options immediately upon termination; and
- non-employee optionees who are terminated will have 90 days, or until the end of the respective option periods, if sooner, to exercise options that are vested as of the termination date unless service terminates for cause, in which case the options terminate immediately.

Stock Awards. We may grant stock awards to participants subject to certain restrictions or no restrictions. Until they are vested and earned, unless an individual award agreement provides otherwise, grantees will not have the right to vote shares of restricted stock or the right to receive dividends or other distributions paid on such shares. If a grantee's employment or other service terminates during the restriction period or if any other conditions are not met, the restricted stock still subject to restrictions will terminate, unless an individual award agreement provides otherwise, and the shares must be immediately returned to us.

Significant Transactions. If:

- any entity or person acquires 50% or more of our outstanding common stock or, if such person owned shares as of August 22, 2000, 67% of our outstanding common stock; or
- our stockholders approve a sale or disposition of all or substantially all of our assets or a merger or consolidation in which we would not be the surviving or continuing corporation or which would result in the conversion of our common stock into cash, securities or other property (other than a merger or consolidation in which holders of common stock immediately prior to the merger or consolidation have the same proportionate ownership of common stock of the surviving corporation immediately after the merger as immediately before),

all awards outstanding under our 2000 plan would become immediately vested and exercisable unless, in the case of a merger, consolidation, share exchange or asset sale or disposition, the board of directors or compensation committee determines that outstanding awards will not become immediately vested and exercisable because steps have been taken, such as the assumption of the awards or substitution of substantially equivalent awards by the other party, as it deems equitable to protect the rights of participants in our 2000 plan. Upon completion of this offering, all awards outstanding under our 2000 plan granted prior to August 20, 2003 will become immediately vested and exercisable.

Termination and Amendment. We may grant awards under our 2000 plan until August 21, 2010, unless our 2000 plan is terminated prior to that date. The board of directors may amend or terminate our 2000 plan at any time, subject to the rights of holders of outstanding awards and subject to any requirements under Section 409A of the Internal Revenue Code. Our 2006 stock incentive plan, which we refer to as our 2006 plan, is intended to serve as the successor equity incentive program to our 2000 plan. However, our board of directors may not amend our 2000 plan without stockholder approval if stockholder approval is required under applicable law, rule or regulation.

Certain Tax Matters. The 2000 plan was amended and restated effective , 2006 to address the effect of recently-enacted Section 409A of the Internal Revenue Code. For a discussion of the general scope of these amendments, see “2006 Stock Incentive Plan—Internal Revenue Code Section 409A Requirements,” below. For a discussion of the general tax consequences of awards granted under the 2000 plan, see the comparable discussion of similar awards granted under the 2006 plan under “2006 Stock Incentive Plan—General Federal Income Tax Consequences,” below.

Option Repricing. On April 7, 2005, in order to promote a closer identification of the interests of our employees with those of us and our stockholders, our board of directors authorized the amendment of each existing employee stock option agreement in order to reduce the exercise price per share with respect to all employee stock options that were outstanding but not yet exercisable as of March 31, 2005. The exercise price per share with respect to each such portion that was not yet exercisable as of March 31, 2005, constituting in the aggregate 354,672 underlying shares of our common stock, was repriced to $1.75 per share. Prior to the repricing, the weighted average exercise price per share with respect to the portions that were not yet exercisable as of March 31, 2005 was $5.13. Prior to the repricing, no outstanding option held by our employees had an exercise price of less than $1.75 per share. All other terms and conditions governing the portions that were not yet exercisable as of March 31, 2005, including the vesting schedules, remain unchanged from the terms and conditions set forth in the original agreements. The affected options are required to be accounted for as a modification of an award under SFAS 123R. The fair market value was calculated immediately prior to the modification and immediately after the modification to determine the incremental fair market value. This incremental value and the fair market value of unvested options that were modified will be expensed as compensation on a quarterly basis, until the date that the option is exercised or forfeited or expires unexercised.

2006 Stock Incentive Plan

Introduction. Our 2006 plan is intended to serve as the successor equity incentive program to our 2000 plan. Our 2006 plan will become effective on the day prior to the date that the underwriting agreement for this offering is signed. At that time, all of the shares reserved for grant under our 2000 plan will be transferred to our 2006 plan and no further options will be granted under our 2000 plan.

Subject to adjustments as provided in our 2006 plan, the maximum number of shares that we may issue pursuant to awards granted under our 2006 plan may not exceed the sum of (i) 2,700,000 shares, plus (ii) up to 54,465 shares of common stock remaining available for issuance as of the effective date under our 2000 plan, plus (iii) up to 1,610,009 shares subject to any award granted under our 2000 plan that is forfeited, cancelled, terminated, expires or lapses for any reason without the issuance of shares pursuant to the award. The maximum number of shares of common stock that we may issue under our 2006 plan pursuant to the grant of incentive stock options is 4,364,474 or, if less, the maximum number of shares issuable under the 2006 plan. In addition, (i) we may not grant to any participant options and stock appreciation rights, or SARs, that are not related to an option for more than 500,000 shares of common stock in any calendar year; (ii) we may not grant to any participant awards for more than 500,000 shares of common stock in any calendar year; and (iii) participants may not be paid more than $1,000,000 with respect to any cash-settled award granted in any calendar year, subject to adjustments as provided in our 2006 plan. For purposes of these restrictions, we will treat an option and related SAR as a single award. The following will not be included in calculating the share limitations set forth above: (i) dividends, including dividends paid in shares of common stock, or dividend equivalents paid in cash in connection with outstanding awards; (ii) awards which by their terms are settled in cash rather than the issuance of shares; (iii) any shares subject to an award under our 2006 plan that is forfeited, cancelled, terminated, expires or lapses for any reason and shares subject to an award that are repurchased or reacquired by us; and (iv) any shares a participant surrenders or we withhold to pay the option or purchase price for an award or use to satisfy any tax withholding requirement in connection with the exercise, vesting or earning of an award if, in accordance with the terms of our 2006 plan, a participant pays such option or purchase price or satisfies such tax withholding by either tendering previously owned shares or having us withhold shares.

We may adjust the number of shares reserved for issuance under our 2006 plan and the terms of awards in the event of an adjustment in our capital stock structure or one of our affiliates due to a merger, stock split, stock dividend or similar event.

Purpose and Eligibility. The purpose of our 2006 plan is to encourage and enable selected employees and our directors and independent contractors to acquire or increase their holdings of common stock and other proprietary interests in us in order to promote a closer identification of their interests with those of us and our stockholders, thereby further stimulating their efforts to enhance our efficiency, soundness, profitability, growth and stockholder value. The purpose will be carried out by the granting of awards to selected participants. We may grant awards under our 2006 plan which include incentive stock options and nonqualified stock options; SARs; restricted awards in the form of restricted stock awards and restricted stock units; performance awards in the form of performance shares and performance units; phantom stock awards; director options in the form of initial options and annual options; and dividend equivalent awards. We discuss the material terms of each type of award below.

Administration; Amendment and Termination. Our board of directors, or upon its delegation, the compensation committee of our board of directors, will administer our 2006 plan. In this discussion, we refer to our board of directors and the compensation committee collectively as the administrator. Under the terms of our 2006 plan, the administrator has full and final authority to take any action with respect to our 2006 plan, including, without limitation, the authority to: (i) determine all matters relating to awards, including selection of individuals to be granted awards, the types of awards, the number of shares, if any, of common stock subject to an award, and the terms, conditions, restrictions and limitations of an award; (ii) prescribe the form or forms of agreements evidencing awards granted under our 2006 plan; (iii) establish, amend and rescind rules and regulations for the administration of our 2006 plan; and (iv) construe and interpret our 2006 plan, awards and award agreements made under the 2006 plan, interpret rules and regulations for administering the 2006 plan and make all other determinations deemed necessary or advisable for administering the 2006 plan.

In certain circumstances and subject to certain terms and conditions, the administrator may delegate to one or more of our officers the authority to grant awards, and to make any or all of the determinations reserved for the administrator in our 2006 plan with respect to such awards.

Our board of directors may amend, alter or terminate our 2006 plan at any time, subject to the following: (i) stockholder approval is required of any amendment if such approval is required by applicable law, rule or regulation; and (ii) except for anti-dilution adjustments made under our 2006 plan, the option price for any outstanding option or base price of any outstanding SAR may not be decreased after the date of grant, nor may any participant surrender any outstanding option or SAR to us as consideration for the grant of a new option or SAR with a lower option or base price than the original option or SAR, as the case may be, without stockholder approval of any such action. Our board of directors may also amend, alter or terminate any award, although participant consent is generally required if such action would materially and adversely affect the participant's rights with respect to the award.

The administrator has the authority to amend the 2006 plan and any award, without participant consent and, except where required by applicable law, rule or regulation, without stockholder approval, in order to comply with applicable laws, rules or regulations or changes to such laws, rules or regulations. In addition, the administrator has the authority to make adjustments to awards upon the occurrence of certain unusual or nonrecurring events, if the administrator determines that such adjustments are appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under our 2006 plan or necessary or appropriate to comply with applicable laws, rules or regulations. The administrator may (subject to any requirements imposed by Section 409A of the Internal Revenue Code) cause any award or any portion of an award granted under our 2006 plan to be cancelled in consideration of an alternative award or cash payment of an equivalent cash value, as determined by the administrator, made to the holder of the cancelled award. The administrator also may determine, in its discretion, that a participant's rights, payments and/or benefits with respect to an award, including but not limited to any shares issued or issuable and/or cash paid or payable with respect to an award, will be subject to reduction, cancellation, forfeiture or recoupment upon the occurrence of certain specified events, in addition to any otherwise applicable vesting or performance conditions of an award. Subject to the requirements of Internal Revenue Code Section 409A, the administrator also may, in its sole discretion, modify or extend the terms and conditions for exercise, vesting or earning of an award and/or accelerate the date that any award which was not otherwise exercisable, vested or earned may become exercisable, vested or earned, in whole or in part, without any obligation to accelerate such date with respect to any other award. In addition, the administrator may terminate any award and distribute benefits to participants subject to the requirements of the 2006 plan and Internal Revenue Code Section 409A.

Options. Our 2006 plan authorizes the grant of both incentive stock options and nonqualified stock options, both of which are exercisable for shares of common stock, although incentive stock options may only be granted to our employees. The administrator will determine the option price at which a participant may exercise an option, and the option price must be:

- with respect to incentive stock options, no less than 100% of the fair market value per share of our common stock on the date of grant, or 110% of the fair market value with respect to incentive stock options granted to an employee who owns stock representing more than 10% of the total voting power of all classes of our stock or stock of our parent or subsidiary corporation, if any;
- with respect to nonqualified stock options, no less than 85% of the fair market value per share of our common stock on the date of grant; and
- not less than the par value per share of our common stock.

The administrator may authorize the grant of substitute or assumed options of an acquired entity with an option price of less than the fair market value on the grant date if the options are assumed or substituted in accordance with Section 424(a) of the Internal Revenue Code and if the assumed or substituted options were granted with an option price at least equal to fair market value on the original grant date or otherwise comply with Internal Revenue Code Section 409A.

Unless an individual award agreement provides otherwise, a participant may pay the option price in the form of cash or cash equivalent; in addition, where the administrator and applicable laws, rules and regulations permit, a participant may also make payment:

- by delivery of shares of common stock the participant has owned for such time period, if any, that the administrator determines, if otherwise acceptable to the administrator;
- by shares of common stock withheld upon exercise;
- with respect only to purchase upon exercise of an option after a public market for the common stock exists, by delivery of written notice of exercise to us and delivery to a broker of written notice of exercise and irrevocable instructions to promptly deliver to us the amount of sale or loan proceeds to pay the option price;
- by such other payment methods as the administrator may approve and which are acceptable under applicable law; or
- by any combination of these methods.

At the time of option grant, the administrator will determine the term and conditions of an option and the period or periods during which a participant may exercise an option and the option term for each option (which, in the case of incentive stock options, may not exceed 10 years, or five years with respect to an employee who owns stock and who possesses more than 10% of the total combined voting power of all classes of our stock or stock of our parent or subsidiary corporation, if any). Options are also subject to certain restrictions on exercise if the participant terminates employment or service. The administrator has authority to establish other terms and conditions related to options.

Director Options. Each non-employee director who is first elected or appointed to our board of directors after the public offering date will receive an initial option to purchase 25,000 shares of common stock on the fifth business day after such director is first elected or appointed to our board of directors. A non-employee director who is first elected or appointed as chairman of the board also will receive an initial option for 10,000 shares. In addition, we will grant to each non-employee director, on an annual basis commencing with the 2006 annual meeting of stockholders, a director option to purchase 7,500 shares of common stock or, in the case of the chairman of the board, a director option to purchase 12,500 shares. This annual option will be granted to a director upon his or her reelection to the board on the fifth business day after the applicable annual or other stockholders meeting, provided that such director continues to serve as a member of our board of directors as of such grant date. Director options will be designated as nonqualified options. The option price at which a director may exercise a director option will be 100% of the fair market value per share of the common stock on the date the option is granted. Each initial option will vest and become exercisable on the first anniversary of the date of grant with respect to one-third of the shares subject to the option. Each initial option will vest with respect to the remaining two-thirds of the shares subject to the option on a pro rata quarterly basis over the next two years, so that the option will be vested in full as of the third anniversary of the date of grant, if the director continues in service during such period. Each annual option will vest in full on the first anniversary of the date of grant if the director is in service on that date. The option period of a director option is 10 years. Director options are also subject to certain restrictions on exercise if the director’s service on our board of directors terminates. The administrator also has authority to establish other terms and conditions related to director options.

Stock Appreciation Rights. Under the terms of our 2006 plan, we may grant SARs to the holder of an option with respect to all or a portion of the shares of common stock subject to the option or we may grant SARs separately. The holder of an SAR may receive consideration paid either (i) in cash; (ii) shares of common stock valued at fair market value on the date of the SAR exercise; or (iii) a combination of cash and shares of common stock, as the administrator determines. Upon exercise of an SAR, a participant is entitled to receive from us consideration in an amount determined by multiplying:

- the difference between the fair market value of a share of common stock on the date of exercise of the SAR over the base price of the SAR by
- the number of shares of common stock with respect to which the SAR is being exercised.

Notwithstanding the foregoing, the administrator may limit the amount payable in its discretion. The base price may be no less than 100% of the fair market value per share of the common stock on the date the SAR is granted. To the extent required by Internal Revenue Code Section 409A, SARs will be structured in a manner designed to be exempt from, or to comply with, the requirements of Internal Revenue Code Section 409A.

SARs are exercisable according to the terms established by the administrator and stated in the applicable award agreement. Upon the exercise of an SAR granted to the holder of an option, the related option is deemed to be cancelled to the extent of the number of shares as to which the holder of an option exercises the SAR. No participant may exercise an SAR more than 10 years after it was granted, or such shorter period as may apply to related options. Each award agreement will set forth the extent to which the holder of an SAR will have the right to exercise an SAR following termination of the holder's employment or service with us.

Restricted Awards. Subject to the limitations of our 2006 plan, the administrator may in its sole discretion grant restricted awards to such individuals in such numbers, upon such terms and at such times as the administrator shall determine. Restricted awards may be in the form of restricted stock awards and/or restricted stock units that are subject to certain conditions, which conditions must be met in order for the restricted award to vest and be earned, in whole or in part, and no longer subject to forfeiture. Restricted stock awards may be payable in shares of common stock. Restricted stock units may be payable in cash or shares of common stock, or partly in cash and partly in shares of common stock, in accordance with the terms of our 2006 plan and the discretion of the administrator.

The administrator has authority to determine the nature, length and starting date of the period during which a participant may earn a restricted award and will determine the conditions that must be met in order for a restricted award to be granted or to vest or be earned. These conditions may include:

- payment of a stipulated purchase price;
- attainment of performance objectives;
- continued service or employment for a certain period of time or a combination of attainment of performance objectives and continued service;
- retirement;
- displacement;
- disability;
- death; or
- any combination of such conditions.

However, restricted awards that vest based solely on continued service or the passage of time will be subject to a minimum restriction period of one year, except in the case of restricted awards assumed or substituted in connection with mergers or other business transactions, restricted awards granted in connection with recruitment or hiring of a participant and/or restricted awards granted under an incentive compensation or bonus program.

In the case of restricted awards based upon performance criteria, or a combination of performance criteria and continued service, the administrator will determine the performance measures applicable to such restricted awards, which performance measures may be based upon such corporate, business unit or division and/or individual performance factors and criteria as the administrator in its discretion may deem appropriate; provided, however, that such performance factors will be limited to the specific performance measures listed below.

Subject to the terms of the 2006 plan and the requirements of Internal Revenue Code Section 409A, the administrator has authority to determine whether and to what degree restricted awards have vested and been earned and are payable. The administrator also may, subject to Internal Revenue Code Section 409A, accelerate the date that any restricted award will be deemed vested or earned, without any obligation to accelerate such date with respect to other restricted awards. If a participant’s employment or service is terminated for any reason and all or any part of a restricted award has not vested or been earned pursuant to the terms of our 2006 plan and the individual award, the participant will forfeit the award unless the administrator determines otherwise.

Performance Awards. Subject to the limitations of our 2006 plan, the administrator may in its discretion grant performance awards to such eligible individuals upon such terms and conditions and at such times as the administrator shall determine. Performance awards may be in the form of performance shares and/or performance units. An award of a performance share is a grant of a right to receive shares of our common stock, the cash value thereof or a combination thereof in the administrator’s discretion, which is contingent upon the achievement of performance or other objectives during a specified period and which has a value on the date of grant equal to the fair market value of a share of our common stock. An award of a performance unit is a grant of a right to receive shares of our common stock or a designated dollar value amount of common stock that is contingent upon the achievement of performance or other objectives during a specified period, and that has an initial value determined in a dollar amount established by the administrator at the time of grant.

Subject to the terms of the 2006 plan and the requirements of Internal Revenue Code Section 409A, the administrator has the authority to determine the nature, length and starting date of the period during which a participant may earn a performance award and will determine the conditions that must be met in order for a performance award to be granted or to vest or be earned. These conditions may include specific performance objectives, continued service or employment for a certain period of time, or a combination of such conditions. In the case of performance awards based on performance criteria, the administrator will determine the performance measures applicable to such awards, which performance measures may be based upon such corporate, business unit or division and/or individual performance factors and criteria as the administrator in its discretion may deem appropriate; provided, however, that such performance factors will be limited to the specific performance measures listed below.

The administrator has authority to determine whether and to what degree performance awards have been earned and are payable. The administrator also may, subject to Internal Revenue Code Section 409A, accelerate the date that any performance award will be deemed to be earned in whole or in part, without any obligation to accelerate such date with respect to other performance awards. If a participant's employment or service is terminated for any reason and all or part of a performance award has not been earned pursuant to the terms of our 2006 plan and the individual award agreement, the participant will forfeit the award unless the administrator determines otherwise.

Phantom Stock Awards. Subject to the limitations of our 2006 plan, the administrator may in its discretion grant phantom stock awards to such eligible individuals in such numbers, upon such terms and at such times as the administrator shall determine. An award of phantom stock is an award of a number of hypothetical share units with respect to shares of our common stock, with a value per unit based on the fair market value of a share of common stock.

Subject to the terms of the 2006 plan and the requirements of Internal Revenue Code Section 409A, the administrator has the authority to determine whether and to what degree phantom stock awards have vested and are payable. Upon vesting of all or part of a phantom stock award and satisfaction of other terms and conditions that the administrator determines, the holder of a phantom stock award will be entitled to a payment of an amount equal to the fair market value of one share of our common stock with respect to each such phantom stock unit that has vested and is payable. We may make payment in cash, shares of common stock, or a combination of cash and stock, as determined by the administrator. The administrator may determine the forms and terms of payment of phantom stock awards in accordance with our 2006 plan. If a participant's employment or service is terminated for any reason and all or any part of a phantom stock award has not vested and become payable pursuant to the terms of our 2006 plan and the individual award, the participant will forfeit the award unless the administrator determines otherwise.

Dividend and Dividend Equivalents. The administrator may provide that awards granted under our 2006 plan earn dividends or dividend equivalents. We may pay such dividends or dividend equivalents currently or credit such dividends or dividend equivalents to a participant's account, subject to any requirements under Internal Revenue Code Section 409A and such restrictions and conditions as the administrator may establish with respect to the crediting of an account, including reinvestment in additional shares of common stock or share equivalents.

Change in Control. Upon a change in control as defined in our 2006 plan, and unless an award agreement provides otherwise or Internal Revenue Code Section 409A requires otherwise, our 2006 plan provides that: (i) all options and SARs outstanding as of the date of the change in control will become fully exercisable, whether or not then otherwise exercisable; and (ii) any restrictions applicable to any restricted award, performance award and/or phantom stock award will be deemed to have been met, and such awards will become fully vested, earned and payable to the fullest extent of the original grant of the applicable award. However, under certain conditions, our 2006 plan authorizes the administrator, in the event of a merger, share exchange, reorganization, sale of all or substantially all of our assets or other similar transaction or event affecting us or one of our affiliates or stockholders, to determine that any or all awards will not vest or become exercisable on an accelerated basis, if we or the surviving or acquiring corporation takes action, including but not limited to the assumption of awards or the grant of substitute awards, that, in the opinion of the administrator, is equitable or appropriate to protect the rights and interest of participants under our 2006 plan.

Transferability. Incentive stock options are not transferable other than by will or the laws of intestate succession or, in the administrator's discretion, as may otherwise be permitted in accordance with Treasury Regulation Section 1.421-1(b)(2) or successor provisions. Nonqualified stock options, director options and SARs are not transferable other than by will or the laws of intestate succession, except as permitted by the administrator in a manner consistent with the registration provisions of the Securities Act. Restricted awards, performance awards and phantom stock awards are not generally transferable, including by sale, assignment, pledge or hypothecation, other than by will or the laws of intestate succession, and participants may not sell, transfer, assign, pledge or otherwise encumber shares subject to such awards until the restriction period and/or performance period has expired and until all conditions to vesting and/or earning the award have been met.

General Federal Income Tax Consequences. Under current federal laws, in general, recipients of awards and grants of nonqualified stock options, SARs, restricted stock, dividend equivalents, performance awards and stock payments under our 2006 plan are taxable under the Internal Revenue Code upon their actual or constructive receipt of common stock or cash with respect to such awards or grants and, subject to Section 162(m) of the Internal Revenue Code and certain reporting requirements, we will be entitled to an income tax deduction with respect to the amounts taxable as ordinary income to such recipients. Under Sections 421 and 422 of the Internal Revenue Code, recipients of incentive stock options are generally not taxed on their receipt of common stock upon their exercises of incentive stock options if the option stock is held for specified minimum holding periods and, in such event, we would not be entitled to income tax deductions with respect to such exercises. If Internal Revenue Code Section 409A is deemed to apply to the 2006 plan or any award, and the 2006 plan and award do not, when considered together, satisfy the requirements of Section 409A during a taxable year, the participant will have ordinary income on the amount of all deferrals subject to Section 409A in the year of non-compliance to the extent that the award is not subject to a substantial risk of forfeiture. The participant will be subject to an additional tax of 20 percent on all amounts includible in income and may also be subject to interest charges under Section 409A. Subject to Section 162(m) of the Internal Revenue Code and certain reporting requirements, we will be entitled to an income tax deduction with respect to the amount of compensation includible as income to the participant.

Internal Revenue Code Section 409A Requirements. The 2006 plan is intended to comply with Section 409A of the Internal Revenue Code. To the extent that Section 409A is deemed to apply to the 2006 plan or any award, the 2006 plan and all such awards will, to the extent practicable, be construed in accordance with Section 409A. Section 409A imposes certain requirements on compensation that is deemed under Section 409A to involve deferred compensation. The 2006 plan imposes certain conditions upon awards that may be subject to Section 409A. These include (but are not limited to) the following:

- Deferrals of shares issuable pursuant to options, SARs settled in shares, restricted awards or other awards otherwise exempt from Section 409A in a manner that would cause Section 409A to apply are not permitted unless such deferrals are otherwise in compliance with Section 409A.
- Awards that are deemed to involve the deferral of compensation under Section 409A are subject to additional restrictions (if and to the extent required under Section 409A):
  - — Distributions may not be made earlier than upon the occurrence of one or more of the following: (i) separation from service; (ii) disability; (iii) death; (iv) a specified time or fixed schedule; (v) a change in control (as defined under Section 409A); or (vi) an unforeseeable emergency.
  - — Distributions to certain “specified employees” (as defined in Section 409A of the Internal Revenue Code) due to separation from service may not be made for six months after termination (or, if earlier, upon death).
  - — Acceleration of the time or schedule of payments due to awards subject to Section 409A is not permitted, unless permitted by the administrator and Section 409A.

— Distributions generally must be made within two and one-half months after the year in which an award is no longer subject to a substantial risk of forfeiture (unless otherwise permitted under the 2006 plan or by Section 409A).

— Deferral elections must generally be made (if at all) in the year before the year in which services for an award are performed (subject to certain exceptions permitted under the 2006 plan or Section 409A). Additional restrictions apply to changes to deferral elections.

Performance-Based Compensation—Section 162(m) Requirements. Our 2006 plan is structured to comply with the requirements imposed by Section 162(m) of the Internal Revenue Code and related regulations in order to preserve, to the extent practicable, our tax deduction for awards made under our 2006 plan to covered employees. Section 162(m) of the Internal Revenue Code generally denies an employer a deduction for compensation paid to covered employees, who are generally the named executive officers, of a publicly held corporation in excess of $1,000,000 unless the compensation is exempt from the $1,000,000 limitation because it is performance-based compensation.

In order to qualify as performance-based compensation, we must pay the compensation under our 2006 plan to covered employees under pre-established objective performance goals that a committee comprised of outside directors determines and certifies. In addition to other requirements for the performance-based exception (and subject to certain exceptions), Section 162(m) generally requires that companies disclose to stockholders, and stockholders approve, the material terms or changes in material terms of the performance goals under which compensation is to be paid. Material terms include the individuals eligible to receive compensation, a description of the business criteria on which the performance goals are based, and either the maximum amount of the compensation to be paid or the formula used to calculate the amount of compensation if the performance goals are met.

As proposed, our 2006 plan limits the maximum amount of awards that we may grant to any employee. In particular, (i) we may not grant to any participant options and SARs that are not related to an option for more than 500,000 shares of common stock in any calendar year; (ii) we may not grant to any participant awards for more than 500,000 shares of common stock in any calendar year; and (iii) we may not pay to any participant more than $1,000,000 in cash with respect to awards granted in any single calendar year. Further, with respect to performance-based restricted awards and performance awards, and in some cases, certain other types of awards, payable to covered employees that are intended to be eligible for the compensation limitation exception available under Section 162(m) and related regulations, our 2006 plan limits performance measures to one or more of the following: cash flow, return on equity, return on assets, earnings per share, achievement of clinical development or regulatory milestones, operations expense efficiency milestones, consolidated earnings before or after taxes (including earnings before interest, taxes, depreciation and amortization), net income, operating income, book value per share, return on investment, return on capital, improvements in capital structure, expense management, profitability of an identifiable business unit or product, maintenance or improvement of profit margins, stock price or total stockholder return, market share, revenues or sales, costs, working capital, economic wealth created, strategic business criteria, efficiency ratios, achievement of division, group, function or corporate financial, strategic or operational goals and comparisons with stock market indices or performances of metrics of peer companies.

To the extent that Section 162(m) of the Internal Revenue Code is applicable, the administrator will, within the time and in the manner prescribed by Section 162(m) of the Internal Revenue Code and related regulations, define in an objective fashion the manner of calculating the performance measures it selects to use for participants during any specific performance period. We may adjust or modify such performance factors due to extraordinary items, transactions, events or developments, or in recognition of, or in anticipation of, any other unusual or nonrecurring events affecting us or our financial statements, or in response to, or in anticipation of, changes in applicable laws, regulations, accounting principles or business conditions, in each case as the administrator may determine.

Targacept Retirement Savings Plan—401(k) Plan

Our employees are eligible to participate in our 401(k) plan. Under our 401(k) plan, eligible employees may elect to make a salary reduction contribution up to the statutorily prescribed annual limit. The 401(k) plan is intended to qualify under Section 401 of the Internal Revenue Code, so that the contributions by our employees will be deductible when made and income earned on 401(k) plan contributions will not be taxable to our employees until withdrawals are made. We match the contributions of our eligible employees at up to a maximum of 6% of an eligible employee's salary.

Limitation of Liability and Indemnification

Our certificate of incorporation includes a provision that eliminates the personal liability of our directors for monetary damages to the fullest extent permitted by Section 102(b)(7) of the Delaware General Corporation Law. Under that statute, a director's liability for monetary damages to us or our stockholders may not be limited with respect to:

- a breach of the director's duty of loyalty to us or our stockholders;
- an act or omission not in good faith or involving intentional misconduct or a knowing violation of law;
- an improper distribution to stockholders; or
- a transaction from which the director derived an improper personal benefit.

Our bylaws provide that we will indemnify and hold harmless any person who is made or threatened to be made a party to any matter because he or she is or was our director or officer or was serving as a director, officer or trustee of another entity, employee benefit plan or enterprise at our request to the fullest extent permitted by the Delaware General Corporation Law. Prior to the completion of this offering, we plan to enter into agreements to indemnify our directors and officers. These agreements, among other things, will indemnify our directors and officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by any such person in any action or proceeding, including any action by us arising out of such person's services as our director or officer, any of our subsidiaries from time to time or any other company or enterprise to which the person provides services at our request. We believe that these provisions and agreements are necessary to attract and retain qualified persons as directors and officers. Currently, there is no pending litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought, nor are we aware of any threatened litigation that may result in claims for indemnification. We currently maintain directors' and officers' liability insurance for each of our directors and officers.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Since January 1, 2003, we have engaged in the following transactions with our directors and executive officers and holders of more than 5% of our voting securities and affiliates of our directors, executive officers and 5% stockholders.

Stock Issuances

Issuances of Series C Convertible Preferred Stock

On March 14, 2003, we issued and sold an aggregate of 11,404,958 shares of our series C convertible preferred stock at a purchase price per share of $1.21 for an aggregate purchase price of approximately $13.8 million. The following table sets forth the number of shares of series C convertible preferred stock sold to our 5% stockholders and their affiliates on March 14, 2003.

Name	Number of Shares of Series C Preferred Stock	Aggregate Purchase Price
Entities affiliated with Oxford Bioscience Partners	6,198,347	$ 7,500,000

These shares of our series C convertible preferred stock will convert into an aggregate of 892,857 shares of our common stock concurrently with the completion of this offering.

On December 6, 2004 and May 13, 2005, we issued and sold an aggregate of 27,768,860 additional shares of our series C convertible preferred stock at a purchase price per share of $1.21 for an aggregate purchase price of approximately $33.6 million. The following table sets forth the aggregate number of shares of series C convertible preferred stock sold to our 5% stockholders and their affiliates on December 6, 2004 and May 13, 2005.

Name	Number of Shares of Series C Preferred Stock	Aggregate Purchase Price
New Enterprise Associates 10, Limited Partnership	7,851,240	$ 9,500,000
Nomura Phase4 Ventures L.P.	6,570,248	7,950,000
EuclidSR Partners, L.P.	3,471,074	4,200,000
Burrill Biotechnology Capital Fund, L.P.	1,487,603	1,800,000
Entities affiliated with Advent Private Equity Fund II	1,033,058	1,250,000
R.J. Reynolds Tobacco Holdings, Inc.	1,652,893	2,000,000

These shares of our series C convertible preferred stock will convert into an aggregate of 3,178,571 shares of our common stock concurrently with the completion of this offering.

Dr. Barrett, one of our directors, is a general partner of NEA Partners 10, Limited Partnership, the general partner of New Enterprise Associates 10, Limited Partnership, which is an affiliate of New Enterprise Associates.

Registration Rights

Pursuant to the terms of an investor rights agreement that we entered into with the holders of our series A, series B and series C convertible preferred stock on November 26, 2002, we granted registration rights to these holders. For a more detailed description of these registration rights, see “Description of Capital Stock—Registration Rights.”

Loan Agreement with R.J. Reynolds Tobacco Holdings, Inc.

In May 2002, we borrowed $2.5 million from R.J. Reynolds Tobacco Holdings, Inc. to finance equipment and other fixed assets that we had previously purchased. The borrowing bears a fixed interest rate of 6.6%, is payable in 48 equal monthly installments and matures in May 2006. In January 2004, we amended the terms of our loan facility to permit us to borrow up to an additional $2.0 million in 2004 in up to three separate borrowings. Each borrowing would bear a fixed interest rate equal to a theoretical four-year U.S. Treasury Rate on the disbursement date plus 3.5%, be payable in 48 equal monthly installments and be secured by specified tangible fixed assets that the lender determined to be sufficient at the time of disbursement. We borrowed $1.0 million in April 2004 and $973,000 in December 2004 under the amended loan facility to finance equipment. The April 2004 borrowing bears a fixed interest rate of 5.9%, is payable in 48 equal monthly installments and matures in April 2008. The December 2004 borrowing bears a fixed interest rate of 6.9%, is payable in 48 equal monthly installments and matures in January 2009. All borrowings under the loan facility are secured by specified tangible fixed assets. We believe that the terms of the loan facility are no less favorable than those that we could have obtained from an unaffiliated third party. As of December 31, 2005, the outstanding principal balance under the loan facility was $1.7 million.

Payments to R.J. Reynolds Tobacco Company

Prior to December 31, 2003, we used the services of an R.J. Reynolds Tobacco Company employee for toxicology studies and purchased materials used for research and development and copy and printing services through R.J. Reynolds Tobacco Company. We paid $201,000 for these services during 2003. During the year ended December 31, 2004 and the nine months ended September 30, 2005, we continued to use only the copy and printing services. We paid $79,000 for the year ended December 31, 2004 and $69,000 for the nine months ended September 30, 2005 for these services.

Director Compensation

For information regarding stock options or restricted stock granted to our non-employee directors or their designees, see “Management—Director Compensation.”

Executive Compensation and Employment Agreements

For information regarding the compensation of our named executive officers, see “Management—Executive Compensation” and “—Stock Options.” For information regarding employment agreements with our named executive officers, see “Management—Employment Agreements.”

Table of Contents

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding the beneficial ownership of our common stock as of December 31, 2005 and on an as adjusted basis to reflect the sale of the common stock offered in this offering by:

- each of our directors;
- each of our named executive officers;
- each person known by us to beneficially own 5% or more of our common stock; and
- all of our directors and executive officers as a group.

The number of shares of common stock beneficially owned by each stockholder is determined under rules issued by the Securities and Exchange Commission and includes voting or investment power with respect to securities. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power and includes any shares that an individual or entity has the right to acquire beneficial ownership of within 60 days of December 31, 2005 through the exercise of any warrant, stock option or other right. Unless otherwise indicated, the address of all listed stockholders is c/o Targacept, Inc., 200 East First Street, Suite 300, Winston-Salem, North Carolina 27101. Each of the stockholders listed has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned (1)	
		Before Offering	After Offering
5% Stockholders			
Entities affiliated with New Enterprise Associates (2) 1119 St. Paul Street Baltimore, Maryland 21202	2,921,999	20.7%	
Entities affiliated with EuclidSR Partners, L.P. (3) 45 Rockefeller Plaza, Suite 3240 New York, New York 10111	1,887,161	13.4%	
Entities affiliated with Nomura Phase4 Ventures Limited (4) Nomura House 1 St. Martin's-le-Grand London EC1A 4NP England	2,136,904	15.2%	
Entities affiliated with Oxford Bioscience Partners (5) 222 Berkeley Street, Suite 1650 Boston, Massachusetts 02116	892,856	6.3%	
R.J. Reynolds Tobacco Holdings, Inc. (6) 401 North Main Street Winston-Salem, North Carolina 27102	1,129,481	7.9%	
Entities affiliated with Burrill & Company LLC (7) One Embarcadero Center, Suite 2700 San Francisco, California 94111	784,395	5.6%	
Entities affiliated with Advent Private Equity Fund II (8) 25 Buckingham Gate London SW1E 6LD England	712,586	5.1%	

Table of Contents

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned (1)	
		Before Offering	After Offering
Executive Officers and Directors			
J. Donald deBethizy, Ph.D. (9)	342,378	2.4%	
Merouane Bencherif, M.D., Ph.D. (10)	113,507	*	
Jeffrey P. Brennan (11)	32,755	*	
William S. Caldwell, Ph.D. (12)	106,798	*	
Geoffrey C. Dunbar, M.D. (13)	115,201	*	
Alan A. Musso (14)	96,076	*	
Mark Skaletsky	11,332	*	
M. James Barrett, Ph.D. (15)	2,921,999	20.7%	
Charles A. Blixt (16)	1,129,481	7.9%	
Errol B. De Souza, Ph.D. (17)	4,333	*	
Ann F. Hanham (18)	778,062	5.5%	
Elaine V. Jones, Ph.D. (19)	1,887,161	13.4%	
John P. Richard (20)	5,333	*	
All executive officers and directors as a group (13 persons) (21)	7,544,416	50.2%	

* Indicates less than one percent.

(1) Our calculation of the percentage of shares of common stock beneficially owned before this offering is based on 14,102,442 shares of our common stock and common stock equivalents outstanding as of December 31, 2005, assuming conversion of all outstanding shares of our series A, series B and series C convertible preferred stock. Our calculation of the percentage of shares beneficially owned after this offering is based on shares of common stock to be outstanding after this offering, including the shares that we are selling in this offering.

(2) Includes 2,913,512 shares owned of record by New Enterprise Associates 10, Limited Partnership, for which voting and investment power is shared by M. James Barrett, Peter J. Barris, C. Richard Kramlich, Peter T. Morris, Charles W. Newhall, III, Mark W. Perry, Scott D. Sandell and Eugene A. Trainor, III, each of whom is a general partner of NEA Partners 10, Limited Partnership, the general partner of New Enterprise Associates 10, Limited Partnership; 3,154 shares owned of record by NEA Ventures 2002, Limited Partnership, for which voting and investment power is held by its general partner, Pamela J. Clark; and 1,000 shares owned of record by, and 4,333 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005 held by, NEA Development Corp., for which voting and investment power is shared by Charles W. Newhall, III, Mark W. Perry, Peter J. Barris, C. Richard Kramlich and Peter T. Morris through their ownership of New Enterprise Associates, LLC. New Enterprise Associates, LLC is the sole owner of NEA Development Corp. Dr. Barrett, one of our directors, and each of the other general partners of NEA Partners 10, Limited Partnership and NEA Ventures 2002, Limited Partnership disclaims beneficial ownership of the shares held by each of the aforementioned entities except to the extent of his or her pecuniary interest therein.

(3) Includes 1,510,080 shares owned of record by, and 5,333 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005 held by, EuclidSR Partners, L.P., for which voting and investment power is shared by Elaine V. Jones, Graham D.S. Anderson, Barbara J. Dalton, Milton J. Pappas, Stephen K. Reidy and Raymond J. Whitaker, each of whom are general partners of EuclidSR Associates, L.P., the general partner of EuclidSR Partners, L.P.; and 371,748 shares owned of record by EuclidSR Biotechnology Partners, L.P., for which voting and investment power is shared by Elaine V. Jones, Graham D.S. Anderson, Barbara J. Dalton, Milton J. Pappas, Stephen K. Reidy and Raymond J. Whitaker, each of whom are general partners of EuclidSR Biotechnology Associates, L.P., the general partner of EuclidSR Biotechnology Partners, L.P. Dr. Jones, one of our directors, and each of the other general partners of EuclidSR Associates, L.P. and EuclidSR Biotechnology Associates, L.P. disclaims beneficial ownership of the shares held by each of the aforementioned entities except to the extent of his or her pecuniary interest therein.

(4) Includes 1,190,476 shares owned of record by Nomura International plc and 946,428 shares owned of record by Nomura Phase4 Ventures L.P. Nomura Phase4 Ventures Limited, as appointee of Nomura International plc and as manager of Nomura Phase4 Ventures L.P., has voting and investment power over the shares held by Nomura International plc and Nomura Phase4 Ventures L.P. Mr. Yoshiki Hashimoto, the Head of Merchant Banking, Nomura International plc, and Dr. Denise Pollard-Knight, the Head of Nomura Phase4 Ventures, are the only two members of the board of directors of Nomura Phase4 Ventures Limited and both of them, acting together, exercise the voting and investment power of Nomura Phase4 Ventures Limited. Mr. Hashimoto exercises these powers in his capacity as director of Nomura Phase4 Ventures Limited and as Head of Merchant Banking, Nomura International plc. Mr. Hashimoto and Dr. Pollard-Knight disclaim beneficial ownership of these shares.

(5) Includes 883,987 shares owned of record by Oxford Bioscience Partners IV L.P. and 8,869 shares owned of record by mRNA Fund II L.P., for which voting and investment power is shared by Alan G. Walton, Jonathan J. Fleming, Jeffrey T. Barnes, Mark P. Carthy and Michael Lytton, each of whom are general partners of OBP Management IV L.P., the sole general partner of Oxford Bioscience Partners IV L.P. and mRNA Fund II L.P. Each of Oxford Bioscience Partners IV L.P. and mRNA Fund II L.P. disclaim beneficial ownership of any shares held of record by the other. Each of the general partners of OBP Management IV L.P. disclaims beneficial ownership of the shares held by each of the aforementioned entities except to the extent of his pecuniary interest therein.

(6) Includes 5,333 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005 and 215,054 shares issuable upon the exercise of an outstanding warrant, assuming that the warrant is exercised in full for cash. Voting and investment power is held by Charles A. Blixt, president of R.J. Reynolds Tobacco Holdings, Inc. and one of our directors. Mr. Blixt disclaims beneficial ownership of these shares.

(7) Includes 778,062 shares owned of record by Burrill Biotechnology Capital Fund, L.P., for which voting and investment power is shared by G. Steven Burrill, John H. Kim, Roger E. Wyse and Ann F. Hanham, members of Burrill & Company (Biotechnology GP), LLC, the general partner of Burrill Biotechnology Capital Fund, L.P.; and 1,000 shares owned of record by, and 5,333 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005 held by, Burrill & Company LLC, for which voting and investment power is held by G. Steven Burrill, the chief executive officer of Burrill & Company LLC. Ms. Hanham, one of our directors, and each of the other members of Burrill & Company (Biotechnology GP), LLC disclaims beneficial ownership of the shares held by Burrill Biotechnology Capital Fund, L.P. except to the extent of his or her pecuniary interest therein.

(8) Includes 260,685 shares owned of record by Advent Private Equity Fund II ‘A’ Limited Partnership; 158,989 shares owned of record by Advent Private Equity Fund II ‘B’ Limited Partnership; 236,694 shares owned of record by Advent Private Equity Fund II ‘C’ Limited Partnership; and 56,218 shares owned of record by Advent Private Equity Fund II ‘D’ Limited Partnership. Voting and investment power over the shares held by each of the partnerships constituting Advent Private Equity Fund II is exercised by Advent Venture Partners LLP in its role as manager. The partners of Advent Venture Partners LLP are Sir David James Scott Cooksey (chairman), Jeryl Christine Andrew, Peter Anthony Baines, Jerry Christopher Benjamin, David Cheesman, Leslie Ian Gabb, Mohammed Shahzad Ahmed Malik, Patrick Pak-tin Lee, Martin Alexander McNair, William Harold Neil Pearce and Nicholas James Teasdale. Each partner disclaims beneficial ownership of these shares except to the extent of his pecuniary interest therein.

(9) Includes 248,543 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005.

(10) Includes 105,772 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005.

(11) Consists of 32,755 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005.

(12) Includes 99,063 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005.

(13) Includes 92,599 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005.

(14) Includes 93,277 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005.

(15) Includes 2,913,512 shares owned of record by New Enterprise Associates 10, Limited Partnership, for which voting and investment power is shared by M. James Barrett, Peter J. Barris, C. Richard Kramlich, Peter T. Morris, Charles W. Newhall, III, Mark W. Perry, Scott D. Sandell and Eugene A. Trainor, III, each of whom is a general partner of NEA Partners 10, Limited Partnership, the general partner of New Enterprise Associates 10, Limited Partnership; 3,154 shares owned of record by NEA Ventures 2002, Limited Partnership, for which voting and investment power is held by its general partner, Pamela J. Clark; and 1,000 shares owned of record by, and 4,333 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005 held by, NEA Development Corp., for which voting and investment power is shared by Charles W. Newhall, III, Mark W. Perry, Peter J. Barris, C. Richard Kramlich and Peter T. Morris through their ownership of New Enterprise Associates, LLC. New Enterprise Associates, LLC is the sole owner of NEA Development Corp. Dr. Barrett, one of our directors, and each of the other general partners of NEA Partners 10, Limited Partnership and NEA Ventures 2002, Limited Partnership disclaims beneficial ownership of the shares held by each of the aforementioned entities except to the extent of his or her pecuniary interest therein.

(16) Includes 5,333 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005 held by R.J. Reynolds Tobacco Holdings, Inc. and 215,054 shares issuable upon the exercise of an outstanding warrant held by R.J. Reynolds Tobacco Holdings, Inc., assuming that the warrant is exercised in full for cash. Voting and investment power is held by Mr. Blixt, president of R.J. Reynolds Tobacco Holdings, Inc. Mr. Blixt disclaims beneficial ownership of these shares.

(17) Includes 3,333 shares of common stock issuable upon exercise of stock options exercisable within sixty days of December 31, 2005.

(18) Includes 778,062 shares owned of record by Burrill Biotechnology Capital Fund, L.P., for which voting and investment power is shared by G. Steven Burrill, John H. Kim, Roger E. Wyse and Ann F. Hanham, members of Burrill & Company (Biotechnology GP), LLC, the general partner of Burrill Biotechnology Capital Fund, L.P. Ms. Hanham, one of our directors, and each of the other members of Burrill & Company (Biotechnology GP), LLC disclaims beneficial ownership of the shares held by Burrill Biotechnology Capital Fund, L.P. except to the extent of his or her pecuniary interest therein.

(19) Includes 1,510,080 shares owned of record by, and 5,333 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005 held by, EuclidSR Partners, L.P., for which voting and investment power is shared by Elaine V. Jones, Graham D.S. Anderson, Barbara J. Dalton, Milton J. Pappas, Stephen K. Reidy and Raymond J. Whitaker, each of whom are general partners of EuclidSR Associates, L.P., the general partner of EuclidSR Partners, L.P.; and 371,748 shares owned of record by EuclidSR Biotechnology Partners, L.P., for which voting and investment power is shared by Elaine V. Jones, Graham D.S. Anderson, Barbara J. Dalton, Milton J. Pappas, Stephen K. Reidy and Raymond J. Whitaker, each of whom are general partners of EuclidSR Biotechnology Associates, L.P., the general partner of EuclidSR Biotechnology Partners, L.P. Dr. Jones, one of our directors, and each of the other general partners of EuclidSR Associates, L.P. and EuclidSR Biotechnology Associates, L.P. disclaims beneficial ownership of the shares held by each of the aforementioned entities except to the extent of his or her pecuniary interest therein.

(20) Includes 1,000 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005.

(21) Includes 691,341 shares of common stock issuable upon exercise of stock options exercisable within 60 days of December 31, 2005 and 215,054 shares issuable upon the exercise of an outstanding warrant, assuming that the warrant is exercised in full for cash.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock and provisions of our certificate of incorporation and bylaws are summaries and are qualified by reference to the certificate of incorporation and the bylaws that will be in effect upon completion of this offering. Copies of these documents have been filed with the Securities and Exchange Commission as exhibits to our registration statement of which this prospectus forms a part. The descriptions of the common stock and preferred stock reflect changes to our capital structure that will occur concurrently with the completion of this offering.

Upon completion of this offering, our authorized capital stock will consist of 100,000,000 shares of common stock, par value $0.001 per share, and 5,000,000 shares of undesignated preferred stock, par value $0.001 per share.

As of December 31, 2005, we had outstanding:

- 270,427 shares of common stock held by 62 stockholders of record;
- 5,000,000 shares of series A convertible preferred stock;
- 6,567,567 shares of series B convertible preferred stock; and
- 76,937,998 shares of series C convertible preferred stock.

As of December 31, 2005, we also had outstanding a warrant to purchase 215,054 shares of common stock at an exercise price of $14.63 per share.

All of our outstanding shares of preferred stock will convert into 13,832,015 shares of common stock concurrently with the completion of this offering. Also, the warrant will be cancelled if it is not exercised prior to the completion of this offering. If R.J. Reynolds exercises the warrant in full for cash, we would issue 215,054 shares of common stock and receive cash proceeds of approximately $3.1 million.

Common Stock

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors, and there are no cumulative voting rights. Subject to preferences that may be applicable to any shares of preferred stock that may become outstanding from time to time, holders of common stock are entitled to receive, ratably, dividends declared from time to time by our board of directors, if any, out of funds legally available for that purpose. In the event of our liquidation, dissolution or winding up, holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any shares of preferred stock then outstanding. Holders of common stock have no conversion, preemptive or other subscription rights, and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

Upon completion of this offering, our board of directors will be authorized, without stockholder approval, to issue up to an aggregate of 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, designation and powers granted to or imposed upon the preferred stock, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences. We cannot state with certainty the actual effects of the issuance of any shares of preferred stock upon the rights of holders of common stock until the board of directors determines the specific rights of the holders of the preferred stock. Some of these effects might potentially include:

- restricting the declaration or payment of dividends on the common stock;
- diluting the voting power of the common stock;
- impairing the liquidation rights of the common stock; and
- delaying or preventing a change in control of us.

We do not currently have any plans to issue any shares of preferred stock following this offering.

Options

As of December 31, 2005, options to purchase 1,610,009 shares of common stock at a weighted average exercise price of $2.88 per share were outstanding.

Registration Rights

After this offering, holders of approximately 14,043,078 shares of our common stock will have the right to require us to register the sales of their shares under the Securities Act, under the terms of an agreement between us and the holders of these securities. Subject to limitations specified in this agreement, these registration rights include the following:

Demand Registration Rights. Beginning six months after the completion of this offering, subject to specified limitations, two separate constituencies of the holders of registrable securities may require that we register part of these securities for sale under the Securities Act. Each constituency may make one such demand.

Incidental Registration Rights. If we register any of our common stock under the Securities Act, solely for cash, either for our own account or for the account of other security holders, the holders of shares of registrable securities are entitled to notice of the registration and to include their shares of common stock in the registration. These rights have been waived for this offering.

Form S-3 Registration Rights. If we become eligible to file registration statements on Form S-3, holders of registrable securities can require us to register their registrable securities on Form S-3 if the total gross proceeds to be received by them together would be at least $1.0 million.

Limitations and Expenses. With specified exceptions, a holder’s right to include shares in a registration statement is subject to the right of the underwriters to limit the number of shares included in the offering. We are generally required to pay all expenses of registration, including the fees and expenses of one legal counsel to the registering security holders up to a prescribed maximum amount, but excluding underwriters’ discounts and commissions.

Anti-Takeover Provisions

We are subject to Section 203 of the Delaware General Corporation Law, an anti-takeover statute. Subject to certain exceptions, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for three years following the date that the person became an interested stockholder, unless the interested stockholder attained such status with the approval of our board of directors or unless the business combination is approved in a prescribed manner. A business combination includes, among other things, a merger or consolidation involving us and the interested stockholder and the sale of more than 10% of our assets. In general, an interested stockholder is any entity or person beneficially owning 15% or more of our outstanding voting stock and any entity or person affiliated with or controlling or controlled by that entity or person.

Certain provisions of our certificate of incorporation and bylaws that will be in effect upon completion of this offering could make the acquisition of us through a tender offer, proxy contest or other means, or the removal of incumbent officers and directors, more difficult. These provisions may discourage certain types of coercive takeover practices and takeover bids and encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of retaining the ability to negotiate with a proponent of an unfriendly or unsolicited proposal outweigh the potential disadvantages of discouraging such a proposal. These provisions may make it more difficult for stockholders to take specific corporate actions and could have the effect of delaying or preventing a change in our control.

In particular, our certificate of incorporation or bylaws that will be in effect upon completion of this offering provide for the following:

Staggered Board of Directors and Number of Directors. Our board of directors is divided into three classes of the same or nearly the same number of directors serving staggered three-year terms, which means that only one class of directors may be elected at a particular stockholders meeting. Also, the authorized number of directors comprising our board of directors may only be changed by resolution of our board of directors. As a result, the replacement of incumbent directors may be more difficult and third parties may be discouraged from seeking to circumvent the anti-takeover provisions of our certificate of incorporation and bylaws by replacing our incumbent directors.

Limitations on Calling Special Meetings of Stockholders. Under Delaware law, a special meeting of stockholders may be called by the board of directors or by any other person authorized to do so in the certificate of incorporation or the bylaws. Our certificate of incorporation and bylaws do not permit our stockholders to call a special meeting. As a result, a stockholder could not force stockholder consideration of a proposal over the opposition of the board of directors by calling a special meeting. The restriction on the ability of stockholders to call a special meeting means that a proposal to replace the board of directors also could be delayed until the next annual meeting.

Advance Notice Procedures. Our bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to the board of directors. At an annual meeting, stockholders may consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the board of directors. Stockholders may also consider a proposal or nomination by a person who was a stockholder of record on the record date for the meeting and on the date that notice of the proposal or nomination was given, who is entitled to vote at the meeting and who has given to our secretary timely written notice, in proper form, of his or her intention to bring that business before the meeting. The bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed. These provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer’s own slate of directors or otherwise attempting to obtain control of us.

Prohibition of Stockholder Action by Written Consent. Delaware law provides that, unless prohibited by the certificate of incorporation, stockholders may execute an action by written consent in lieu of a stockholder meeting. Our certificate of incorporation prohibits stockholder action by written consent, which may lengthen the amount of time required to take stockholder actions because actions by written consent are not subject to the minimum notice requirement of a stockholders meeting. The prohibition of stockholder action by written consent may deter hostile takeover attempts because a holder that controlled a majority of our capital stock would not be able to amend our bylaws or remove directors without holding a stockholders meeting and would have to obtain the consent of a majority of our board of directors, our chairman of the board, our chief executive officer or our president to call a stockholders meeting and satisfy the applicable notice periods.

Undesignated Preferred Stock. Our board of directors is authorized to issue up to 5,000,000 shares of our preferred stock in one or more series and to fix the rights, preferences, designation and powers granted to or imposed upon the preferred stock, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences. The existence of this ability could discourage an attempt to take control of us through a merger, tender offer, proxy contest or other means.

With the exception of the provision relating to the issuance of preferred stock, which can be amended with the approval of a majority of the outstanding shares of stock entitled to vote, none of these provisions can be amended without the approval of at least two-thirds of our outstanding shares of stock entitled to vote. In addition, the affirmative vote of two-thirds of our outstanding shares of stock entitled to vote is required to amend provisions of our certificate of incorporation or bylaws relating to exculpation and indemnification of directors and officers, the number, election, qualification, term of office, resignation or removal of directors and the filling of director vacancies.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company.

NASDAQ National Market

We have applied to list our common stock on the NASDAQ National Market under the symbol “TRGT.”

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock and we cannot assure you that a liquid trading market for our common stock will develop or be sustained after this offering. Future sales of substantial amounts of our common stock in the public market following this offering, or the anticipation of those sales, could adversely affect market prices prevailing from time to time and could impair our ability to raise capital by the sale of our equity securities.

Upon completion of this offering, we will have outstanding shares of common stock, after giving effect to the conversion of all outstanding shares of our convertible preferred stock into 13,832,015 shares of common stock concurrently with the completion of this offering.

All of the shares sold in this offering will be freely tradable without restriction unless purchased by our "affiliates," as that term is defined in Rule 144 under the Securities Act. The remaining shares of common stock to be outstanding after this offering are "restricted securities" under Rule 144. Substantially all of these restricted securities will be subject to the 180-day lock-up period described below. Immediately after the 180-day lock-up period, shares will be freely tradable under Rule 144(k) or Rule 701(g)(3) under the Securities Act and shares will be eligible for resale under Rule 144 or Rule 701(g)(3), subject to volume limitations.

Restricted securities may be sold in the public market only if registered or if they qualify for an exemption from registration under Rules 144 or 701 under the Securities Act. These rules are summarized below.

Rule 144

In general, under Rule 144, beginning 90 days after the date of this prospectus, a person who has beneficially owned shares of our common stock for at least one year would be entitled to sell within any three-month period a number of shares that does not exceed the greater of:

- 1% of the number of shares of common stock then outstanding, which will equal approximately shares immediately after the completion of this offering; or
- the average weekly trading volume of the common stock on the NASDAQ National Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Sales under Rule 144 are also subject to manner of sale provisions and notice requirements and to the availability of current public information about us.

Rule 144(k)

Subject to the lock-up agreements described below, shares of our common stock eligible for sale under Rule 144(k) may be sold immediately after the completion of this offering. In general, under Rule 144(k), a person may sell shares of common stock acquired from us immediately after the completion of this offering, without regard to manner of sale, notice, availability of public information or volume, if:

- the person is not our affiliate and has not been our affiliate at any time during the three months preceding the sale; and
- the person has beneficially owned the shares proposed to be sold for at least two years, including the holding period of any prior owner other than an affiliate.

Rule 701

In general, under Rule 701, any of our employees, consultants or advisors who purchased shares from us in connection with a qualified compensatory benefit plan or other written compensation contract is eligible to resell those shares 90 days after the effective date of this offering in reliance on Rule 144, but without compliance with various restrictions, including the holding period, contained in Rule 144.

Lock-up Agreements

The holders of substantially all of our currently outstanding stock have agreed that, without the prior written consent of Deutsche Bank Securities Inc. on behalf of the underwriters and subject to the exceptions described in the section entitled “Underwriters” in this prospectus they will not, during the period ending 180 days after the date of this prospectus, subject to a possible extension:

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of shares of our common stock,

whether any transaction described above is to be settled by delivery of shares of our common stock or such other securities, in cash or otherwise. Deutsche Bank Securities does not have any pre-established conditions to waiving the terms of the lock-up agreements. Any determination to release any shares subject to the lock-up agreements would be based on a number of factors at the time of determination, including but not necessarily limited to the market price of the common stock, the liquidity of the trading market for the common stock, general market conditions, the number of shares proposed to be sold and the timing, purpose and terms of the proposed sale.

The lock-up agreements also provide that, if we issue an earnings release or if material news or a material event relating to our company occurs during the last 17 days of the 180-day restricted period or if prior to the expiration of the 180-day restricted period we announce that we will release earnings results during the 16-day period beginning on the last day of the 180-day period, the restricted period will continue for the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event.

Stock Options

After the completion of this offering, we intend to file a registration statement on Form S-8 under the Securities Act to register all of the shares of common stock subject to issuance upon exercise of outstanding options granted under, or reserved for future issuance under, our 2000 plan and our 2006 plan. Shares of common stock issued under the Form S-8 upon exercise of options will be available for sale in the public market, subject to Rule 144 volume limitations applicable to affiliates and subject to the contractual restrictions described above. As of December 31, 2005, options to purchase 1,610,009 shares of common stock were outstanding under our 2000 plan with a weighted average exercise price of $2.88 per share, of which approximately 979,784 were vested and exercisable with a weighted average exercise price of $3.61 per share and an additional 54,465 shares were reserved for issuance under our 2000 plan.

Upon completion of this offering, those shares reserved under our 2000 plan plus an additional 2,700,000 shares of common stock will become reserved for issuance under our 2006 plan.

Registration Rights

Upon completion of this offering, the holders of approximately 14,043,078 shares of our common stock will be entitled to registration rights. Registration of the sale of these shares upon exercise of these rights would make them freely tradable without restriction under the Securities Act. For more information regarding these registration rights, see "Description of Capital Stock—Registration Rights."

UNDERWRITERS

Under the terms and subject to the conditions contained in an underwriting agreement dated the date of this prospectus, the underwriters named below, for which Deutsche Bank Securities Inc., Pacific Growth Equities, LLC, CIBC World Markets Corp. and Lazard Capital Markets LLC are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below:

Underwriters	Number of Shares
Deutsche Bank Securities Inc.	
Pacific Growth Equities, LLC	
CIBC World Markets Corp.	
Lazard Capital Markets LLC	
Total	

The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus are subject to the approval of specified legal matters by their counsel and to other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option described below.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the public offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of $ per share under the public offering price. No underwriter may allow, and no dealer may reallow, any concession to other underwriters or to certain dealers. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to an aggregate of additional shares of common stock at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase approximately the same percentage of the additional shares of common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table. If the underwriters' option is exercised in full, the total price to the public would be $, the total underwriters' discounts and commissions would be $ and the total proceeds to us would be $.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed five percent of the total number of shares of common stock offered by them.

We and all of our directors and officers and holders of substantially all of our currently outstanding stock have agreed that, without the prior written consent of Deutsche Bank Securities on behalf of the underwriters, we and they will not, during the period ending 180 days after the date of this prospectus:

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of shares of our common stock,

whether any transaction described above is to be settled by delivery of shares of our common stock or such other securities, in cash or otherwise.

The 180-day restricted period described in the preceding paragraph will be extended if:

- during the last 17 days of the 180-day restricted period we issue an earnings release or material news or a material event relating to our company occurs; or
- prior to the expiration of the 180-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 180-day period,

in which case the restrictions described in the preceding paragraph will continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event.

These restrictions do not apply to:

- the sale of shares to the underwriters;
- the issuance by us of shares of our common stock upon the exercise of an option or a warrant or the conversion of a security outstanding on the date of this prospectus of which the underwriters have been advised in writing;
- the issuance by us of shares or options to purchase shares of our common stock pursuant to our 2000 plan or our 2006 plan, provided that the recipient of the shares agrees to be subject to the restrictions described above;
- transactions by any person other than us relating to shares of common stock or other securities acquired in open market transactions after the completion of the offering of the shares;
- transfers of shares as a gift or charitable contribution, or by will or intestacy;
- transfers of shares to any trust the sole beneficiaries of which are the transferee or a member of the immediate family of the transferee; or
- transfers to certain entities or persons affiliated with the stockholder;

provided that in the case of each of the last three transactions, each donee, distributee, transferee and recipient agrees to be subject to the restrictions described in the immediately preceding paragraph, no filing under Section 16 of the Securities Exchange Act of 1934, as amended, is required in connection with these transactions, other than a filing on a Form 5 made after the expiration of the 180-day period, and no transaction includes a disposition for value.

The following table shows the underwriting discounts and commissions that we are to pay to the underwriters in connection with this offering. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares of our common stock.

	Paid by Targacept	
	No Exercise	**Full Exercise**
Per share	$	$
Total	$	$

In addition, we estimate that the expenses of this offering payable by us, other than underwriting discounts and commissions, will be $.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. In addition, to stabilize the price of the common stock, the underwriters may bid for, and purchase, shares of common stock in the open market. Finally, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the common stock in this offering, if the syndicate repurchases previously distributed common stock in transactions to cover syndicate short positions or to stabilize the price of the common stock. Any of these activities may stabilize or maintain the market price of the common stock above independent market levels. The underwriters are not required to engage in these activities, and may end any of these activities at any time.

We have applied to list our common stock on the NASDAQ National Market under the symbol "TRGT."

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

Directed Share Program

At our request, the underwriters have reserved for sale, at the initial public offering price, up to shares offered by this prospectus to directors, officers, employees and other individuals associated with us and members of their respective families and friends through a directed share program. The number of shares of our common stock available for sale to the general public in the offering will be reduced to the extent these persons purchase these reserved shares. Any reserved shares not purchased by these persons will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus.

Pricing of the Offering

Prior to the offering, there has been no public market for our common stock. The initial public offering price will be determined by negotiations between us and the representatives. Among the factors to be considered in determining the initial public offering price of the shares will be our future prospects and those of our industry in general, our sales, earnings and other financial operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities and financial and operating information of companies engaged in activities similar to ours. The estimated initial public offering price range set forth on the cover page of this preliminary prospectus is subject to change as a result of market conditions and other factors.

LEGAL MATTERS

Certain legal matters with respect to the validity of the shares of common stock offered hereby will be passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts and by Womble Carlyle Sandridge & Rice, PLLC, Winston-Salem, North Carolina. Wilmer Cutler Pickering Hale and Dorr LLP, New York, New York, has acted as counsel for the underwriters in connection with certain legal matters related to this offering.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, have audited our financial statements as of December 31, 2004 and 2003 and for each of the three years in the period ended December 31, 2004, as set forth in their report. We have included our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the Securities and Exchange Commission a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock to be sold in this offering. This prospectus does not contain all of the information set forth in the registration statement. You should refer to the registration statement for additional information regarding us and the shares of our common stock to be sold in this offering. Whenever we reference any contract, agreement or other document in this prospectus, the reference is not necessarily complete and you should refer to the exhibits to the registration statement for the actual contract, agreement or other document. In each instance, reference is made to such exhibits and each such statement is qualified in all respects by such reference. In addition, when this offering is completed, we will become subject to the information and reporting requirements of the Exchange Act and, in accordance with the Exchange Act, will file periodic reports, proxy statements and other information with the Securities and Exchange Commission.

You can read the registration statement and our future filings with the Securities and Exchange Commission over the Internet at the Securities and Exchange Commission's website at http://www.sec.gov. You may also read and copy any document that we file with the Securities and Exchange Commission at its public reference room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549.

You may obtain copies of the documents at prescribed rates by writing to the Public Reference Section of the Securities and Exchange Commission at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Please call the Securities and Exchange Commission at 1-800-SEC-0330 for further information on the operation of the public reference room. Such reports, proxy and information statements and other information may also be inspected at the offices of NASDAQ Operations, 1735 K Street, N.W., Washington, D.C. 20006.

Table of Contents

INDEX TO THE FINANCIAL STATEMENTS

Years ended December 31, 2002, 2003 and 2004

Nine months ended September 30, 2004 and 2005 (unaudited)

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors
Targacept, Inc.

We have audited the accompanying balance sheets of Targacept, Inc. as of December 31, 2003 and 2004, and the related statements of operations, redeemable convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2004. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Targacept, Inc. at December 31, 2003 and 2004, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2004, in conformity with U.S. generally accepted accounting principles.

/s/ ERNST & YOUNG LLP

February 4, 2005
Greensboro, North Carolina

Table of Contents

TARGACEPT, INC.
BALANCE SHEETS

	December 31,	
	2003	2004
ASSETS		
Current assets:		
Cash and cash equivalents	$ 11,609,157	$ 53,075,348
Short-term investments	31,367,500	—
Research fees and accounts receivable	818,618	484,565
Inventories	118,520	102,640
Prepaid expenses and accrued interest receivable	514,552	1,727,836
Total current assets	44,428,347	55,390,389
Property and equipment, net	2,373,035	2,262,698
Intangible assets, net of accumulated amortization of $53,499 and $91,263 at December 31, 2003 and 2004, respectively	588,501	550,737
Total assets	$ 47,389,883	$ 58,203,824
LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	$ 1,246,975	$ 1,854,138
Accrued expenses	1,406,778	1,940,836
Current portion of long-term debt	576,072	1,113,350
Current portion of deferred rent incentive	402,647	402,647
Current portion of deferred license fee revenue	269,537	—
Total current liabilities	3,902,009	5,310,971
Long-term debt, net of current portion	1,461,554	3,443,297
Deferred rent incentive, net of current portion	1,040,171	637,524
Deferred license fee revenue, net of current portion	1,647,687	—
Total liabilities	8,051,421	9,391,792
Commitments		
Redeemable convertible preferred stock:		
Series A, $0.001 par value, 5,000,000 shares authorized, issued and outstanding, aggregate liquidation preference of $28,496,497 and $30,166,741 at December 31, 2003, and 2004, respectively, or $4.65 per share plus accreted redemption value	28,496,497	30,166,741
Series B, $0.001 par value, 6,567,567 shares authorized, issued and outstanding, aggregate liquidation preference of $37,484,419 and $39,622,161 at December 31, 2003, and 2004, respectively, or $4.65 per share, plus accreted redemption value	37,484,419	39,622,161
Series C, $0.001 par value, 49,169,138 and 76,441,866 shares authorized, issued and outstanding at December 31, 2003, and 2004, respectively, aggregate liquidation preference of $64,153,421 and $101,988,994 at December 31, 2003, and 2004, or $1.21 per share, plus accreted redemption value	64,153,421	101,988,994
Total redeemable convertible preferred stock	130,134,337	171,777,896
Stockholders' equity (deficit):		
Common stock, $0.001 par value, 11,333,333 and 16,666,666 shares authorized at December 31, 2003, and 2004, respectively, 144,370 and 256,816 shares issued and outstanding at December 31, 2003, and 2004, respectively	144	257
Capital in excess of par value	691,614	1,261,178
Common stock warrants	213,710	213,710
Accumulated deficit	(91,672,061)	(124,441,009)
Accumulated other comprehensive loss	(29,282)	—
Total stockholders' equity (deficit)	(90,795,875)	(122,965,864)
Total liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)	$ 47,389,883	$ 58,203,824

See accompanying notes.

Table of Contents

TARGACEPT, INC.
STATEMENTS OF OPERATIONS

	Year ended December 31,		
	2002	2003	2004
Revenue:			
Research fee revenue	$ 1,388,824	$ 1,302,500	$ 337,500
License fee revenue	634,881	269,532	1,917,224
Product sales	242,861	814,724	766,583
Grant revenue	—	71,529	717,067
Other	19,792	—	—
Net revenue	2,286,358	2,458,285	3,738,374
Operating expenses:			
Research and development	16,243,888	18,179,542	22,770,881
General and administrative	4,135,262	3,599,673	5,162,474
Cost of product sales	243,718	742,941	198,446
Purchased in-process research and development	2,666,000	—	—
Total operating expenses	23,288,868	22,522,156	28,131,801
Loss from operations	(21,002,510)	(20,063,871)	(24,393,427)
Other income (expense):			
Interest and dividend income	87,691	791,339	504,986
Interest expense	(102,891)	(122,789)	(132,749)
Loss on disposal of fixed assets	(53,996)	—	(4,199)
Total other income (expense)	(69,196)	668,550	368,038
Net loss	(21,071,706)	(19,395,321)	(24,025,389)
Preferred stock accretion	(4,173,545)	(8,340,628)	(8,743,559)
Net loss attributable to common stockholders	$ (25,245,251)	$ (27,735,949)	$ (32,768,948)
Basic and diluted net loss per share attributable to common stockholders	$ (339.63)	$ (254.33)	$ (149.48)
Weighted average common shares outstanding—basic and diluted	74,332	109,053	219,213

Table of Contents

TARGACEPT, INC.

STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)

	Redeemable Convertible Preferred Stock			Common Stock		Capital in Excess of Par Value	Common Stock Warrants	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Deficit
	Series A	Series B	Series C	Shares	Amount					
Balances at January 1, 2002	$25,156,009	$33,208,932	$ —	64,813	$ 65	$ 209,239	$213,710	$ (38,690,861)	$ —	$ (38,267,847)
Stock issuance costs	—	—	(206,887)	—	—	—	—	—	—	—
Issuance of 37,764,180 shares of Series C redeemable convertible preferred stock at $1.21 per share	—	—	45,694,658	—	—	—	—	—	—	—
Issuance of 18,465 shares of common stock at $0.001 per share par value, related to exercise of stock options	—	—	—	18,465	18	178,157	—	—	—	178,175
Accreted redemption value for common stock warrants attached to Series A redeemable convertible preferred stock	42,744	—	—	—	—	—	—	(42,744)	—	(42,744)
Accreted redemption value for Series A, Series B, and Series C redeemable convertible preferred stock	1,627,500	2,137,743	365,558	—	—	—	—	(4,130,801)	—	(4,130,801)
Net loss	—	—	—	—	—	—	—	(21,071,706)	—	(21,071,706)
Balances at December 31, 2002	$26,826,253	$35,346,675	$45,853,329	83,278	$ 83	$ 387,396	$213,710	$ (63,936,112)	$ —	$ (63,334,923)

TARGACEPT, INC.

STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)—(CONTINUED)

	Redeemable Convertible Preferred Stock			Common Stock		Capital in Excess of Par Value	Common Stock Warrants	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Deficit
	Series A	Series B	Series C	Shares	Amount					
Balances at December 31, 2002 (carried forward)	$26,826,253	$35,346,675	$ 45,853,329	83,278	$ 83	$ 387,396	$ 213,710	$ (63,936,112)	$ —	$ (63,334,923)
Stock issuance costs	—	—	(32,548)	—	—	—	—	—	—	—
Issuance of 11,404,958 shares of Series C redeemable convertible preferred stock at $1.21 per share	—	—	13,800,000	—	—	—	—	—	—	—
Issuance of 61,092 shares of common stock at $0.001 per share par value, related to exercise of stock options	—	—	—	61,092	61	304,218	—	—	—	304,279
Accreted redemption value for common stock warrants attached to Series A redeemable convertible preferred stock	42,744	—	—	—	—	—	—	(42,744)	—	(42,744)
Accreted redemption value for Series A, Series B, and Series C redeemable convertible preferred stock	1,627,500	2,137,744	4,532,640	—	—	—	—	(8,297,884)	—	(8,297,884)
Net change in unrealized holding loss on available-for-sale securities	—	—	—	—	—	—	—	—	(29,282)	(29,282)
Net loss	—	—	—	—	—	—	—	(19,395,321)	—	(19,395,321)
Comprehensive loss										(19,424,603)
Balances at December 31, 2003	$28,496,497	$37,484,419	$ 64,153,421	144,370	$ 144	$ 691,614	$ 213,710	$ (91,672,061)	$ (29,282)	$ (90,795,875)
Stock issuance costs	—	—	(100,000)	—	—	—	—	—	—	—
Issuance of 27,272,728 shares of Series C redeemable convertible preferred stock at $1.21 per share	—	—	33,000,000	—	—	—	—	—	—	—
Issuance of 112,446 shares of common stock at $0.001 per share par value, related to exercise of stock options	—	—	—	112,446	113	569,564	—	—	—	569,677
Accreted redemption value for common stock warrants attached to Series A redeemable convertible preferred stock	42,744	—	—	—	—	—	—	(42,744)	—	(42,744)
Accreted redemption value for Series A, Series B, and Series C redeemable convertible preferred stock	1,627,500	2,137,742	4,935,573	—	—	—	—	(8,700,815)	—	(8,700,815)
Net change in unrealized holding loss on available-for-sale securities	—	—	—	—	—	—	—	—	29,282	29,282
Net loss	—	—	—	—	—	—	—	(24,025,389)	—	(24,025,389)
Comprehensive loss										(23,996,107)
Balances at December 31, 2004	$30,166,741	$39,622,161	$101,988,994	256,816	$ 257	$1,261,178	$ 213,710	$(124,441,009)	$ —	$ (122,965,864)

See accompanying notes.

TARGACEPT, INC.
STATEMENTS OF CASH FLOWS

	Year ended December 31,		
	2002	2003	2004
Operating activities			
Net loss	$ (21,071,706)	$ (19,395,321)	$ (24,025,389)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	958,105	672,927	766,335
Loss on disposal of equipment	53,996	—	4,199
Write-off of in-process research and development	2,666,000	—	—
Non-cash compensation expense	129,710	65,325	50,623
Recognition of deferred rent incentive	(167,769)	(402,647)	(402,647)
Realized loss on sale of investments	—	20,978	87,948
Amortization of discount on held-to-maturity investments	(48,446)	—	—
Changes in operating assets and liabilities, excluding the effects from acquired assets and liabilities:			
Research fees and accounts receivable	(713,109)	517,030	334,053
Inventories	22,464	51,016	15,880
Prepaid expenses and accrued interest receivable	158,605	(205,054)	(1,091,627)
Accounts payable and accrued expenses	1,503,132	(326,451)	1,141,221
Deferred license fee revenue	(634,881)	(269,532)	(1,917,224)
Net cash used in operating activities	(17,143,899)	(19,271,729)	(25,036,628)
Investment activities			
Purchase of investments	(11,500,000)	(84,796,103)	(6,191,930)
Proceeds from sale of investments	26,400,000	58,500,000	37,379,107
Purchase of property and equipment	(1,281,840)	(545,254)	(660,624)
Proceeds from sale of property and equipment	—	—	38,191
Proceeds from rent incentive	2,013,234	—	—
Purchase of Inversine product	(3,500,000)	—	—
Net cash provided by (used in) investing activities	12,131,394	(26,841,357)	30,564,744
Financing activities			
Proceeds from borrowing of long-term debt	3,000,000	—	3,250,000
Principal payments on long-term debt	(324,891)	(637,483)	(730,979)
Proceeds from issuance of redeemable convertible preferred stock, net of transaction costs	45,487,771	13,767,452	32,900,000
Proceeds from issuance of common stock	48,465	238,954	519,054
Net cash provided by financing activities	48,211,345	13,368,923	35,938,075
Net increase (decrease) in cash and cash equivalents	43,198,840	(32,744,163)	41,466,191
Cash and cash equivalents at beginning of period	1,154,480	44,353,320	11,609,157
Cash and cash equivalents at end of period	$ 44,353,320	$ 11,609,157	$ 53,075,348

See accompanying notes.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2004

1. The Company and Nature of Operations

Targacept, Inc., a Delaware corporation (the Company), was formed on March 7, 1997. The Company is a biopharmaceutical company engaged in the design, discovery and development of a new class of drugs to treat multiple diseases and disorders of the central nervous system by selectively targeting neuronal nicotinic receptors, or NNRs. Its facilities are located in Winston-Salem, North Carolina.

The accompanying financial statements have been prepared on a going concern basis. The Company has incurred operating losses since its inception and expects to incur substantial additional losses for the foreseeable future. As a result, the Company will require substantial additional funds, and plans to seek additional collaborative agreements, research funding, and private or public equity or debt financing to meet such needs. If such funds are not available, management may need to reassess its plans. Even if the Company does not have an immediate need for additional cash, it may seek access to the private or public equity markets if and when conditions are favorable. There is no assurance that such additional funds will be available for the Company to finance its operations on acceptable terms, if at all.

2. Summary of Significant Accounting Policies

Cash and Cash Equivalents

The Company considers cash equivalents to be those investments which are highly liquid, readily convertible to cash, and mature within three months from the date of purchase.

Investments

In accordance with the Company’s investment policy, surplus cash is invested with high quality financial institutions in money market accounts, certificates of deposit, and a mutual fund that invests in Government National Mortgage Association and other mortgage-backed securities, United States Government debt and other asset-backed securities with AAA credit ratings. The Company determines the appropriate classification of marketable securities at the time of purchase and reevaluates such designation as of each balance sheet date. All marketable securities have been classified as available-for-sale and are stated at market value with the unrealized holding gains and losses reported as a component of stockholders’ equity in comprehensive loss. Interest and dividend income on investments, as well as realized gains and losses, are included in “Interest and dividend income.” The cost of securities sold is based on the specific identification method.

Research Fees and Accounts Receivable

Substantially all of the Company’s research fees and accounts receivable are related to the collaborative research and license agreements discussed in Note 15, and trade sales of Inversine. All of the Company’s trade accounts receivable are due from customers located within the United States. The Company makes judgments with respect to the collectability of trade accounts receivable based on historical experience and current economic trends. Actual losses could differ from those estimates.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

2. Summary of Significant Accounting Policies (continued)

During 2002, 2003 and 2004, the Company recognized revenues of $2,024,000, $1,572,000 and $2,255,000, respectively, or 89%, 64% and 60%, respectively, of net revenues, from two collaborative research and license agreements discussed in Note 15.

Inventories

Inventories are stated at the lower of cost or market. Cost is determined by the weighted-average method.

Property and Equipment and Intangible Assets

Property and equipment consists primarily of lab equipment, office furniture and fixtures and leasehold improvements and is recorded at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets ranging from three to ten years. Lab equipment is typically depreciated over 3-5 years, office furniture and fixtures are typically depreciated over 5-10 years, and leasehold improvements are amortized over the life of the applicable lease.

Intangible assets consist of patents acquired (See Note 16). The intangible assets are being amortized to research and development expense on a straight-line basis over the remaining useful life of the patents, or a period of 17 years from the date of acquisition.

The Company assesses the net realizable value of its long-lived assets and evaluates such assets for impairment whenever events or changes in business circumstances indicate that the carrying amount of an asset may not be recoverable. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition are less than its carrying amount. An impairment loss, if recognized, would be based on the excess of the carrying value of the impaired asset over its fair value. Through December 31, 2004, there has been no such impairment.

Patents

The Company capitalizes the costs of patents purchased from external sources. The Company expenses all other patent-related costs.

Research and Development Costs

Research and development costs are expensed as incurred and include related salaries of personnel involved in research and development activities, contractor fees, administrative expenses and allocations of research-related overhead costs. Administrative expenses and research-related overhead costs included in research and development consist of allocations of facility and equipment lease charges, depreciation and amortization of assets, and insurance, legal and supply costs that are directly related to research and development activities.

The Company directly reduces research and development expenses for amounts reimbursed pursuant to cost-sharing agreements. During 2002, 2003 and 2004, research and

2. Summary of Significant Accounting Policies (continued)

development expenses were reduced by $514,000, $131,000 and $23,000, respectively, for costs reimbursed primarily by Dr. Falk Pharma, GmbH and under the terms of the collaboration described in Note 15.

Clinical Trials Accounting

The Company records accruals based on estimates of the services received, efforts expended and amounts owed pursuant to contracts with numerous clinical trial centers and contract research organizations. In the normal course of business, the Company contracts with third parties to perform various clinical trial activities in the ongoing development of potential products. The financial terms of these agreements are subject to negotiation and variation from contract to contract and may result in uneven payment flows. Payments under the contracts depend on factors such as the achievement of certain events, the successful recruitment of patients, the completion of portions of the clinical trial or similar conditions. The objective of the Company's accrual policy is to match the recording of expenses in its financial statements to the actual services received and efforts expended. As such, expense accruals related to clinical trials are recognized based on the Company's estimate of the degree of completion of the event or events specified in the specific clinical study or trial contract.

Deferred Rent Incentive

In August 2002, the Company received $2,013,000 as an incentive to lease its current office space. The incentive is being recognized monthly over the life of the lease on a straight-line basis as a reduction to the lease expense in general and administrative expenses. The Company recognized $168,000, $403,000 and $403,000 of the incentive during 2002, 2003 and 2004, respectively.

Redeemable Convertible Preferred Stock

The carrying value of redeemable convertible preferred stock is increased by periodic accretions so that the carrying amount will equal the redemption amount at the earliest redemption date. These increases are effected through charges to accumulated deficit.

Fair Value of Financial Instruments

The carrying amounts of cash and cash equivalents, short-term investments, accounts receivable, accounts payable, accrued expenses and redeemable convertible preferred stock are considered to be representative of their respective fair values. The fair value of long-term debt was $2,590,000, $1,961,000 and $4,504,000 at December 31, 2002, 2003 and 2004, respectively. The Company estimates the fair value of long-term debt using discounted cash flows based on its incremental borrowing rates for similar debt.

Credit Risk

Financial instruments that potentially subject the Company to credit risk consist principally of cash and short-term investments. The Company places its cash and cash equivalents with high-credit quality financial institutions. The Company has established guidelines for investment of its excess cash designed to emphasize safety, liquidity and preservation of capital.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

2. Summary of Significant Accounting Policies (continued)

Revenue Recognition

The Company uses revenue recognition criteria in Staff Accounting Bulletin No. 101, *Revenue Recognition in Financial Statements,* as amended by Staff Accounting Bulletin No. 104, *Revision of Topic 13*. Revenues are recorded under collaboration agreements at the time of performance of services or achievement of milestones. Research fee revenues are earned and recognized in accordance with contract provisions. License fees for access to the Company's intellectual properties are recognized ratably over the contracted period in accordance with the provisions of the contract. Amounts received in advance of performance are recorded as deferred revenue and amortized in the statements of operations into revenue over the estimated life of the research and development period. Revenues from milestones are only recognized upon achievement of the milestone criteria. Product sales revenues are recorded when goods are shipped, at which point title has passed. Revenues from grants are recognized as the Company performs the work and incurs reimbursable costs in accordance with the objectives of the governing grant agreement.

Shipping and Handling Costs

During 2002, 2003 and 2004, $22,000, $173,000 and $174,000, respectively, of shipping and handling costs were included in cost of product sales.

Income Taxes

The liability method is used in accounting for income taxes as required by Statement of Financial Accounting Standards (SFAS) No. 109, *Accounting for Income Taxes*. Under this method, deferred tax assets and liabilities are recognized for operating loss and tax credit carryforwards and for the future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the results of operations in the period that includes the enactment date. A valuation allowance is recorded to reduce the carrying amounts of deferred tax assets unless it is more likely than not that such assets will be realized. Currently there is no provision for income taxes as the Company has incurred net losses to date.

Comprehensive Loss

SFAS No. 130, *Reporting Comprehensive Income*, requires components of other comprehensive loss, including unrealized gains and losses on available-for-sale securities, to be included as part of total comprehensive loss. The components of comprehensive loss are included in the statements of redeemable convertible preferred stock and stockholders' equity (deficit).

Reverse Stock Split

On February 2, 2005, the Company's Board of Directors adopted, and on February 2, 2005 the stockholders approved, a one-for-7.5 reverse stock split of the Company's common stock

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

2. Summary of Significant Accounting Policies (continued)

effective as of February 3, 2005. All common stock and per common share amounts for all periods presented in the accompanying financial statements have been restated to reflect the effect of this reverse common stock split.

Net Loss Per Share Attributable to Common Stockholders

The Company computes net loss per share attributable to common stockholders in accordance with SFAS No. 128, *Earnings Per Share* (SFAS 128). Under the provisions of SFAS 128, basic net loss per share attributable to common stockholders (Basic EPS) is computed by dividing net loss attributable to common stockholders by the weighted average number of common shares outstanding. Diluted net loss per share attributable to common stockholders (Diluted EPS) is computed by dividing net loss attributable to common stockholders by the weighted average number of common shares and dilutive common share equivalents then outstanding. Common share equivalents consist of the incremental common shares issuable upon the conversion of preferred stock, shares issuable upon the exercise of stock options and shares issuable upon the exercise of warrants. For the periods presented, Diluted EPS is identical to Basic EPS because common share equivalents are excluded from the calculation, as their effect is antidilutive.

Unaudited Pro Forma Stockholders' Equity and Pro Forma Net Loss Per Share

The Company's Board of Directors has authorized management of the Company to file a registration statement with the Securities and Exchange Commission permitting the Company to sell shares of its common stock to the public in an initial public offering (the IPO). If the IPO is closed at a price per share of at least $11.00 and the gross proceeds to the Company are not less than $50,000,000, all of the redeemable convertible preferred stock outstanding at the time of the IPO will automatically convert into 13,832,015 shares of common stock. Unaudited pro forma basic and diluted net loss per share is computed using the weighted average number of common shares outstanding, including the pro forma effects of the conversion of outstanding redeemable convertible preferred stock into shares of the Company's common stock effective upon the completion of the Company's planned IPO as if such conversion had occurred at January 1, 2004, or the date of issuance, if later.

Table of Contents

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

2. Summary of Significant Accounting Policies (continued)

The following table sets forth the computation of basic and diluted, and pro forma basic and diluted, net loss per share attributable to common stockholders:

	Year ended December 31,		
	2002	2003	2004
Historical			
Numerator:			
Net loss attributable to common stockholders	$ (25,245,251)	$ (27,735,949)	$ (32,768,948)
Denominator:			
Weighted-average common shares outstanding	74,332	109,053	219,213
Basic and diluted net loss per share attributable to common stockholders	$ (339.63)	$ (254.33)	$ (149.48)
Unaudited pro forma			
Numerator:			
Net loss attributable to common stockholders			$ (24,025,389)
Denominator:			
Shares used above			219,213
Pro forma adjustment to reflect assumed conversion of preferred stock, on a weighted average basis			10,111,066
Shares used to compute pro forma basic and diluted net loss per share attributable to common stockholders			10,330,279
Unaudited pro forma basic and diluted net loss per share attributable to common stockholders			$ (2.33)

The Company has excluded all outstanding stock options and warrants from the calculation of net loss per share attributable to common stockholders because such securities are antidilutive for all periods presented. Had the Company been in a net income position, these securities may have been included in the calculation. These potentially dilutive securities consist of the following on a weighted average basis:

	Year ended December 31,		
	2002	2003	2004
Outstanding common stock options	286,753	613,503	1,010,716
Redeemable convertible preferred stock	2,130,673	9,373,431	10,111,066
Outstanding warrants	215,054	215,054	215,054
Total	2,632,480	10,201,988	11,336,836

Stock-Based Compensation

In December 2002, the Financial Accounting Standards Board (FASB) issued Statement No. 148, *Accounting for Stock-Based Compensation—Transition and Disclosure* (SFAS 148). SFAS 148 amends Statement No. 123, *Accounting for Stock-Based Compensation* (SFAS 123), to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, SFAS 148 amends the

2. Summary of Significant Accounting Policies (continued)

disclosure provisions of SFAS 123 and Accounting Principles Board (APB) Opinion No. 28, *Interim Financial Reporting*, to require more prominent disclosure in the summary of significant accounting policies about the method of accounting for the effects of an entity's accounting policy with respect to stock-based employee compensation and the effect of the method used on reported net loss results.

The Company has elected to continue to account for stock options granted to employees using the intrinsic-value method as prescribed by APB Opinion No. 25, *Accounting for Stock Issued to Employees* (APB 25), and thus recognizes no compensation expense for options granted with exercise prices equal to the fair market value of the Company's common stock on the date of grant. The information regarding net loss as required by SFAS 123 has been determined as if the Company had accounted for its employee stock options under the fair value method of that Statement.

The following table illustrates the weighted-average assumptions for the Black-Scholes model used in determining the fair value of options granted to employees:

	Year ended December 31,		
	2002	2003	2004
Dividend yield	—	—	—
Risk-free interest rate	3.5%	2.8%	3.0%
Volatility	0.8	0.8	0.8
Expected life	4 years	4 years	4 years

For purposes of disclosures pursuant to SFAS 123, as amended by SFAS 148, the estimated fair value of the options is amortized to expense over the options' vesting period. The following table illustrates the effect on net loss if the Company had applied the fair value recognition provisions of SFAS 123:

	Year Ended December 31,		
	2002	2003	2004
Net loss attributable to common stockholders, as reported	$ (25,245,251)	$ (27,735,949)	$ (32,768,948)
Add: Stock-based employee compensation expense included in reported net income, net of related tax effects	129,710	65,325	50,623
Deduct: Stock-based employee compensation expense determined under fair value based method for all awards, net of related tax effects	(312,830)	(515,405)	(916,988)
Pro forma net loss	$ (25,428,371)	$ (28,186,029)	$ (33,635,313)
Net loss per share:			
Basic and diluted, as reported	$ (339.63)	$ (254.33)	$ (149.48)
Basic and diluted, pro forma	$ (342.09)	$ (258.46)	$ (153.44)

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

2. Summary of Significant Accounting Policies (continued)

Stock compensation arrangements to non-employees are accounted for in accordance with SFAS 123, as amended by SFAS 148, and EITF No. 96-18, *Accounting for Equity Instruments That Are Issued to Other than Employees for Acquiring, or in Conjunction with Selling, Goods or Services,* using a fair value approach.

Recent Accounting Pronouncements

On December 16, 2004, the FASB issued FASB Statement No. 123 (revised 2004), *Share-Based Payment* (SFAS 123R), which is a revision of SFAS 123. SFAS 123R supersedes APB 25 and amends FASB Statement No. 95, *Statement of Cash Flows.* Generally, the approach in SFAS 123R is similar to the approach described in SFAS 123. However, SFAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values. Pro forma disclosure is no longer an alternative.

SFAS 123R must be adopted no later than July 1, 2005. Early adoption will be permitted in periods in which financial statements have not yet been issued. The Company expects to adopt SFAS 123R on July 1, 2005.

In November 2004, the FASB issued SFAS No. 151, *Inventory Costs, an amendment of ARB No. 43, Chapter 4* (SFAS 151), which clarifies the types of costs that should be expensed rather than capitalized as inventory. This statement also clarifies the circumstances under which fixed overhead costs associated with operating facilities involved in inventory processing should be capitalized. The provisions of SFAS 151 are effective for fiscal years beginning after June 15, 2005. The Company will adopt this standard in fiscal 2006. The Company has not determined the impact, if any, that this statement will have on its financial position or results of operations.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Reclassifications

Certain reclassifications have been made to the prior year financial statements to conform to the current year presentation. These reclassifications had no impact on net loss.

Table of Contents

3. Short-term investments

The following is a summary of available-for-sale securities as of December 31, 2003. During 2004, all short-term investments present at December 31, 2003 were converted to cash.

December 31, 2003	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Adjustable rate mortgage fund	$20,177,033	$ —	$(29,282)	$20,147,751
Certificates of deposit	11,098,092	—	—	11,098,092
Interest receivable	121,657	—	—	121,657
Total	$31,396,782	$ —	$(29,282)	$31,367,500

The Company recognized $88,000, $591,000 and $400,000 of interest income during 2002, 2003 and 2004, respectively. The Company recognized $200,000 and $193,000 of dividend income during 2003 and 2004, respectively. The Company recognized loss on sale of investments of $88,000 in 2004.

4. Inventories

Inventories consisted of the following:

	December 31,	
	2003	2004
Raw materials	$ 46,988	$ 46,988
Work-in-process	6,892	6,400
Finished goods	64,640	49,252
	$ 118,520	$ 102,640

5. Property and equipment

Property and equipment consists of the following:

	December 31,	
	2003	2004
Lab equipment	$ 5,057,345	$ 4,795,050
Office furniture and fixtures	1,192,685	1,438,329
Leasehold improvements	87,875	138,790
	6,337,905	6,372,169
Less: accumulated depreciation	3,964,870	4,109,471
Property and equipment, net	$ 2,373,035	$ 2,262,698

The Company recorded $577,000, $635,000 and $729,000 of depreciation expense during 2002, 2003 and 2004, respectively.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

6. Intangible Assets

Intangible assets consist of the following:

	December 31,	
	2003	2004
Patents (See Note 16)	$642,000	$642,000
Less: accumulated amortization	(53,499)	(91,263)
Total	$588,501	$550,737

The Company recognized amortization expense of $16,000, $38,000 and $38,000 in 2002, 2003 and 2004, respectively. The Company expects to recognize $38,000 of amortization expense in each of the next five years.

7. Accrued Expenses

Accrued expenses consists of the following:

	December 31,	
	2003	2004
Clinical trials costs	$ 623,158	$ 965,407
Employee compensation	676,900	850,503
Other	106,720	124,926
	$ 1,406,778	$ 1,940,836

8. Long-term debt

During 2002, the Company entered into agreements to borrow $500,000 from the City of Winston-Salem and $2,500,000 from R.J. Reynolds Tobacco Company (RJRT). The note payable to the City of Winston-Salem matures on April 19, 2012, is non-interest bearing until April 2007 and, thereafter, bears interest between 5% and 7% depending on the gross revenues of the Company until maturity. No payments are due on the City of Winston-Salem note until the 5-year anniversary of the loan. The note payable to RJRT accrues interest at 6.6%, is repayable in monthly payments of $59,403 through the maturity date of May 1, 2006, and is secured by equipment owned by the Company with a book value of approximately $2,000,000, net of accumulated depreciation, at December 31, 2004. In January 2004, the Company amended the note agreement with RJRT to allow for up to three additional tranches to be advanced to the Company for up to a total of $2,000,000. Each of the additional tranches will accrue interest at the 4-year U.S. Treasury rate plus 3.5% determined on the day the additional tranche is advanced and will be repayable in 48 equal monthly installments. The Company was advanced an additional tranche on April 1, 2004 in the amount of $1,027,000. This additional tranche accrues interest at 5.87% and is repayable in monthly payments of $24,000 through the maturity date of April 1, 2008. The Company was advanced the final tranche on December 23, 2004 in the amount of $973,000. This tranche accrues interest at 6.89% and is repayable in monthly payments of $23,000 through the maturity date of January 1, 2009. The Company paid $91,000, $135,000 and $133,000 for interest under the RJRT note during 2002, 2003 and 2004, respectively.

8. Long-term debt (continued)

On December 15, 2004, the Company entered into a development agreement with The Stanley Medical Research Institute (SMRI). In connection with the agreement, SMRI paid the Company $1,250,000 in return for the issuance by the Company of a convertible promissory note in an equal principal amount. The note bears interest at 10% per annum and matures on January 1, 2007. However, if not earlier paid, the outstanding principal and accrued interest under the note will automatically convert into shares of the Company's common stock concurrently with the completion of the Company's IPO (defined in Note 2) at a conversion price equal to the initial public offering price. The Company is entitled to receive payments under the development agreement upon the achievement of specified milestones during the development period. The Company is required to make royalty payments based on net sales of products developed under the agreement. This agreement was terminated in December 2005.

Maturities of long-term debt are as follows:

	Maturities as of December 31, 2004
2005	$ 1,113,350
2006	783,895
2007	1,843,330
2008	456,223
2009	121,748
Thereafter	238,101
	$ 4,556,647

9. Redeemable Preferred Stock

In August 2000, the Company issued 5,000,000 shares of its Series A redeemable convertible preferred stock (the Series A) to RJRT, and completed a private placement of 6,537,634 shares of its Series B redeemable convertible preferred stock (the Series B) generating cash of $29,073,000, net of offering costs.

In January 2001, the Company issued 29,933 shares of Series B to three consultants in partial payment of consulting fees owed by the Company.

In November 2002, the Company completed a private placement of 37,764,180 shares of its Series C redeemable convertible preferred stock (the Series C) and received cash of $45,488,000, net of offering costs.

In March 2003, the Company completed a private placement of an additional 11,404,958 shares of Series C and received cash of $13,767,452, net of offering costs.

In December 2004, the Company completed a private placement of an additional 27,272,728 shares of Series C and received cash of $32,900,000, net of offering costs.

9. Redeemable Preferred Stock (continued)

The following is a summary of the rights, preferences and terms of the Company's outstanding series of redeemable convertible preferred stock:

Conversion

Each share of Series A, Series B and Series C is convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into fully paid and nonassessable shares of the Company's common stock. As of December 31, 2004, conversion of the Series A, Series B and Series C would result in the issuance of 666,667, 2,082,623, and 11,011,258 shares of common stock, respectively. Future sales of equity at prices below the respective conversion prices could result in adjustments to the number of shares of common stock into which each series of preferred stock is convertible.

Automatic conversion of the Series A, Series B and Series C into fully paid and nonassessable shares of common stock, without the payment of additional consideration by the holders thereof, would occur immediately upon the closing of the sale of the Company's common stock in a firm commitment, underwritten public offering registered under the Securities Act of 1933 in which (i) the price per share equals or exceeds $11.00 (subject to certain adjustments) or such lesser amount as is approved by the holders of (a) a majority of then outstanding shares of Series A and Series B, considered together as a single class on an as-converted basis, and (b) at least sixty-five percent (65%) of the then outstanding shares of Series C, and (ii) the gross proceeds to the Company are not less than $50,000,000 or such lesser amount as is approved by the holders of (a) a majority of then outstanding shares of Series A and Series B, considered together as a single class on an as-converted basis, and (b) at least sixty-five percent (65%) of the then outstanding shares of Series C. The accrued but unpaid cumulative dividend on the Series C shall, if not yet declared, be forfeited upon conversion of the Series C.

Dividends

Dividends accrue daily on each share of Series C on a cumulative basis at the rate of 8% per annum and are recorded as an increase to Series C and an increase to accumulated deficit. Cumulative dividends may be declared and paid at any time and shall be payable upon liquidation or redemption. At December 31, 2003 and 2004, cumulative accrued dividends on the Series C stock totaled $4,898,000 and $9,834,000, respectively.

Dividends on the Series A, Series B and Series C are payable when and if declared by the Board of Directors. No dividend may be paid on the common stock without the approval of the holders of a majority of the then outstanding shares of Series A and Series B, considered together on an as-converted basis, and the holders of 65% of the Series C. No dividend may be declared or paid on either the Series A or the Series B unless, simultaneously with such declaration or payment, the same dividend per share is declared or paid on both the Series A and the Series B, as well as the Series C, and any unpaid cumulative dividends on the Series C are declared and paid in full.

9. Redeemable Preferred Stock (continued)

Voting

Each holder of the Series A, Series B and Series C is entitled to the number of votes equal to the number of shares of common stock into which such holder's shares are convertible on the applicable record date. In addition, certain actions by the Company require the approval of one or more of (i) the holders of a majority of the outstanding shares of Series A, (ii) the holders of at least two-thirds of the outstanding shares of Series B, (iii) the holders of a majority of the outstanding shares of Series A and Series B, considered together on an as-converted basis, and/or (iv) the holders of at least 65% of the outstanding shares of Series C.

Liquidation Preference

In the event of any liquidation, dissolution or winding up of the Company, the holders of the Series C shares have preference and are entitled to receive an amount per share equal to the greater of (i) their initial purchase price per share plus any accrued or declared and unpaid dividends on such share or (ii) the amount per share of Series C that such holders would receive if all of the Series A, Series B and Series C were converted to common stock immediately prior to such liquidation, dissolution or winding up.

Next, the holders of Series A and Series B are entitled to receive, on a *pari passu* basis, an amount equal to their initial purchase price per share plus any declared and unpaid dividends on such shares. Any assets of the Company remaining after the payments specified above shall be distributed on a *pari passu* basis among the holders of common stock and, on an as-converted to common stock basis, Series A, Series B and Series C. Unless the holders of a prescribed number of shares of Series A, Series B and/or Series C otherwise elect, certain fundamental transactions involving the Company shall be treated as a liquidation for the Series A, Series B and/or Series C, as the case may be.

Mandatory Redemption

At any time after November 26, 2008, upon demand by the holders of at least 65% of the outstanding shares of Series C, all of the outstanding shares of Series C shall be redeemed in cash in an amount per share equal to the initial purchase price per share (subject to certain adjustments) plus any accrued or declared and unpaid dividends on such shares.

At any time after the later of August 22, 2005 or the date on which no shares of Series C are outstanding, a number of outstanding shares of Series A or Series B elected upon demand by the holders of a majority of the outstanding shares of Series A (in the case of Series A) or a majority of the outstanding shares of Series B (in the case of Series B) shall be redeemed in an amount per share equal to $4.65 (subject to certain adjustments) plus (i) any previously declared but unpaid dividends on such share and (ii) an amount equal to $0.081375 per share (subject to certain adjustments) multiplied by the number of complete three-month periods that have elapsed from the date such share was originally issued to the redemption date. The Company may satisfy its redemption obligation with respect to the Series A and/or the Series B in cash or by paying a portion in cash and issuing a promissory note that meets certain prescribed conditions for the remaining amount.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

10. Stockholders' Equity (Deficit)

Prior to August 22, 2000, the Company was a wholly owned subsidiary of RJRT. On August 22, 2000, the Company reclassified its 500 shares of common stock as 5,000,000 shares of Series A at $4.65 per share and a warrant to purchase 215,054 shares of the Company's common stock at $34.88 per share. The fair value of the Series A redeemable convertible preferred stock was determined to be $4.65 per share based on the sales price of Series B redeemable convertible preferred stock of $4.65 per share with rights containing identical terms as Series A. As cash was not received in connection with this reclassification of the 500 shares of common stock into shares of Series A redeemable convertible preferred stock, the fair value of $23,250,000 was recorded as redeemable convertible preferred stock. On the same date, the Company sold 5,892,473 shares of the Company's Series B to an investor group. The Company then issued 41,257 shares of the common stock to management for proceeds of $309, which was less than fair value. As a result, the Company recorded compensation expense of $145,120. An aggregate of 645,161 shares of Series B redeemable convertible preferred stock were subsequently sold in a second offering to certain of the Company's investors.

On January 2, 2001, the Company amended its Certificate of Incorporation to increase the number of authorized shares of preferred stock to 11,567,567 shares and issued 29,933 shares of Series B to consultants in exchange for the partial satisfaction of a cash liability on January 26, 2001.

On November 26, 2002, the Company amended its Certificate of Incorporation to increase the number of authorized shares of common stock to 10,000,000 and preferred stock to 49,331,747 and issued 37,764,180 shares of Series C.

On March 14, 2003, the Company amended its Certificate of Incorporation to increase the number of authorized shares of common stock to 11,333,333 and preferred stock to 60,736,705 and issued 11,404,958 shares of Series C.

On December 6, 2004, the Company amended its Certificate of Incorporation to increase the number of authorized shares of common stock to 16,666,666 and preferred stock to 81,741,965 and issued 27,272,728 shares of Series C.

In conjunction with the issuance of Series A, the Company issued a warrant to purchase 215,054 shares of the Company's common stock at an original exercise price of $34.88 per share (subject to certain adjustments). In connection with the Company's issuance of Series C and price adjustment provisions of the warrant, the conversion price of the warrant was adjusted to $14.63. The warrant is exercisable only upon the earlier of an initial public offering or a change in control. The fair value of the warrant is a direct cost of obtaining capital. As such, the fair value has been recorded in stockholders' equity, with the offset recorded as a decrease in the redemption value of the Series A. The Company will accrete to the redemption value of the Series A at the earliest date of redemption, or until November 2008 through an increase in redemption value to Series A and an increase to retained deficit. The fair value of the warrant to purchase 215,054 shares of the Company's common stock was estimated at the grant date to be $213,710 or $3.98 per share. The Company considered the anti-dilution features, the contingencies surrounding the limited opportunities for exercise, and the warrant's priorities over common stock options in relation to the fair value of the Company's common stock at the date of issuance when estimating the fair value of the warrant.

Table of Contents

10. Stockholders' Equity (Deficit) (continued)

At December 31, 2003 and 2004, the Company had reserved shares of common stock for future issuance as follows:

	December 31, 2003	December 31, 2004
Convertible preferred stock	9,831,987	13,760,548
Warrant	215,054	215,054
Options	1,140,589	1,028,086
	11,187,630	15,003,688

11. Income Taxes

There is no income tax provision (benefit) for federal or state income taxes as the Company has incurred operating losses since inception.

The Company's effective tax rate differs from the federal income tax rate for the following reasons:

	Year ended December 31,		
	2002	2003	2004
Expected federal income tax benefit at statutory rate	(34)%	(34)%	(34)%
Increase (decrease) resulting from:			
Research and development credits	(1)	(6)	(3)
Purchased in-process research and development	4	—	—
State income tax expense, net of federal benefit	(4)	(5)	(5)
Net operating loss and credit limitations	14	3	—
Change in valuation allowance	21	41	42
Other	—	1	—
	—%	—%	—%

At December 31, 2002, 2003 and 2004, the Company had net operating loss carryforwards for federal income tax purposes of approximately $17,637,000, $38,409,000 and $63,296,000, respectively, net operating loss carryforwards for state income tax purposes of $25,317,000, $46,090,000 and $70,976,000, respectively, and research and development tax credits of approximately $48,000, $638,000 and $1,357,000, respectively. The federal net operating loss carryforwards begin to expire in 2020. State net operating loss carryforwards begin to expire in 2015. The research and development tax credits will begin to expire in 2021.

Utilization of the net operating loss carryforwards and credits may be subject to a substantial annual limitation due to ownership change limitations provided by Section 382 of the Internal Revenue Code of 1986, as amended, and similar state provisions. As a result of a series of stock issuances, the Company had such an ownership change on November 30, 2002. Consequently, an annual limitation is imposed on the Company's use of net operating loss and credit carryforwards attributable to periods before the change. The Company completed a private placement of Series C in December 2004 but has not performed a detailed analysis to determine whether an ownership change under Section 382 of the Internal Revenue Code occurred.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

11. Income Taxes (continued)

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The Company's net deferred tax assets relate primarily to its net operating loss carryforwards. A valuation allowance has been recognized to offset the deferred tax assets related primarily to its net operating loss carryforwards. If and when recognized, the tax benefit for those items will be reflected in current operations of the period in which the benefit is recorded as a reduction of income tax expense. The utilization of the loss carryforwards to reduce future income taxes will depend on the Company's ability to generate sufficient taxable income prior to the expiration of the net operating loss carryforwards. For the years ended December 31, 2002, 2003 and 2004, the valuation allowance increased approximately $4,518,000, $8,050,000 and $9,600,000, respectively.

Significant components of the Company's deferred tax assets (liabilities) are as follows:

	December 31,	
	2003	2004
Deferred tax assets:		
Net operating loss carryforwards	$ 15,158,059	$ 24,787,121
Research and development tax credit	638,153	1,357,135
Patents	641,008	577,974
Unearned revenue	739,167	—
Total gross deferred tax assets	17,176,387	26,722,230
Valuation allowance	(16,999,275)	(26,599,098)
Net deferred tax asset	177,112	123,132
Deferred tax liabilities:		
Equipment and other	(177,112)	(123,132)
Net deferred tax asset	$ —	$ —

12. Equity Incentive Plan

On August 22, 2000, the Company established an equity incentive plan (the Plan) and authorized the issuance of up to 268,168 shares under the Plan to attract and retain employees, directors and certain independent contractors, consultants and advisors and to allow them to participate in the growth of the Company. During 2001, the number of shares authorized for issuance under the Plan was increased to 348,168. In conjunction with the November 2002 Series C financing, the Company authorized the issuance of an additional 400,000 shares, increasing the number of authorized shares to 748,168. Upon the issuance of the additional Series C shares in March 2003, the number of authorized shares was increased to 1,228,888. Awards may be made to participants under the Plan in the form of incentive and nonqualified stock options, restricted stock, stock appreciation rights, stock awards, and performance awards. Eligible participants under the Plan include employees, directors and certain independent contractors, consultants or advisors of the Company or a related corporation. The vesting periods for awards made under the Plan are determined at the discretion of the Plan administrator and range from 0 to 4 years. The exercise price of incentive options granted under

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

12. Equity Incentive Plan (continued)

the Plan may not be less than 100% of the fair market value of the common stock on the date of grant, as determined by the Plan Administrator. The following summarizes stock option activity and balances:

	Options Granted	Price	Weighted Average Exercise Price Per Share
Outstanding at January 1, 2002	210,362	$ 3.53-34.88	$ 4.43
Granted	111,807	0.08-5.10	4.35
Forfeited	(2,490)	4.20	4.20
Exercised	(12,131)	3.53-5.10	3.98
Outstanding at December 31, 2002	307,548	3.53-34.88	4.43
Granted	799,479	0.08-5.63	5.03
Forfeited	(4,797)	0.08-5.10	1.95
Exercised	(61,092)	0.08-5.10	3.90
Outstanding at December 31, 2003	1,041,138	0.08-34.88	4.88
Granted	65,200	0.08-5.63	5.33
Forfeited	(6,066)	3.53-34.88	21.53
Exercised	(112,472)	3.53-5.63	4.73
Outstanding at December 31, 2004	987,800	$ 0.08-5.63	$ 4.88

The weighted average fair value of options granted during 2002, 2003 and 2004 was $3.45, $3.08 and $5.33, respectively. At December 31, 2002, 2003 and 2004, 127,741, 471,762 and 586,707 options, respectively, were exercisable at a weighted-average price of $4.80, $4.73 and $4.65, respectively.

A summary of options outstanding as of December 31, 2004 is as follows:

	Options Outstanding			Options Exercisable	
Exercise Price	Number Outstanding	Weighted Average Remaining Contractual Exercise Life	Weighted Average Exercise Price	Number Exercisable	Weighted Average Price
$0.08	27,897	8.1	$ 0.08	24,563	$ 0.08
3.53	92,461	5.7	3.53	92,448	3.53
5.10	803,051	8.5	5.10	430,561	5.10
5.63	64,391	9.2	5.63	39,135	5.63
	987,800	8.2	$ 4.88	586,707	$ 4.65

During 2002 and 2003, respectively, the Company granted 17,333 and 13,000 options below fair value at an exercise price of $0.08 and fair value of $5.10 per share. The fair value of these shares was recorded as compensation expense in the amounts of $129,710 and $65,325, during 2002 and 2003, respectively. During 2004, the Company granted 10,333 options below fair value at an exercise price of $0.08 and a fair value of $5.63 per share. The fair value of these shares was recorded as compensation expense in the amount of approximately $51,000.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

13. Leases

Prior to March 1, 2002, the Company leased its office space and certain equipment under a non-cancelable, one-year operating lease agreement with RJRT. Rent expense incurred by the Company under the RJRT lease was approximately $106,000 for the year ended December 31, 2002. The Company has no future minimum lease payments to RJRT as of December 31, 2004.

On March 1, 2002, the Company entered into an agreement with Wake Forest University to lease an office and research facility in Winston-Salem, North Carolina with an initial term that extends through July 31, 2007. The lease contains a renewal option for up to one additional five-year term, with a lease rate similar to the original agreement. In December 2004, the Company amended the terms of the lease to include 1,000 square feet and an option on additional space in this facility. The lease amendment increased annual rent by $15,000 per year and included a $37,000 hold fee in the first year. Rent expense incurred by the Company under this lease was approximately $904,000, $1,456,000 and $1,456,000 for the years ended December 31, 2002, 2003 and 2004, respectively. Rent expense is offset by the monthly recognition of the deferred rent incentive discussed in Note 2. At December 31, 2004, the Company has the following future minimum lease payments in relation to this lease:

2005	$ 1,507,566
2006	1,470,552
2007	857,822
2008 and thereafter	—
	$ 3,835,940

14. Retirement Savings Plan

The Company has a 401(k) retirement plan that covers substantially all of its employees. This plan provides for the Company to make 100% matching contributions up to a maximum of 6% of employees’ eligible compensation. The Company contributed $290,000, $298,000 and $368,000 to the plan for the years ended December 31, 2002, 2003 and 2004, respectively.

15. Collaborative Research and License Agreements

Aventis Pharma

In December 1998, the Company entered into a collaborative research and license agreement with Aventis Pharma (Aventis) whereby the Company and Aventis agreed to collaborate on the discovery, development and commercialization of nicotinic agonists for use in prevention of certain human diseases. Under the agreement, as restated in January 2002, Aventis was granted a license under certain patent rights and knowledge to develop, manufacture and commercialize certain compounds. The agreement provides for the payment of research fees on a “fee for service” basis for development work that the Company agreed to perform. For the years ended December 31, 2002, 2003 and 2004, these fees were $1,389,000, $1,303,000 and $338,000, respectively. The Company is entitled to receive milestone payments under the contract at specified dates during the development period. The Company did not receive milestone payments under the agreement during 2002, 2003 or 2004. In addition, Aventis agreed to make royalty payments based on net sales of products developed and sold. In

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

15. Collaborative Research and License Agreements (continued)

general, either party may terminate the agreement in the event of a material breach by the other party, including a material breach of research obligations or the issuance of third-party patent rights to a competitor. Additionally, Aventis may terminate the agreement without cause by providing the Company with 30 days, written notice at any time after the research term, in which case all rights to the product candidate would revert to the Company. All royalty and other payment obligations of the parties survive any termination of the agreement.

During 1999, the Company received a one-time non-refundable license fee payment of $2,000,000 to enter into this agreement. During 2002, 2003 and 2004, the product candidate subject to the agreement had not completed the research and clinical development process. Accordingly, the Company has deferred recognition of the license fee and is amortizing it over the expected term of the research and development period. On December 3, 2004, Aventis provided the Company with 30 days advance written notice of Aventis' plans to terminate the collaborative research and license agreement between the companies entered into December 1998 and restated in January 2002. The agreement terminated effective January 2, 2005 and was within the provisions of termination clauses of the agreement. As a result of the termination of the agreement, the Company recognized the remaining deferred revenue of $825,000 related to the agreement during the fourth quarter of 2004, as there were no further responsibilities or duties to be performed under the agreement as of December 3, 2004.

On January 21, 2002, the Company entered into a second collaborative research and license agreement with Aventis to discover and develop drugs, derived from the Aventis library of compounds for the treatment of Alzheimer's disease and other disorders of the central nervous system. The second agreement was structured similarly to the first agreement. The research term of the agreement expired in December 2004. The Company is eligible to receive milestone payments and royalties from Aventis for any compounds that are selected for further development within six months after the expiration of the research term.

Dr. Falk Pharma

On January 26, 2001, the Company entered into a collaborative research development and license agreement with Dr. Falk Pharma GmbH (Dr. Falk Pharma), a German corporation, pursuant to which the parties agreed to collaborate to research, develop and commercialize nicotinic therapeutics for use in the prevention or treatment of ulcerative colitis and other gastrointestinal and liver diseases. Upon execution of the agreement, Dr. Falk Pharma paid the Company a $1,000,000 license fee and purchased 14,815 shares of the Company's common stock for $1,000,000. The Company deferred recognition of the license fee payment and is amortizing it over the expected term of the research and development period. To account for the $1,000,000 in proceeds for the common stock, the Company used the estimated fair value of the common stock to value the shares issued to arrive at a total equity value of $76,000, with the remaining proceeds of $924,000 allocated to deferred revenue. This deferred revenue is also being amortized over the expected term of the research and development period.

Dr. Falk Pharma agreed to make royalty payments based on net profits from products containing compounds developed under the agreement. For the years ended December 31, 2002, 2003 and 2004, the Company did not pay or receive any royalties related to this agreement. The Company and Dr. Falk Pharma have mutually agreed to discontinue the

Table of Contents

15. Collaborative Research and License Agreements (continued)

development of the lead compound subject to the collaboration agreement resulting in the recognition of the remaining deferred revenue of $890,000 during the fourth quarter of 2004. The Company recognized $385,000, $170,000 and $1,017,000 of deferred revenue under this agreement during 2002, 2003, and 2004, respectively.

16. Acquisition of Inversine Product

On August 5, 2002, the Company purchased from Layton Bioscience the Inversine product line, inventory and related patent rights for cash consideration of $3,500,000. The purchase was made in order to further the Company's science and portfolio of compounds, and to further the Company's development in certain neuropsychiatric indications.

This transaction was accounted for as an acquisition of assets. The aggregate purchase price was allocated to the assets acquired based on their fair values as follows:

	Amount
Inventories	$ 192,000
Intangible assets acquired:	
Core technology	296,000
Developed product technology	346,000
In-process research and development	2,666,000
Aggregate purchase price	$ 3,500,000

In determining the total consideration as well as the allocation of the purchase price including the amount of in-process research and development, the Company considered as part of its analysis an appraisal prepared by an independent appraiser that used established valuation techniques appropriate for the pharmaceutical industry. The amount allocated to in-process research and development was expensed upon acquisition. A one-time charge of $2,666,000 for purchased in-process research and development arising from the acquisition has been reflected in the Statement of Operations for the year ended December 31, 2002.

17. Related Party Transactions

RJRT is the holder of 5,000,000 shares of Series A convertible into 666,667 shares of common stock, 1,652,893 shares of Series C convertible into 238,095 shares of common stock, a warrant to purchase 215,054 shares of common stock, 3,333 shares of common stock, and options to purchase 4,230 shares of common stock. The Company has entered into the following transactions and agreements with RJRT in the ordinary course of business.

During 2002, the Company entered into an agreement to borrow $2,500,000 from RJRT accruing interest at 6.6%. The note is repayable in monthly installments of $59,000 through the maturity date of May 1, 2006. In January 2004, the Company amended the note agreement with RJRT to allow for up to three additional tranches to be advanced to the Company for up to a total of $2,000,000. Each of the additional tranches will accrue interest at the 4-year U.S. Treasury rate plus 3.5% determined as at the day the additional tranche is advanced and will be

17. Related Party Transactions (continued)

repayable in 48 equal monthly installments. The Company was advanced an additional tranche on April 1, 2004 in the amount of $1,027,000. This additional tranche accrues interest at 5.87% and is repayable in monthly payments of $24,000 through the maturity date of April 1, 2008.

The Company was advanced the final tranche on December 23, 2004 in the amount of $973,000. This tranche accrues interest at 6.89% and is repayable in monthly payments of $23,000 through the maturity date of January 1, 2009. Under this related party note payable, the Company paid RJRT $416,000, $772,000 and $846,000 during 2002, 2003 and 2004, respectively.

The notes are secured by equipment owned by the Company with a book value of approximately $2,000,000, net of accumulated depreciation, at December 31, 2004.

Prior to March 1, 2002, the Company leased office space and certain equipment under a non-cancelable operating lease agreement with RJRT. Rent expense incurred by the Company under the RJRT lease was approximately $106,000 for the year ended December 31, 2002. The Company has no future minimum lease payments to RJRT as of December 31, 2004.

A member of the Company's board of directors serves as an officer of RJRT. Equity compensation for such director's service has been made, at the director's request, directly to RJRT. The numbers of shares subject to stock options granted to RJRT during the years ended December 31, 2002, 2003 and 2004 in connection with the director's services are 4,333, 1,000 and 2,103 shares, respectively. In addition, a stock option for an additional 4,333 shares was granted to RJRT during the year ended December 31, 2002 in connection with the services of a former director. A portion of that option, representing 2,103 shares, was forfeited when that director ceased to serve as a director. In connection with the issuance of the stock options, the Company recognized compensation expense of $43,550, $2,512 and $4,247 during 2002, 2003 and 2004, respectively.

Prior to December 31, 2003, the Company used the services of a RJRT employee for toxicology studies and purchased materials used for research and development and copy and print services through RJRT. The Company paid RJRT $525,000 and $201,000 for these services during 2002 and 2003, respectively. During 2004, the Company continued to use copy and print services through RJRT totaling $79,000.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS—(CONTINUED)

18. Selected Quarterly Financial Data (unaudited)

	2003 Quarter			
	First	Second	Third	Fourth
Net revenue	$ 690,796	$ 526,517	$ 598,840	$ 642,132
Gross profit (loss) on product sales	111,509	(67,923)	(957)	29,154
Operating loss	(4,275,065)	(5,997,799)	(4,525,572)	(5,265,435)
Net loss	(4,185,042)	(5,775,002)	(4,387,882)	(5,047,395)
Net loss attributable to common stockholders	(6,100,000)	(7,916,891)	(6,529,771)	(7,189,287)
Basic and diluted net loss per share attributable to common stockholders(1)	$ (71.09)	$ (82.46)	$ (53.63)	$ (54.47)
Weighted average common shares outstanding—basic and diluted	85,809	96,012	121,758	131,983

	2004 Quarter			
	First	Second	Third	Fourth
Net revenue	$ 496,939	$ 528,026	$ 555,583	$ 2,157,826
Gross profit on product sales	6,060	494,780	55,697	11,600
Operating loss	(6,843,593)	(6,485,006)	(6,664,381)	(4,400,447)
Net loss	(6,637,935)	(6,481,318)	(6,617,687)	(4,288,449)
Net loss attributable to common stockholders	(8,779,826)	(8,623,208)	(8,759,577)	(6,606,337)
Basic and diluted net loss per share attributable to common stockholders(1)	$ (59.18)	$ (38.76)	$ (34.94)	$ (25.95)
Weighted average common shares outstanding—basic and diluted	148,345	222,504	250,710	254,556

Diluted EPS is identical to Basic EPS since common stock equivalent shares are excluded from the calculation, as their effect is anti-dilutive.

(1) Per common share amounts for the quarters and full years have been calculated separately. Accordingly, quarterly amounts do not add to the annual amount because of differences in the weighted-average common shares outstanding during each period principally due to the effect of the Company's issuing shares of its common stock during the year.

Table of Contents

TARGACEPT, INC.

BALANCE SHEETS (UNAUDITED)

	September 30, 2004	September 30, 2005
ASSETS		
Current assets:		
Cash and cash equivalents	$ 24,425,286	$ 30,740,027
Research fees and accounts receivable	205,328	116,337
Inventories	106,275	92,484
Prepaid expenses	1,521,330	924,712
Total current assets	26,258,219	31,873,560
Property and equipment, net	2,389,452	1,924,699
Intangible assets, net of accumulated amortization of $81,822 and $119,586 at September 30, 2004 and 2005, respectively	560,178	522,414
Total assets	$ 29,207,849	$ 34,320,673
LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	$ 1,873,536	$ 1,088,460
Accrued expenses	1,759,279	2,460,505
Current portion of long-term debt	898,907	947,664
Current portion of deferred rent incentive	402,647	402,647
Current portion of deferred license fee revenue	269,537	—
Total current liabilities	5,203,906	4,899,276
Long-term debt, net of current portion	1,654,113	1,535,269
Deferred rent incentive, net of current portion	738,185	335,539
Deferred license fee revenue, net of current portion	1,445,534	—
Total liabilities	9,041,738	6,770,084
Commitments		
Redeemable convertible preferred stock:		
Series A, $0.001 par value, 5,000,000 shares authorized, issued and outstanding, aggregate liquidation preference of $29,749,180 and $31,419,424 at September 30, 2004 and 2005, respectively, or $4.65 per share, plus accreted redemption value	29,749,180	31,419,424
Series B, $0.001 par value, 6,567,567 shares authorized, issued and outstanding, aggregate liquidation preference of $39,087,725 and $41,225,469 at September 30, 2004, and 2005, respectively, or $4.65 per share, plus accreted redemption value	39,087,725	41,225,469
Series C, $0.001 par value, 49,169,138 and 81,741,965 shares authorized at September 30, 2004 and 2005, respectively, 49,169,139 and 76,937,998 shares issued and outstanding at September 30, 2004 and 2005, respectively, aggregate liquidation preference of $67,723,100 and $108,169,364 at September 30, 2004 and 2005, respectively, or $1.21 per share, plus accreted redemption value	67,723,100	108,169,364
Total redeemable convertible preferred stock	136,560,005	180,814,257
Stockholders' equity (deficit):		
Common stock, $0.001 par value, 11,333,333 and 16,666,666 shares authorized at September 30, 2004 and 2005, respectively, 251,647 and 263,361 shares issued and outstanding at September 30, 2004, and 2005, respectively	252	263
Capital in excess of par value	1,226,813	1,850,912
Common stock warrants	213,710	213,710
Accumulated deficit	(117,834,669)	(155,328,553)
Total stockholders' equity (deficit)	(116,393,894)	(153,263,668)
Total liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)	$ 29,207,849	$ 34,320,673

See accompanying notes.

TARGACEPT, INC.

STATEMENTS OF OPERATIONS (UNAUDITED)

	Nine Months Ended September 30, 2004	Nine Months Ended September 30, 2005
Revenue:		
Research fee revenue	$ 208,806	$ —
License fee revenue	202,153	—
Product sales	584,167	503,585
Grant revenue	585,422	437,604
Net revenue	1,580,548	941,189
Operating expenses:		
Research and development ($0 and $373,970 stock-based compensation in 2004 and 2005, respectively)	17,782,199	18,607,830
General and administrative ($32,700 and $195,386 stock-based compensation in 2004 and 2005, respectively)	3,763,700	5,255,270
Cost of product sales	27,629	243,822
Total operating expenses	21,573,528	24,106,922
Loss from operations	(19,992,980)	(23,165,733)
Other income (expense):		
Interest and dividend income	355,638	898,347
Interest expense	(95,755)	(196,078)
Gain (loss) on disposal of fixed assets	(3,843)	—
Total other income (expense)	256,040	702,269
Net loss	(19,736,940)	(22,463,464)
Preferred stock accretion	(6,425,668)	(8,424,080)
Net loss attributable to common stockholders	$ (26,162,608)	$ (30,887,544)
Basic and diluted net loss attributable to common stockholders per share	$ (126.18)	$ (118.30)
Weighted average common shares outstanding—basic and diluted	207,345	261,094
Pro forma basic and diluted net loss per share attributable to common stockholders assuming conversion of preferred stock		$ (1.60)
Pro forma weighted average shares outstanding—basic and diluted		14,058,554

See accompanying notes.

TARGACEPT, INC.

STATEMENTS OF CASH FLOWS (UNAUDITED)

	Nine Months Ended September 30,	
	2004	2005
Operating activities		
Net loss	$ (19,736,940)	$ (22,463,464)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	564,010	603,125
Loss on disposal of equipment	3,843	—
Non-cash compensation expense	32,700	569,356
Recognition of deferred rent incentive	(301,986)	(301,986)
Realized loss on sale of investments	99,023	—
Changes in operating assets and liabilities:		
Research fees and accounts receivable	613,290	368,228
Inventories	12,245	10,156
Prepaid expenses	(885,121)	803,124
Accounts payable and accrued expenses	979,062	(246,009)
Deferred license fee revenue	(202,153)	—
Net cash used in operating activities	(18,822,027)	(20,657,470)
Investment activities		
Purchase of investments	(6,191,930)	(10,500,000)
Proceeds from sale of investments	37,368,032	10,500,000
Purchase of property and equipment	(591,539)	(236,803)
Proceeds from sale of property and equipment	35,592	—
Net cash provided by (used in) investing activities	30,620,155	(236,803)
Financing activities		
Proceeds from borrowing of long-term debt	1,027,000	—
Principal payments on long-term debt	(511,606)	(2,073,714)
Proceeds from issuance of redeemable convertible preferred stock, net of transaction costs	—	612,281
Proceeds from issuance of common stock	502,607	20,385
Net cash provided by (used in) financing activities	1,018,001	(1,441,048)
Net increase (decrease) in cash and cash equivalents	12,816,129	(22,335,321)
Cash and cash equivalents at beginning of period	11,609,157	53,075,348
Cash and cash equivalents at end of period	$ 24,425,286	$ 30,740,027

See accompanying notes.

TARGACEPT, INC.

NOTES TO UNAUDITED FINANCIAL STATEMENTS
SEPTEMBER 30, 2005

1. Basis of Presentation

The accompanying financial statements are unaudited and have been prepared in accordance with the requirements of Article 10 of Regulation S-X included in the rules and regulations of the U.S. Securities and Exchange Commission (SEC). Certain information and footnote disclosures, normally included in annual financial statements prepared in accordance with accounting principles generally accepted in the United States, have been omitted pursuant to those rules and regulations. The Company believes that the disclosures made are adequate to make the information presented not misleading. In the opinion of management, all adjustments, consisting only of normal recurring adjustments, necessary to fairly present the financial position, results of operations and cash flows with respect to the interim financial statements have been included. Operating results for the nine months ended September 30, 2004 and 2005 are not necessarily indicative of the results that may be expected for the full year or for any other interim period or for any future year. These unaudited financial statements should be read in conjunction with the Company's audited financial statements and notes thereto for the fiscal years ended December 31, 2002, 2003 and 2004.

2. Summary of Significant Accounting Policies

Revenue Recognition

The Company uses revenue recognition criteria in Staff Accounting Bulletin No. 101, *Revenue Recognition in Financial Statements*, as amended by Staff Accounting Bulletin No. 104, *Revision of Topic 13*. Revenues are recorded under collaboration agreements at the time of performance of services or achievement of milestones. Research fee revenues are earned and recognized in accordance with contract provisions. License fees for access to the Company's intellectual properties are recognized ratably over the contracted period in accordance with the provisions of the contract. Amounts received in advance of performance are recorded as deferred revenue and amortized in the statements of operations into revenue over the estimated life of the research and development period. Revenues from milestones are only recognized upon achievement of the milestone criteria. Product sales revenues are recorded when goods are shipped, at which point title has passed. Revenues from grants are recognized as the Company performs the work and incurs reimbursable costs in accordance with the objectives of the agreement.

Net Loss Per Share Attributable to Common Stockholders

The Company computes net loss per share attributable to common stockholders in accordance with SFAS No. 128, *Earnings Per Share* (SFAS 128). Under the provisions of SFAS 128, basic net loss per share attributable to common stockholders (Basic EPS) is computed by dividing net loss attributable to common stockholders by the weighted average number of common shares outstanding. Diluted net loss per share attributable to common stockholders (Diluted EPS) is computed by dividing net loss attributable to common stockholders by the weighted average number of common shares and dilutive common share equivalents then outstanding. Common share equivalents consist of the incremental common shares issuable upon the conversion of preferred stock, shares issuable upon the exercise of stock options and shares issuable upon the exercise of warrants. For the periods presented, Diluted EPS is identical to Basic EPS because common share equivalents are excluded from the calculation, as their effect is antidilutive.

TARGACEPT, INC.

NOTES TO UNAUDITED FINANCIAL STATEMENTS—(CONTINUED)

2. Summary of Significant Accounting Policies (continued)

Pro Forma Net Loss Per Share

The Company's Board of Directors has authorized management of the Company to file a registration statement with the Securities and Exchange Commission permitting the Company to sell shares of its common stock to the public in an initial public offering (the IPO). If the IPO is closed at a price per share of at least $11.00 and gross proceeds to the Company are not less than $50,000,000, all of the redeemable convertible preferred stock outstanding at the time of the IPO will automatically convert into 13,832,015 shares of common stock. Pro forma basic and diluted net loss per share is computed using the weighted average number of common shares outstanding, including the pro forma effects of the conversion of outstanding redeemable convertible preferred stock into shares of the Company's common stock effective upon the completion of the Company's planned IPO as if such conversion had occurred at January 1, 2005, or the date of issuance, if later.

The following table sets forth the computation of basic and diluted, and pro forma basic and diluted, net loss per share attributable to common stockholders:

	Nine Months Ended September 30,	
	2004	2005
Historical		
Numerator:		
Net loss attributable to common stockholders	$ (26,162,608)	$ (30,887,544)
Denominator:		
Weighted-average common shares outstanding	207,345	261,094
Basic and diluted net loss per share attributable to common stockholders	$ (126.18)	$ (118.30)
Unaudited pro forma		
Numerator:		
Net loss attributable to common stockholders		$ (22,463,464)
Denominator:		
Shares used above		261,094
Pro forma adjustments to reflect assumed conversion of preferred stock, on a weighted average basis		13,797,460
Shares used to compute pro forma basic and diluted net loss per share attributable to common stockholders		14,058,554
Unaudited pro forma basic and diluted net loss per share attributable to common stockholders		$ (1.60)

TARGACEPT, INC.

NOTES TO UNAUDITED FINANCIAL STATEMENTS—(CONTINUED)

2. Summary of Significant Accounting Policies (continued)

The Company has excluded all outstanding stock options and warrants from the calculation of net loss per share attributable to common stockholders because such securities are antidilutive for all periods presented. Had the Company been in a net income position, these securities may have been included in the calculation. These potentially dilutive securities consist of the following on a weighted average basis:

	Nine Months Ended September 30,	
	2004	2005
Outstanding common stock options	1,018,383	1,414,728
Redeemable convertible preferred stock	9,831,987	13,797,460
Outstanding warrants	215,054	215,054
Total	11,065,424	15,427,242

Stock-Based Compensation

The Company has an equity incentive plan, which is described more fully in Note 8. Prior to January 1, 2005, the Company accounted for the plan under the recognition and measurement provisions of APB Opinion No. 25, *Accounting for Stock Issued to Employees* (APB 25), and related Interpretations, as permitted by FASB Statement No. 123, *Accounting for Stock-Based Compensation* (SFAS 123). No stock-based employee compensation cost was recognized in the Statement of Operations for the year ended December 31, 2004 or in the nine-month period ended September 30, 2004, as all options granted under the plan had an exercise price equal to the market value of the underlying common stock on the date of grant. Effective January 1, 2005, the Company adopted the fair value recognition provisions of FASB Statement No. 123 (revised 2004), *Share-Based Payment* (SFAS 123R), using the modified-prospective-transition method. Under that transition method, compensation cost recognized in the first nine months of 2005 includes: (a) compensation cost for all share-based payments granted prior to, but not yet vested as of January 1, 2005, based on the grant date fair value estimated in accordance with the original provisions of SFAS 123, (b) compensation cost for all share-based payments granted subsequent to January 1, 2005, based on the grant-date fair value estimated in accordance with the provisions of SFAS 123R and (c) compensation cost for awards modified on April 7, 2005, based on the modification provisions in accordance with SFAS 123R. Results for prior periods have not been restated.

As a result of adopting SFAS 123R on January 1, 2005, the Company's net income for the nine-month period ended September 30, 2005, is $526,717 lower than if it had continued to account for share-based compensation under APB 25.

SFAS 123R also requires the benefits of tax deductions in excess of recognized compensation cost to be reported as a financing cash flow, rather than as an operating cash flow as required under current literature. This requirement will reduce net operating cash flows and increase net financing cash flows in periods after adoption. While the Company cannot estimate what those amounts will be in the future (because they depend on, among other things, when employees exercise stock options and the tax deduction for the company at that point), no amount of operating cash flows has been recognized in prior periods for such excess tax deductions because of net operating losses generated since inception.

TARGACEPT, INC.

NOTES TO UNAUDITED FINANCIAL STATEMENTS—(CONTINUED)

2. Summary of Significant Accounting Policies (continued)

The following table illustrates the effect on net income and earnings per share if the Company had applied the fair value recognition provisions of SFAS 123 to options granted under the Company's stock option plan for the nine months ended September 30, 2004. For purposes of this pro forma disclosure, the value of the options is estimated using a Black-Scholes-Merton option-pricing formula and amortized to expense over the options' vesting periods.

	Nine Months Ended September 30, 2004
Net loss attributable to common stockholders, as reported	$ (26,162,608)
Add: stock-based employee compensation expense included in reported net income, net of related tax effects of $0.	$ 32,700
Deduct: stock-based employee compensation expense determined under fair value based method for all awards, net of related tax effects	$ (681,777)
Pro forma net loss	$ (26,811,685)
Net loss per share:	
Basic and diluted, as reported	$ (126.18)
Basic and diluted, pro forma	$ (129.31)

Recent Accounting Pronouncements

In June 2005, the FASB issued Statement No. 154, *Accounting Changes and Error Corrections, a replacement of APB Opinion No. 20, Accounting Changes, and FASB Statement No. 3, Reporting Accounting Changes in Interim Financial Statements* (SFAS 154). SFAS 154 requires retrospective application to prior periods' financial statements for all voluntary changes in accounting principle, unless impracticable. SFAS 154 is effective for accounting changes and corrections of errors made in fiscal years beginning after December 15, 2005. SFAS 154 will have no immediate impact on our consolidated financial statements, though it would impact our presentation of future voluntary accounting changes, should such changes occur.

3. Inventories

Inventories consisted of the following:

	September 30, 2004	September 30, 2005
Raw materials	$ 46,988	$ 46,988
Work-in-process	6,400	6,400
Finished goods	52,887	39,096
	$ 106,275	$ 92,484

TARGACEPT, INC.

NOTES TO UNAUDITED FINANCIAL STATEMENTS—(CONTINUED)

4. Accrued Expenses

Accrued expenses consists of the following:

	September 30,	
	2004	2005
Clinical trials costs	$ 935,058	$ 1,449,968
Employee compensation	759,301	898,805
Other	64,920	111,732
	$ 1,759,279	$ 2,460,505

5. Redeemable Preferred Stock

In August 2000, the Company issued 5,000,000 shares of its Series A redeemable convertible preferred stock (the Series A) to RJRT, and completed a private placement of 6,537,634 shares of its Series B redeemable convertible preferred stock (the Series B) generating cash of $29,073,000, net of offering costs.

In January 2001, the Company issued 29,933 shares of Series B to three consultants in partial payment of consulting fees owed by the Company.

In November 2002, the Company completed a private placement of 37,764,180 shares of its Series C redeemable convertible preferred stock (the Series C) and received cash of $45,488,000, net of offering costs.

In March 2003, the Company completed a private placement of an additional 11,404,958 shares of Series C and received cash of $13,767,000, net of offering costs.

In December 2004, the Company completed a private placement of an additional 27,272,728 shares of Series C and received cash of $32,900,000, net of offering costs.

In May 2005, the Company completed a private placement of an additional 496,132 shares of Series C and received cash of $612,000, net of offering costs.

The following is a summary of the rights, preferences and terms of the Company's outstanding series of redeemable convertible preferred stock:

Conversion

Each share of Series A, Series B and Series C is convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into fully paid and nonassessable shares of the Company's common stock. As of September 30, 2005, conversion of the Series A, Series B and Series C would result in the issuance of 666,667, 2,082,623, and 11,082,725 shares of common stock, respectively. Future sales of equity at prices below the respective conversion prices could result in adjustments to the number of shares of common stock into which each series of preferred stock is convertible.

TARGACEPT, INC.

NOTES TO UNAUDITED FINANCIAL STATEMENTS—(CONTINUED)

5. Redeemable Preferred Stock (continued)

Automatic conversion of the Series A, Series B and Series C into fully paid and nonassessable shares of common stock, without the payment of additional consideration by the holders thereof, would occur immediately upon the closing of the sale of the Company's common stock in a firm commitment, underwritten public offering registered under the Securities Act of 1933 in which (i) the price per share equals or exceeds $11.00 (subject to certain adjustments) or such lesser amount as is approved by the holders of (a) a majority of then outstanding shares of Series A and Series B, considered together as a single class on an as-converted basis, and (b) at least sixty-five percent (65%) of the then outstanding shares of Series C, and (ii) the gross proceeds to the Company are not less than $50,000,000. The accrued but unpaid cumulative dividend on the Series C shall, if not yet declared, be forfeited upon conversion of the Series C.

Dividends

Dividends accrue daily on each share of Series C on a cumulative basis at the rate of 8% per annum and are recorded as an increase to Series C and an increase to accumulated deficit. Cumulative dividends may be declared and paid at any time and shall be payable upon liquidation or redemption. At September 30, 2004 and 2005, cumulative accrued dividends on the Series C stock totaled $8,468,000 and $15,402,000, respectively.

Dividends on the Series A, Series B and Series C are payable when and if declared by the Board of Directors. No dividend may be paid on the common stock without the approval of the holders of a majority of the then outstanding shares of Series A and Series B, considered together on an as-converted basis, and the holders of 65% of the Series C. No dividend may be declared or paid on either the Series A or the Series B unless, simultaneously with such declaration or payment, the same dividend per share is declared or paid on both the Series A and the Series B, as well as the Series C, and any unpaid cumulative dividends on the Series C are declared and paid in full.

Voting

Each holder of the Series A, Series B and Series C is entitled to the number of votes equal to the number of shares of common stock into which such holder's shares are convertible on the applicable record date. In addition, certain actions by the Company require the approval of one or more of (i) the holders of a majority of the outstanding shares of Series A, (ii) the holders of at least two-thirds of the outstanding shares of Series B, (iii) the holders of a majority of the outstanding shares of Series A and Series B, considered together on an as-converted basis, and/or (iv) the holders of at least 65% of the outstanding shares of Series C.

Liquidation Preference

In the event of any liquidation, dissolution or winding up of the Company, the holders of the Series C shares have preference and are entitled to receive an amount per share equal to the greater of (i) their initial purchase price per share plus any accrued or declared and unpaid dividends on such share or (ii) the amount per share of Series C that such holders would receive if all of the Series A, Series B and Series C were converted to common stock immediately prior to such liquidation, dissolution or winding up.

5. Redeemable Preferred Stock (continued)

Next, the holders of Series A and Series B are entitled to receive, on a *pari passu* basis, an amount equal to their initial purchase price per share plus any declared and unpaid dividends on such shares. Any assets of the Company remaining after the payments specified above shall be distributed on a *pari passu* basis among the holders of common stock and, on an as-converted to common stock basis, Series A, Series B and Series C. Unless the holders of a prescribed number of shares of Series A, Series B and/or Series C otherwise elect, certain fundamental transactions involving the Company shall be treated as a liquidation for the Series A, Series B and/or Series C, as the case may be.

Mandatory Redemption

At any time after November 26, 2008, upon demand by the holders of at least 65% of the outstanding shares of Series C, all of the outstanding shares of Series C shall be redeemed in cash in an amount per share equal to the initial purchase price per share (subject to certain adjustments) plus any accrued or declared and unpaid dividends on such shares.

At any time after the later of August 22, 2005 or the date on which no shares of Series C are outstanding, a number of outstanding shares of Series A or Series B elected upon demand by the holders of a majority of the outstanding shares of Series A (in the case of Series A) or a majority of the outstanding shares of Series B (in the case of Series B) shall be redeemed in an amount per share equal to $4.65 (subject to certain adjustments) plus (i) any previously declared but unpaid dividends on such share and (ii) an amount equal to $0.081375 per share (subject to certain adjustments) multiplied by the number of complete three-month periods that have elapsed from the date such share was originally issued to the redemption date. The Company may satisfy its redemption obligation with respect to the Series A and/or the Series B in cash or by paying a portion in cash and issuing a promissory note that meets certain prescribed conditions for the remaining amount.

6. Stockholders' Equity (Deficit)

On February 2, 2005 the Company's board of directors adopted, and on February 2, 2005 the stockholders approved, a 7.5 to 1 reverse stock split of the Company's common stock. The reverse stock split became effective as of February 3, 2005. All common stock and per common share amounts for all periods presented in the accompanying financial statements have been restated to reflect the effect of this reverse common stock split.

In conjunction with the issuance of Series A, the Company issued a warrant to purchase 215,054 shares of the Company's common stock at an original exercise price of $34.88 per share (subject to certain adjustments). In connection with the Company's issuance of Series C and price adjustment provisions of the warrant, the conversion price of the warrant was adjusted to $14.63. The warrant is exercisable only upon the earlier of an initial public offering or a change in control. The fair value of the warrant is a direct cost of obtaining capital. As such, the fair value has been recorded in stockholders' equity, with the offset recorded as a decrease in the redemption value of the Series A. The Company will accrete to the redemption value of the Series A at the earliest date of redemption, or until November 2008 through an increase in redemption value to Series A and an increase to retained deficit. The fair value of the warrant to purchase 215,054 shares of the Company's common stock was estimated at the grant date to be

TARGACEPT, INC.

NOTES TO UNAUDITED FINANCIAL STATEMENTS—(CONTINUED)

6. Stockholders' Equity (Deficit) (continued)

$213,710 or $3.98 per share. The Company considered the anti-dilution features, the contingencies surrounding the limited opportunities for exercise, and the warrant's priorities over common stock options in relation to the fair value of the Company's common stock at the date of issuance when estimating the fair value of the warrant.

The Company had reserved shares of common stock for future issuance as follows:

	September 30,	
	2004	2005
Convertible preferred stock	9,831,987	13,832,015
Warrant	215,054	215,054
Options	1,033,311	1,671,540
	11,080,352	15,718,609

7. Income Taxes

There is no income tax provision (benefit) for federal or state income taxes as the Company has incurred operating losses since inception.

8. Equity Incentive Plan

On August 22, 2000, the Company established an equity incentive plan (the Plan) and authorized the issuance of up to 268,168 shares under the Plan to attract and retain employees, directors and certain independent contractors, consultants and advisors and to allow them to participate in the growth of the Company. During 2001, the number of shares authorized for issuance under the Plan was increased to 348,168. In conjunction with the November 2002 Series C financing, the Company authorized the issuance of an additional 400,000 shares, increasing the number of authorized shares to 748,168. Upon the issuance of the additional Series C shares in March 2003, the number of authorized shares was increased to 1,228,888. In March 2005, the number of authorized shares was increased to 1,878,888. Awards may be made to participants under the Plan in the form of incentive and nonqualified stock options, restricted stock, stock appreciation rights, stock awards, and performance awards. Eligible participants under the Plan include employees, directors and certain independent contractors, consultants or advisors of the Company or a related corporation. The vesting periods for awards made under the Plan are determined at the discretion of the Plan administrator and range from 0 to 5 years and have 10-year contractual terms or, in some cases, shorter terms designed to comply with Section 409A of the Internal Revenue Code. The exercise price of incentive options granted under the Plan may not be less than 100% of the fair market value of the common stock on the date of grant, as determined by the Plan Administrator.

On April 7, 2005 the Company's board of directors authorized and directed an amendment to each stock option agreement that changed the exercise price on each unvested portion as of March 31, 2005 to $1.75 per share. As of March 31, 2005 there were 354,672 shares subject to unvested options ranging from an original exercise price of $5.10 to $5.63 that were affected by the amended agreements. Each affected option is required to be accounted for as a modification of an award under SFAS 123R. The fair market value was calculated immediately prior to the modification and immediately after the modification to determine the incremental fair market

TARGACEPT, INC.

NOTES TO UNAUDITED FINANCIAL STATEMENTS—(CONTINUED)

8. Equity Incentive Plan (continued)

value. This incremental value and the fair market value of unvested options that were modified will be expensed as compensation on a quarterly basis, until the date that the option is exercised or forfeited or expires unexercised.

The company uses the Black-Scholes-Merton formula to estimate the fair value of its share-based payments. The volatility assumption used in the Black-Scholes-Merton formula is based on the calculated historical volatility of twelve benchmark biotechnology companies who have been identified as similar public entities. The expected term of options granted is derived from the simplified method allowable under SAB 107. Under this approach, the expected term would be the mid-point between the weighted average of vesting period and the contractual term. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield curve in effect at the time of grant.

The following table illustrates the weighted-average assumptions for the Black-Scholes model used in determining the fair value of options granted to employees:

	Nine Months Ended September 30,	
	2004	2005
Dividend yield	—	—
Risk-free interest rate	2.7%	4.0%
Volatility	0.80	0.72
Expected life	4 years	6.25-6.5 years

A summary of option activity under the Plan as of September 30, 2005, and changes during the nine months then ended is presented below:

	Options Granted	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at January 1, 2005	987,800	$ 4.81		
Granted	647,741	1.76		
Forfeited	(6,418)	5.11		
Exercised	(6,545)	3.11		
Outstanding at September 30, 2005	1,622,578	$ 2.86	8.3	$ 68,846
Vested and exercisable at September 30, 2005	925,079	$ 3.71	7.8	$ 58,796

The weighted-average grant-date fair value for an option granted during the nine months ended September 30, 2005 was $1.20. The total intrinsic value of options exercised during the nine month period ended September 30, 2005 was $2,999.

TARGACEPT, INC.

NOTES TO UNAUDITED FINANCIAL STATEMENTS—(CONTINUED)

8. Equity Incentive Plan (continued)

A summary of the status of the Company's nonvested shares as of September 30, 2005, and changes during nine months ended September 30, 2005, is presented below:

Nonvested Options	Options Granted	Weighted-Average Grant-Date Fair Value
Nonvested at January 1, 2005	401,148	$ 3.00
Granted	647,741	1.20
Vested	(348,347)	3.28
Forfeited	(3,043)	3.07
Nonvested at September 30, 2005	697,499	1.19(a)

(a) Reflects the April 7, 2005 amendment that decreased the weighted average fair value of 354,672 shares subject to unvested options from $3.08 to $1.02 per share.

As of September 30, 2005, there was $1.62 million of total unrecognized compensation cost related to nonvested share-based compensation arrangements granted under the Plan. That cost is expected to be recognized over a weighted-average period of 4.5 years. The total fair value of shares vested during the nine months ended September 30, 2005 was $862,159.

During 2004, the Company granted 10,333 options below fair value at an exercise price of $0.08 and a fair value of $5.63 per share. During 2005 the Company granted 6,000 options below fair value at an exercise price of $0.08 and fair value of $1.75 per share. The fair value of these shares was recorded as compensation expense in the amounts of $32,700 and $42,638 during the nine months ended September 30, 2004 and 2005, respectively.

9. Collaborative Research and License Agreements

Stanley Medical Research Institute

On December 15, 2004, the Company entered into a development agreement with The Stanley Medical Research Institute (SMRI) which was terminated in December 2005. In connection with the agreement, SMRI paid the Company $1,250,000 in return for the issuance by the Company of a convertible promissory note in an equal principal amount. The note bore interest at 10% per annum. In August 2005, the Company re-paid the promissory note in full.

10. Related-Party Transactions

RJRT is the holder of 5,000,000 shares of Series A convertible into 666,667 shares of common stock, 1,652,893 shares of Series C convertible into 238,095 shares of common stock, a warrant to purchase 215,054 shares of common stock, 3,333 shares of common stock, and options to purchase 5,230 shares of common stock. The Company has entered into the following transactions and agreements with RJRT in the ordinary course of business.

TARGACEPT, INC.

NOTES TO UNAUDITED FINANCIAL STATEMENTS—(CONTINUED)

10. Related-Party Transactions (continued)

During 2002, the Company entered into an agreement to borrow $2,500,000 from RJRT accruing interest at 6.6%. The note is repayable in monthly installments of $59,000 through the maturity date of May 1, 2006. In January 2004, the Company amended the note agreement with RJRT to allow for up to three additional tranches to be advanced to the Company for up to a total of $2,000,000. Each of the additional tranches accrue interest at the 4-year U.S. Treasury rate plus 3.5% determined, as of the day the additional tranche is advanced, and is repayable in 48 equal monthly installments. The Company was advanced an additional tranche on April 1, 2004 in the amount of $1,027,000. This additional tranche accrues interest at 5.87% and is repayable in monthly payments of $24,000 through the maturity date of April 1, 2008.

The Company was advanced the final tranche on December 23, 2004 in the amount of $973,000. This tranche accrues interest at 6.89% and is repayable in monthly payments of $23,000 through the maturity date of January 1, 2009. Under this related party note payable, the Company paid RJRT $596,000 and $939,000 during the nine months ended September 20, 3004 and 2005, respectively.

The notes are secured by equipment owned by the Company with a book value of approximately $1,925,000, net of accumulated depreciation, at September 30, 2005.

A member of the Company's board of directors serves as an officer of RJRT. Equity compensation for such director's service has been made, at the director's request, directly to RJRT. The numbers of shares subject to stock options granted to RJRT during the nine months ended September 30, 2004 and 2005 in connection with the director's services were 0 and 1,000, respectively. In connection with the issuance of the stock options, the Company recognized compensation expense of $4,235 during the nine months ended September 30, and 2005.

During 2004 and 2005, the Company used copy and print services through RJRT. For the nine months ended September 20, 2004 and 2005 the Company paid RJRT $56,000 and $69,000, respectively, for such services.

11. Subsequent Event

In December 2005, the Company entered into a collaborative research and license agreement with AstraZeneca AB for the development and worldwide commercialization of its lead product candidate, a novel small molecule that the Company refers to as TC-1734, as a treatment for Alzheimer's disease, cognitive deficits in schizophrenia and potentially other conditions marked by cognitive impairment such as attention deficit hyperactivity disorder, age associated memory impairment and mild cognitive impairment.

The Company is eligible to receive future research fees, license fees and milestone payments under its collaboration agreement with AstraZeneca, which becomes effective upon expiration or early termination of the Hart-Scott-Rodino waiting period applicable to the agreement. The amount of research fees, license fees and milestone payments will depend on the extent of the Company's research activities and the timing and achievement of development, regulatory and first commercial sale milestone events. AstraZeneca has agreed to pay the Company an initial fee of $10 million upon effectiveness of the agreement. Based on the collaboration agreement terms, the Company will allocate $5 million of the initial fee to the

Targacept, Inc.

Notes to Unaudited Financial Statements—(continued)

11. Subsequent Event (continued)

α4β2 research collaboration, which the Company expects to recognize as revenue over the four- year term of the research collaboration. The Company will defer recognition of the remaining $5 million of the initial fee, which will be allocated to the TC-1734 license grants, until AstraZeneca makes a determination whether to conduct Phase II clinical development of TC-1734 following the completion of additional safety and product characterization studies to be conducted by AstraZeneca. If AstraZeneca decides to conduct a Phase II clinical trial of TC-1734 following the completion of the safety and product characterization studies, the Company would recognize the deferred $5 million of the initial fee as revenue over the expected development period for TC-1734. The Company expects to recognize any revenue based on the achievement of milestones under the collaboration agreement upon achievement of the milestone event, as long as the Company determines that the revenue satisfies the revenue recognition requirements of Securities and Exchange Commission Staff Accounting Bulletin, or SAB, No. 101, *Revenue Recognition in Financial Statements*, as amended by SAB No. 104. SAB No. 101 requires that four basic criteria must be met before revenue can be recognized: persuasive evidence of an arrangement exists; delivery has occurred or services have been rendered; the fee is fixed and determinable; and collectibility is reasonably assured. The Company will record research fees that the Company receives from AstraZeneca while it is conducting the safety and product characterization studies on TC-1734 as deferred revenue. If the agreement continues in effect following the completion of the additional safety and product characterization studies to be conducted by AstraZeneca, the Company will recognize all research fees previously recorded as deferred revenue and recognize future research fee revenues as the research is performed and related expenses are incurred.

[Table of Contents](#)

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide information different from that contained in this prospectus. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock.

TABLE OF CONTENTS

Until , 2006 (25 days after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to unsold allotments or subscriptions.

TARGACEPT

Shares

Common Stock

Deutsche Bank Securities

Pacific Growth Equities, LLC

CIBC World Markets

Lazard Capital Markets

Prospectus

, 2006

Table of Contents

Part II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the expenses in connection with the offering, all of which will be borne by us. All amounts shown are estimates except for the Securities and Exchange Commission registration fee, the NASDAQ National Market listing fee and the NASD filing fee.

Securities and Exchange Commission registration fee	$ 6,399
NASDAQ National Market listing fee	100,000
NASD filing fee	6,480
Blue sky fees and expenses	*
Accounting fees and expenses	*
Legal fees and expenses	*
Transfer agent and registrar fees and expenses	*
Printing and engraving expenses	*
Miscellaneous	*
Total	$ *

* To be filed by amendment.

Item 14. Indemnification of Directors and Officers.

Our Third Amended and Restated Certificate of Incorporation, as amended and in effect as of the date of this registration statement, and our Fourth Amended and Restated Certificate of Incorporation to be in effect upon completion of this offering (as may be in effect from time to time, the Certificate) provide that, except to the extent prohibited by the Delaware General Corporation Law, as amended (the DGCL), our directors shall not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty while serving as our directors. Under the DGCL, our directors have a fiduciary duty to us that is not eliminated by this provision of the Certificate and, in appropriate circumstances, equitable remedies such as injunctive or other forms of non-monetary relief will remain available. In addition, each director will continue to be subject to liability under the DGCL for breach of the director’s duty of loyalty to us or our stockholders, for acts or omissions that are found by a court of competent jurisdiction to be not in good faith or involving intentional misconduct, for knowing violations of law, for actions leading to improper personal benefit to the director and for payment of dividends or approval of stock repurchases or redemptions that are prohibited by the DGCL. This provision also does not affect our directors’ responsibilities under any other laws, such as federal securities laws or state or federal environmental laws.

Section 145 of the DGCL empowers a corporation to indemnify its directors and officers against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by them in connection with any action, suit or proceeding brought by third parties by reason of the fact that they were or are directors or officers of the corporation, if they acted in good faith, in a manner they reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reason to believe that their conduct was unlawful. The DGCL provides further that the indemnification permitted thereunder shall not be deemed exclusive of any other rights to which the directors and officers may be entitled under the corporation’s bylaws, any agreement, a vote of stockholders or otherwise. The Certificate provides that, to the fullest extent permitted by Section 145 of the DGCL, we shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (whether civil, criminal, administrative or investigative) by reason of the fact that such person is or was a director or officer of us, or is or was serving at our request as a director, officer or trustee of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding. At present, there is no pending litigation or proceeding involving any director or officer as to which indemnification will be required or permitted under the Certificate and we are not aware of any threatened litigation or proceeding that may result in a claim for such indemnification.

Section 145 of the DGCL also empowers a corporation to purchase insurance for its officers and directors for such liabilities. We maintain liability insurance for our officers and directors.

Item 15. Recent Sales of Unregistered Securities.

Set forth below is information regarding shares of common stock and preferred stock issued, and options and warrants granted, by us since January 1, 2003. Also included is the consideration, if any, received by us for such shares, options and warrants and information relating to the section of the Securities Act, or rule of the Securities and Exchange Commission, under which exemption from registration was claimed.

(a) Issuance of Securities

1. On March 14, 2003, we issued and sold an aggregate of 11,404,958 shares of our series C convertible preferred stock at a purchase price per share of $1.21 to investors affiliated with JAFCO G-9(A) Venture Capital Investment Limited Partnership, Rock Castle Ventures, Cogene Biotech Ventures Five, Bison Capital, LLC and Oxford Bioscience Partners IV L.P. for an aggregate purchase price of approximately $13.8 million. These shares will convert into common stock at the rate of approximately 0.144 shares of common stock for each share of series C convertible preferred stock concurrently with the completion of this offering.

2. On December 6, 2004, we issued and sold an aggregate of 27,272,728 shares of our series C convertible preferred stock at a purchase price per share of $1.21 to New Enterprise Associates 10, Limited Partnership, EuclidSR Partners, L.P., Burrill Biotechnology Capital Fund, L.P., R.J. Reynolds Tobacco Holdings, Inc., Nomura Phase4Ventures LP and investors affiliated with CDIB Bioscience Ventures I, Inc., Genavent Fund, FCPR SGAM AI Biotechnology Fund, FCPR CDC-Innovation 2000, Advent Private Equity Fund II and JAFCO G-9(A) Venture Capital Investment Limited Partnership for an aggregate purchase price of approximately $33.0 million. These shares will convert into common stock at the rate of approximately 0.144 shares of common stock for each share of series C convertible preferred stock concurrently with the completion of this offering.

3. On December 15, 2004, we issued a $1.25 million convertible promissory note to The Stanley Medical Research Institute. In August 2005, we repaid the note in full.

4. On May 13, 2005, we issued and sold an aggregate of 496,132 shares of our series C convertible preferred stock at a purchase price per share of $1.21 to Cogene Biotech Ventures, L.P. for an aggregate purchase price of approximately $600,320. These shares will convert into common stock at the rate of approximately 0.144 shares of common stock for each share of series C convertible preferred stock concurrently with the completion of this offering.

5. In December 2005, upon the exercise of stock options at an exercise price per share of $0.08 per share, we issued and sold an aggregate of 5,999 shares of common stock to NEA Development Corp., EuclidSR Partners, L.P., EuclidSR Biotechnology Partners, L.P., Burrill & Company LLC, R.J. Reynolds Tobacco Holdings, Inc., John P. Richard and Errol B. De Souza.

6. From January 1, 2003 to December 31, 2005, we granted:

- options to purchase an aggregate of 1,496,093 shares of common stock at exercise prices ranging from $0.08 to $5.63 per share under our 2000 Equity Incentive Plan, as amended, with a weighted average exercise price of $3.24 per share, to employees, directors and individual consultants;
- restricted stock awards for an aggregate of 8,331 shares of common stock at a purchase price of $0.08 per share under our 2000 Equity Incentive Plan, as amended; and
- options to purchase an aggregate of 13,999 shares of common stock at an exercise price of $0.08 per share to non-individual consultants under our 2000 Equity Incentive Plan, as amended.

The weighted average exercise price of all options to purchase shares of common stock granted since January 1, 2003 and outstanding on December 31, 2005 is $3.61 per share. As of December 31, 2005, there were 62 holders of record of shares of our common stock.

(b) No underwriters were involved in the foregoing sales of securities. The securities described in paragraphs (a)(1), (2), (3) and (4), and a portion of the securities described in paragraphs (5) and (6) of this Item 15 were issued to a combination of foreign and U.S. investors in reliance upon the exemption from the registration requirements of the Securities Act, as set forth in Sections 3(a)(9) or 4(2) under the Securities Act and Rule 506 of Regulation D promulgated thereunder relative to sales by an issuer not involving any public offering, or in reliance upon Regulation S promulgated under the Securities Act, to the extent an exemption from such registration was required. All purchasers of shares of our convertible preferred stock described in paragraphs (a)(1), (2), (3) and (4), and the purchasers of a portion of the securities described in paragraphs (5) and (6) of this Item 15 represented to us in connection with their purchase that they were accredited investors and were acquiring the shares for investment and not distribution, that they could bear the risks of the investment and could hold the securities for an indefinite period of time. The purchasers received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration or an available exemption from such registration.

All of the foregoing securities are deemed restricted securities for purposes of the Securities Act. All certificates representing the issued shares of common stock described in this Item 15 included appropriate legends setting forth that the securities had not been registered and the applicable restrictions on transfer.

The restricted stock and a portion of the stock options and the common stock issuable upon the exercise of such options described in paragraphs (5) and (6) of this Item 15 were issued pursuant to written compensatory benefit plans or arrangements with our employees, directors and consultants, in reliance on the exemption provided by Rule 701 promulgated under the Securities Act. All recipients either received adequate information about us or had access, through employment or other relationships, to such information.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

Exhibit No.	Description
1.1*	Form of Underwriting Agreement.
3.1(a)	Third Amended and Restated Certificate of Incorporation of the Company, as amended.
3.1(b)*	Form of Fourth Amended and Restated Certificate of Incorporation of the Company, to be effective upon completion of this offering.
3.2(a)	Amended and Restated Bylaws of the Company.
3.2(b)*	Form of Bylaws of the Company, to be effective upon completion of this offering.
4.1*	Specimen common stock certificate.
4.2(a)	Third Amended and Restated Investor Rights Agreement, dated May 12, 2004, by and among the Company and certain stockholders of the Company.
4.2(b)	Amendment No. 1, dated December 6, 2004, to Third Amended and Restated Investor Rights Agreement, dated May 12, 2004.
4.2(c)*	Amendment No. 2, dated , 2006, to Third Amended and Restated Investor Rights Agreement, dated May 12, 2004.
4.3	Warrant to Purchase Common Stock, dated August 22, 2000, granted to R.J. Reynolds Tobacco Company and subsequently assigned to R.J. Reynolds Tobacco Holdings, Inc.
5.1*	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
10.1*	Form of Indemnification Agreement between the Company and each of its directors and officers.
10.2(a)	Lease Agreement, dated as of August 1, 2002, by and between the Company and Wake Forest University Health Sciences.
10.2(b)	First Lease Amendment to Lease Agreement, dated as of August 1, 2002, by and between the Company and Wake Forest University Health Sciences.
10.3	Loan Agreement, dated as of April 19, 2002, between the Company and the City of Winston-Salem.
10.4	Amended and Restated Note and Security Agreement, dated January 30, 2004, issued by the Company in favor of R.J. Reynolds Tobacco Holdings, Inc.
10.5(a)	Amended and Restated Targacept, Inc. 2000 Equity Incentive Plan.
10.5(b)	Form of Incentive Stock Option Agreement under Targacept, Inc. 2000 Equity Incentive Plan.
10.5(c)	Form of Nonemployee Director Nonqualified Stock Option Agreement under Targacept, Inc. 2000 Equity Incentive Plan.
10.5(d)	Form of Restricted Stock Award Agreement under Targacept, Inc. 2000 Equity Incentive Plan.
10.6*	Targacept, Inc. 2006 Stock Incentive Plan.
10.6(a)*	Form of Incentive Stock Option Agreement under Targacept, Inc. 2006 Stock Incentive Plan.

Exhibit No.	Description
10.6(b)*	Form of Nonqualified Stock Option Agreement under Targacept, Inc. 2006 Stock Incentive Plan.
10.6(c)*	Form of Nonemployee Director Nonqualified Stock Option Agreement under Targacept, Inc. 2006 Stock Incentive Plan.
10.6(d)*	Form of Restricted Stock Award Agreement under Targacept, Inc. 2006 Stock Incentive Plan.
10.7	Employment Agreement, dated as of August 22, 2000, by and between the Company and J. Donald deBethizy.
10.8	Employment Agreement, dated as of August 22, 2000, by and between the Company and Merouane Bencherif.
10.9	Employment Agreement, dated as of August 22, 2000, by and between the Company and William S. Caldwell.
10.10	Employment Agreement, dated as of April 24, 2001, by and between the Company and Geoffrey Dunbar.
10.11	Employment Agreement, dated as of February 8, 2002, by and between the Company and Alan Musso.
10.12	Employment Agreement, dated as of September 1, 2003, by and between the Company and Jeffrey P. Brennan.
10.13(a)+	Collaborative Research and License Agreement, dated as of January 21, 2002, by and between the Company and Aventis Pharma SA.
10.13(b)+	Amended and Restated Collaborative Research and License Agreement, dated as of January 21, 2002, by and between the Company and Aventis Pharma SA.
10.13(c)	Letter Agreement, dated March 18, 2003, amending the Amended and Restated Collaborative Research and License Agreement, dated as of January 21, 2002, by and between the Company and Aventis Pharma SA and the Collaborative Research and License Agreement, dated as of January 21, 2002, by and between the Company and Aventis Pharma SA.
10.14	Asset Purchase Agreement, dated as of June 28, 2002, by and between the Company and Layton Bioscience, Inc.
10.15+	Asset Purchase and Trademark Assignment Agreement, dated March 19, 1998, by and between the Company (as assignee of Layton Bioscience, Inc.) and Merck & Co., Inc.
10.16+	Amended and Restated License Agreement, dated as of March 9, 2004, by and between the Company and the University of South Florida Research Foundation, Inc.
10.17(a)+	License Agreement, dated October 6, 1997, by and between the Company (as assignee of R.J. Reynolds Tobacco Company) and Virginia Commonwealth University Intellectual Property Foundation.
10.17(b)+	Amendment to License Agreement, dated February 11, 2004, to the License Agreement, dated October 6, 1997, by and between the Company (as assignee of R.J. Reynolds Tobacco Company) and Virginia Commonwealth University Intellectual Property Foundation.
10.18(a)+	License Agreement, dated May 26, 1999, by and between the Company and the University of Kentucky Research Foundation.

[Table of Contents](#)

Exhibit No.	Description
10.18(b)*	Amendment No. 1, dated August 16, 2005, to License Agreement, dated May 26, 1999, by and between the Company and the University of Kentucky Research Foundation.
10.19+	License Agreement, dated as of August 12, 2002, between the Company and Wake Forest University Health Sciences.
10.20+	Development and Production Agreement for Active Pharmaceutical Ingredients, dated as of February 1, 2004, by and between the Company and Siegfried Ltd.
10.21*	Collaborative Research and License Agreement, dated as of December 27, 2005, by and between the Company and AstraZeneca AB.
23.1	Consent of Ernst & Young LLP.
23.2*	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).

* To be filed by amendment.
\+ Confidential treatment has been granted with respect to certain portions of this Exhibit, which portions have been omitted and filed separately with the Securities and Exchange Commission as part of an application for confidential treatment pursuant to the Securities Act of 1933, as amended.

(b) Financial Statement Schedules.

All information for which provision is made in the applicable accounting regulations of the Securities and Exchange Commission is either included in the financial statements or is not required under the related instructions or is inapplicable, and therefore has been omitted.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described herein, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as a part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Winston-Salem, State of North Carolina, on January 17, 2006.

TARGACEPT, INC.

By: /s/ J. DONALD DEBETHIZY

J. Donald deBethizy
Chief Executive Officer and President

POWER OF ATTORNEY

Each person whose signature appears below hereby constitutes and appoints J. Donald deBethizy and Alan A. Musso, or either of them, as his or her attorney-in-fact, each with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this registration statement on Form S-1, including post-effective amendments and any and all new registration statements filed pursuant to Rule 462 under the Securities Act, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each said attorney-in-fact or his or her substitute or substitutes may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated on January 17, 2006.

	/s/ J. DONALD DEBETHIZY		/s/ ALAN A. MUSSO
Name: **Title:**	**J. Donald deBethizy** **Chief Executive Officer, President and Director** **(Principal Executive Officer)**	**Name:** **Title:**	**Alan A. Musso** **Vice President and Chief Financial Officer** **(Principal Financial Officer and Principal Accounting Officer)**
	/s/ MARK SKALETSKY		/s/ M. JAMES BARRETT
Name: **Title:**	**Mark Skaletsky** **Chairman of the Board of Directors**	**Name:** **Title:**	**M. James Barrett** **Director**
	/s/ CHARLES A. BLIXT		/s/ ERROL B. DE SOUZA
Name: **Title:**	**Charles A. Blixt** **Director**	**Name:** **Title:**	**Errol B. De Souza** **Director**
	/s/ ANN F. HANHAM		/s/ ELAINE V. JONES
Name: **Title:**	**Ann F. Hanham** **Director**	**Name:** **Title:**	**Elaine V. Jones** **Director**
	/s/ JOHN P. RICHARD		
Name: **Title:**	**John P. Richard** **Director**		

Table of Contents

EXHIBIT INDEX

Exhibit No.	Description
1.1*	Form of Underwriting Agreement.
3.1(a)	Third Amended and Restated Certificate of Incorporation of the Company, as amended.
3.1(b)*	Form of Fourth Amended and Restated Certificate of Incorporation of the Company, to be effective upon completion of this offering.
3.2(a)	Amended and Restated Bylaws of the Company, as amended.
3.2(b)*	Form of Bylaws of the Company, to be effective upon completion of this offering.
4.1*	Specimen common stock certificate.
4.2(a)	Third Amended and Restated Investor Rights Agreement, dated May 12, 2004, by and among the Company and certain stockholders of the Company.
4.2(b)	Amendment No. 1, dated December 6, 2004, to Third Amended and Restated Investor Rights Agreement, dated May 12, 2004.
4.2(c)*	Amendment No. 2, dated , 2006, to Third Amended and Restated Investor Rights Agreement, dated May 12, 2004.
4.3	Warrant to Purchase Common Stock, dated August 22, 2000, granted to R.J. Reynolds Tobacco Company and subsequently assigned to R.J. Reynolds Tobacco Holdings, Inc.
5.1*	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
10.1*	Form of Indemnification Agreement between the Company and each of its directors and officers.
10.2(a)	Lease Agreement, dated as of August 1, 2002, by and between the Company and Wake Forest University Health Sciences.
10.2(b)	First Lease Amendment to Lease Agreement, dated as of August 1, 2002, by and between the Company and Wake Forest University Health Sciences.
10.3	Loan Agreement, dated as of April 19, 2002, between the Company and the City of Winston-Salem.
10.4	Amended and Restated Note and Security Agreement, dated January 30, 2004, issued by the Company in favor of R.J. Reynolds Tobacco Holdings, Inc.
10.5(a)	Amended and Restated Targacept, Inc. 2000 Equity Incentive Plan, as amended.
10.5(b)	Form of Incentive Stock Option Agreement under Targacept, Inc. 2000 Equity Incentive Plan.
10.5(c)	Form of Nonemployee Director Nonqualified Stock Option Agreement under Targacept, Inc. 2000 Equity Incentive Plan.
10.5(d)	Form of Restricted Stock Award Agreement under Targacept, Inc. 2000 Equity Incentive Plan.
10.6*	Targacept, Inc. 2006 Stock Incentive Plan.
10.6(a)*	Form of Incentive Stock Option Agreement under Targacept, Inc. 2006 Stock Incentive Plan.
10.6(b)*	Form of Nonqualified Stock Option Agreement under Targacept, Inc. 2006 Stock Incentive Plan.
10.6(c)*	Form of Nonemployee Director Nonqualified Stock Option Agreement under Targacept, Inc. 2006 Stock Incentive Plan.

Table of Contents

Exhibit No.	Description
10.6(d)*	Form of Restricted Stock Award Agreement under Targacept, Inc. 2006 Stock Incentive Plan
10.7	Employment Agreement, dated as of August 22, 2000, by and between the Company and J. Donald deBethizy.
10.8	Employment Agreement, dated as of August 22, 2000, by and between the Company and Merouane Bencherif.
10.9	Employment Agreement, dated as of August 22, 2000, by and between the Company and William S. Caldwell.
10.10	Employment Agreement, dated as of April 24, 2001, by and between the Company and Geoffrey Dunbar.
10.11	Employment Agreement, dated as of February 8, 2002, by and between the Company and Alan Musso.
10.12	Employment Agreement, dated as of September 1, 2003, by and between the Company and Jeffrey P. Brennan.
10.13(a)+	Collaborative Research and License Agreement, dated as of January 21, 2002, by and between the Company and Aventis Pharma SA.
10.13(b)+	Amended and Restated Collaborative Research and License Agreement, dated as of January 21, 2002, by and between the Company and Aventis Pharma SA.
10.13(c)	Letter Agreement, dated March 18, 2003, amending the Amended and Restated Collaborative Research and License Agreement, dated as of January 21, 2002, by and between the Company and Aventis Pharma SA and the Collaborative Research and License Agreement, dated as of January 21, 2002, by and between the Company and Aventis Pharma SA.
10.14	Asset Purchase Agreement, dated as of June 28, 2002, by and between the Company and Layton Bioscience, Inc.
10.15+	Asset Purchase and Trademark Assignment Agreement, dated March 19, 1998, by and between the Company (as assignee of Layton Bioscience, Inc.) and Merck & Co., Inc.
10.16+	Amended and Restated License Agreement, dated as of March 9, 2004, by and between the Company and the University of South Florida Research Foundation, Inc.
10.17(a)+	License Agreement, dated October 6, 1997, by and between the Company (as assignee of R.J. Reynolds Tobacco Company) and Virginia Commonwealth University Intellectual Property Foundation.
10.17(b)+	Amendment to License Agreement, dated February 11, 2004, to the License Agreement, dated October 6, 1997, by and between the Company (as assignee of R.J. Reynolds Tobacco Company) and Virginia Commonwealth University Intellectual Property Foundation.
10.18(a)+	License Agreement, dated May 26, 1999, by and between the Company and the University of Kentucky Research Foundation.
10.18(b)*	Amendment No. 1, dated August 16, 2005, to License Agreement, dated May 26, 1999, by and between the Company and the University of Kentucky Research Foundation.
10.19+	License Agreement, dated as of August 12, 2002, between the Company and Wake Forest University Health Sciences.

Table of Contents

Exhibit No.	Description
10.20+	Development and Production Agreement for Active Pharmaceutical Ingredients, dated as of February 1, 2004, by and between the Company and Siegfried Ltd.
10.21*	Collaborative Research and License Agreement, dated as of December 27, 2005, by and between the Company and AstraZeneca AB.
23.1	Consent of Ernst & Young LLP.
23.2*	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).

* To be filed by amendment.
+ Confidential treatment has been granted with respect to certain portions of this Exhibit, which portions have been omitted and filed separately with the Securities and Exchange Commission as part of an application for confidential treatment pursuant to the Securities Act of 1933, as amended.

Exhibit 3.1(a)

**THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
TARGACEPT, INC.**

Pursuant to Section 242 and Section 245 of the General Corporation Law of Delaware (the "**DGCL**"), the undersigned corporation hereby submits the following for the purpose of amending and restating its Certificate of Incorporation, as amended, and does hereby certify as follows.

1. The name of the corporation is Targacept, Inc. The corporation's original Certificate of Incorporation was filed on March 7, 1997, an Amended and Restated Certificate of Incorporation was filed on August 22, 2000, a Certificate of Amendment was filed on January 2, 2001, a Second Amended and Restated Certificate of Incorporation was filed on November 26, 2002 and a Certificate of Amendment was filed on March 14, 2003.
2. The corporation's Certificate of Incorporation is hereby amended and restated in its entirety, as set forth in the text of the Third Amended and Restated Certificate of Incorporation attached hereto as Exhibit A.
3. This Third Amended and Restated Certificate of Incorporation was duly adopted in accordance with Section 245(c) of the DGCL and will be effective upon filing.

IN WITNESS WHEREOF, said Targacept, Inc. has caused this Third Amended and Restated Certificate of Incorporation to be signed by its President and Chief Executive Officer and attested by its Secretary, this 6th day of December, 2004.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
J. Donald deBethizy
President and Chief Executive Officer

ATTEST:

By: /s/ Alan A. Musso
Alan A. Musso, Secretary

Exhibit A

THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
TARGACEPT, INC.

FIRST: The name of the corporation (hereinafter called the “**corporation**”) is Targacept, Inc.

SECOND: The address, including street, number, city and county of the registered office of the corporation in the State of Delaware, is 1013 Centre Road, City of Wilmington 19805, County of New Castle; and the name of the registered agent of the corporation in the State of Delaware at such address is Corporation Service Company.

THIRD: The purpose of the corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation law of the State of Delaware.

FOURTH:

The corporation is authorized to issue shares of stock as follows:

A. The number of shares that the corporation is authorized to issue is Two Hundred Eighteen Million, Three Hundred Nine Thousand, Five Hundred Thirty-Two (218,309,532), of which: (1) One Hundred Twenty-Five Million (125,000,000) shares shall be designated as Common Stock, $0.001 par value per share (“**Common Stock**”); and (2) Ninety-Three Million, Three Hundred Nine Thousand, Five Hundred Thirty-Two (93,309,532) shares shall be designated as Preferred Stock, $0.001 par value per share (“**Preferred Stock**”). Of the Preferred Stock, (i) Five Million (5,000,000) shares shall be designated Series A Convertible Preferred Stock (“**Series A Preferred**”), (ii) Six Million, Five Hundred Sixty-Seven Thousand, Five Hundred Sixty-Seven (6,567,567) shares shall be designated Series B Convertible Preferred Stock (“**Series B Preferred**”) and (iii) Eighty-One Million, Seven Hundred Forty-One Thousand, Nine Hundred Sixty-Five (81,741,965) shares shall be designated Series C Convertible Preferred Stock (“**Series C Preferred**”). Each of Series A Preferred, Series B Preferred and Series C Preferred may be referred to herein individually as a “**Preferred Series**.”

The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares then outstanding) by the affirmative vote or written consent or approval of the holders of a majority of the then outstanding shares of the corporation’s capital stock entitled to vote, voting together as a single class on an as-converted to Common Stock basis, irrespective of the provisions of Section 242(b)(2) of the Delaware General Corporation Law.

B. The preferences, limitations and relative rights relating to the Common Stock and Preferred Stock are as set forth below. Series C Preferred shall rank senior to each other Preferred Series and to the Common Stock with respect to the payment and distribution of dividends (to the extent of the Series C Dividend (as defined in Section 1(a))), in liquidation and, to the extent provided herein, with respect to redemption. Except as expressly provided above, each of the Preferred Series shall rank *pari passu* with the other Preferred Series with respect to the payment of dividends, in liquidation and with respect to redemption. Unless otherwise indicated, all references to sections or subsections set forth in this Section B of Article FOURTH are deemed to refer to sections or subsections within this Section B of Article FOURTH.

1. Dividends.

(a) The holders of record of the then outstanding shares of Series C Preferred shall be entitled to receive, when, as and if declared by the corporation's Board of Directors (the "**Board**") out of any funds legally available therefor, cumulative dividends (the "**Series C Dividend**") at the annual rate (and no more) of 8% of the Series C Original Price (as defined in Section 4(a)(iii)) per share, computed on the basis of a 360-day year and rounded to the nearest whole cent (subject to equitable adjustment for stock splits, stock dividends, reverse stock splits and other similar corporate reorganizations or reclassifications that result in any change in the number of outstanding shares of Series C Preferred). The accrued but unpaid Series C Dividend, if any, may be declared and paid at any time. The Series C Dividend shall be fully cumulative and, with respect to each share of Series C Preferred, shall accrue (whether or not declared), without interest, daily from the previous anniversary of the date on which such share was issued, except that the first annual dividend shall accrue with respect to each share of Series C Preferred from the date on which such share was issued. No dividends shall be declared or paid with respect to any other class or series of the Corporation's capital stock unless prior to or contemporaneously therewith, the Board declares and pays the Series C Dividend in full. Notwithstanding anything herein to the contrary, upon any conversion of Series C Preferred pursuant to Section 4, the accrued but unpaid Series C Dividend, if any, shall be forfeited if not yet declared and shall cease to accrue or be payable thereafter.

(b) The holders of record of then outstanding shares of Series A Preferred and Series B Preferred shall not be entitled to receive any fixed, stated or regular dividend, but shall receive such dividends when, as and if declared by the Board out of any funds legally available therefor; provided, that no dividend shall be declared or paid on either the Series A Preferred or the Series B Preferred unless, simultaneously with such declaration or payment, (i) the same dividend per share is declared or paid on both the Series A Preferred and the Series B Preferred and (ii) the same dividend per share is declared or paid on the Series C Preferred and (iii) any accrued but unpaid Series C Dividend is declared and paid in full.

(c) Each holder of then outstanding shares of a Preferred Series shall be entitled to share ratably with the holders of Common Stock in all dividends or other distributions declared and paid on the Common Stock, other than those payable solely in shares of Common Stock (which shall have the effects described in Section 4(e)), on the basis that such holder held, on the record date for such dividend or distribution, the number of shares of Common Stock into which such holder's shares of Series A Preferred, Series B Preferred or Series C Preferred, as the case may be, would have been convertible on such date upon exercise of the Conversion Rights described in Section 4.

(d) Notwithstanding anything herein to the contrary, so long as any shares of: (i) Series A Preferred or Series B Preferred are outstanding, no dividends or other distributions shall be declared or paid on the Common Stock without the approval of the holders of a majority of the then outstanding shares of Series A Preferred and Series B Preferred, considered together as a single class on an as-converted basis; and (ii) Series C Preferred are outstanding, no dividends or other distributions shall be declared or paid on the Common Stock without the approval of the holders of at least sixty-five percent (65%) of the then outstanding shares of Series C Preferred.

2. <u>Liquidation</u>.

(a) <u>Series C Liquidation Preference</u>.

(i) In the event of any liquidation, dissolution or winding up of the affairs of the corporation, whether voluntary or involuntary (a "**General Liquidation Event**"), after payment or provision for payment of the debts and other liabilities and obligations of the corporation as required by law, the holder of each share of Series C Preferred then outstanding shall be entitled to be paid out of the net assets of the corporation available for distribution to its stockholders, before any payment or declaration and setting apart for payment of any amount shall be made in respect of Series B Preferred, Series A Preferred or Common Stock, an amount equal to the greater of (A) the Series C Original Price (as defined in Section 4(a)(iii)) per share of Series C Preferred, plus the accrued but unpaid Series C Dividend plus any other previously declared but unpaid dividends thereon to and including the date full payment is tendered to the holders of the Series C Preferred with respect to such General Liquidation Event, or (B) the amount per share of Series C Preferred that would be received by such holder in respect of such General Liquidation Event if all of the corporation's outstanding shares of Preferred Stock were converted to Common Stock immediately prior to such General Liquidation Event (such greater amount, the "**Series C Liquidation Preference**"). If the corporation shall at any time or from time to time effect a subdivision of the outstanding Series C Preferred (or declare and pay a dividend thereon payable in additional shares of Series C Preferred), the calculation of Section 2(a)(i)(A) then in effect immediately before that subdivision (or dividend) shall be proportionately decreased; conversely, if the corporation shall at any time or from time to time reduce the outstanding shares of Series C Preferred by combination or reverse stock split, the calculation of Section 2(a)(i)(A) then in effect immediately before the combination shall be proportionately increased. Any such adjustment pursuant to the preceding sentence shall become effective at the close of business on the date the subdivision or combination becomes effective or the dividend is paid.

(ii) Unless the holders of at least sixty-five percent (65%) of then outstanding shares of Series C Preferred otherwise elect, a Fundamental Transaction (as defined in Section 2(a)(iii)) shall be treated as a General Liquidation Event with respect to the Series C Preferred. If a Fundamental Transaction is treated as a General Liquidation Event with respect to the Series C Preferred, the respective holders of Series C Preferred shall have the right to receive, in connection with the closing of the

Fundamental Transaction and upon surrender of such holder's Series C Preferred certificate(s), duly endorsed, at the office of the corporation or of any transfer agent therefor, payment of the Series C Liquidation Preference and, if the Series C Liquidation Preference is the amount calculated pursuant to Section 2(a)(i)(A), the other amounts specified in Section 2(d) (such payment to be in the form of the securities or other consideration issued or paid in the Fundamental Transaction) in lieu of receiving the consideration and other securities and property that it would otherwise receive in the Fundamental Transaction. Upon payment of the Series C Liquidation Preference and the other amounts specified in Section 2(d) (or such amount thereof as may be payable as provided in Section 2(d)(iii)), each share of such Series C Preferred shall thereafter be deemed retired and no longer outstanding.

(iii) "**Fundamental Transaction**" shall mean the consummation by the corporation of (A) a share exchange, consolidation, merger, reorganization or other similar transaction in which the corporation is a constituent party in which outstanding shares of capital stock of the corporation are exchanged for, or converted into, securities or other consideration issued, or caused to be issued, by another entity (other than a mere reincorporation transaction) or (B) a sale, lease or other disposition of all or substantially all of the assets of the corporation.

(b) Series B Liquidation Preference.

(i) In the event of a General Liquidation Event, after (A) payment or provision for payment of the debts and other liabilities and obligations of the corporation as required by law and (B) payment of the Series C Liquidation Preference in full, the holder of each share of Series B Preferred then outstanding shall be entitled to be paid out of the net assets of the corporation available for distribution to its stockholders, before any payment or declaration and setting apart for payment of any amount shall be made in respect of Common Stock and on a *pari passu* basis with the holders of each share of Series A Preferred then outstanding as provided in Section 2(c), an amount equal to $4.65 per share of Series B Preferred, plus any previously declared but unpaid dividends thereon to and including the date full payment is tendered to the holders of the Series B Preferred with respect to such General Liquidation Event (the "**Series B Liquidation Preference**"). If the corporation shall at any time or from time to time effect a subdivision of the outstanding Series B Preferred (or declare and pay a dividend thereon payable in additional shares of Series B Preferred), the Series B Liquidation Preference then in effect immediately before that subdivision (or dividend) shall be proportionately decreased; conversely, if the corporation shall at any time or from time to time reduce the outstanding shares of Series B Preferred by combination or reverse stock split, the Series B Liquidation Preference then in effect immediately before the combination shall be proportionately increased. Any such adjustment pursuant to the preceding sentence shall become effective at the close of business on the date the subdivision or combination becomes effective or the dividend is paid.

(ii) Unless the holders of a majority of then outstanding shares of Series B Preferred otherwise elect, a Fundamental Transaction (as defined in

Section 2(a)(iii)) shall be treated as a General Liquidation Event with respect to the Series B Preferred. If a Fundamental Transaction is treated as a General Liquidation Event with respect to the Series B Preferred, the respective holders of Series B Preferred shall have the right to receive, in connection with the closing of the Fundamental Transaction and upon surrender of such holder's Series B Preferred certificate(s), duly endorsed, at the office of the corporation or of any transfer agent therefor, payment of the Series B Liquidation Preference and the other amounts specified in Section 2(d) (such payment to be in the form of the securities or other consideration issued or paid in the Fundamental Transaction) in lieu of receiving the consideration and other securities and property that it would otherwise receive in the Fundamental Transaction; provided, that if the Fundamental Transaction is treated as a General Liquidation Event with respect to the holders of (A) Series A Preferred, payment of the Series B Liquidation Preference shall be on a *pari passu* basis with the payment of the Series A Liquidation Preference and (B) Series C Preferred, payment of the Series B Liquidation Preference shall be expressly subject to, and conditional on, the prior payment of the Series C Liquidation Preference in full. Upon payment of the Series B Liquidation Preference and the other amounts specified in Section 2(d) (or such amount thereof as may be payable as provided in Section 2(d)(iii)), each share of such Series B Preferred shall thereafter be deemed retired and no longer outstanding.

(c) <u>Series A Liquidation Preference</u>.

(i) In the event of a General Liquidation Event, after (A) payment or provision for payment of the debts and other liabilities and obligations of the corporation as required by law and (B) payment of the Series C Liquidation Preference in full, the holder of each share of Series A Preferred then outstanding shall be entitled to be paid out of the net assets of the corporation available for distribution to its stockholders, before any payment or declaration and setting apart for payment of any amount shall be made in respect of Common Stock and on a *pari passu* basis with the holders of each share of Series B Preferred then outstanding as provided in Section 2(b), an amount equal to $4.65 per share of Series A Preferred, plus any previously declared but unpaid dividends thereon to and including the date full payment is tendered to the holders of the Series A Preferred with respect to such General Liquidation Event (the "**Series A Liquidation Preference**"). If the corporation shall at any time or from time to time effect a subdivision of the outstanding Series A Preferred (or declare and pay a dividend thereon payable in additional shares of Series A Preferred), the Series A Liquidation Preference then in effect immediately before that subdivision (or dividend) shall be proportionately decreased; conversely, if the corporation shall at any time or from time to time reduce the outstanding shares of Series A Preferred by combination or reverse stock split, the Series A Liquidation Preference then in effect immediately before the combination shall be proportionately increased. Any such adjustment pursuant to the preceding sentence shall become effective at the close of business on the date the subdivision or combination becomes effective or the dividend is paid.

(ii) Unless the holders of a majority of then outstanding shares of Series A Preferred otherwise elect, a Fundamental Transaction (as defined in

Section 2(a)(iii)) shall be treated as a General Liquidation Event with respect to the Series A Preferred. If a Fundamental Transaction is treated as a General Liquidation Event with respect to the Series A Preferred, the respective holders of Series A Preferred shall have the right to receive, in connection with the closing of the Fundamental Transaction and upon surrender of such holder's Series A Preferred certificate(s), duly endorsed, at the office of the corporation or of any transfer agent therefor, payment of the Series A Liquidation Preference and the other amounts specified in Section 2(d) (such payment to be in the form of the securities or other consideration issued or paid in the Fundamental Transaction) in lieu of receiving the consideration and other securities and property that it would otherwise receive in the Fundamental Transaction; provided, that if the Fundamental Transaction is treated as a General Liquidation Event with respect to the holders of (A) Series B Preferred, payment of the Series A Liquidation Preference shall be on a *pari passu* basis with the payment of the Series B Liquidation Preference and (B) Series C Preferred, payment of the Series A Liquidation Preference shall be expressly subject to, and conditional on, payment of the Series C Liquidation Preference in full. Upon payment of the Series A Liquidation Preference and the other amounts specified in Section 2(d) (or such amount thereof as may be payable as provided in Section 2(d)(iii)), each share of such Series A Preferred shall thereafter be deemed retired and no longer outstanding.

(d) Distribution of Remaining Liquidation Proceeds; Participation of Preferred Series.

(i) After payment in full of the Series C Liquidation Preference, the Series B Liquidation Preference and the Series A Liquidation Preference, the remaining net assets of the corporation shall next be distributed ratably per share to the holders of Common Stock and, if the Series C Liquidation Preference is paid pursuant to Section 2(a)(i), the Series B Liquidation Preference is paid pursuant to Section 2(b)(i) and/or the Series A Liquidation Preference is paid pursuant to Section 2(c)(i), each such Preferred Series, as if the holders of each such Preferred Series had converted their shares into Common Stock as provided in Section 4 immediately prior to the event resulting in the distributions under this Section 2.

(ii) For purposes of this Section 2, references to "**the other amounts specified in Section 2(d)**" shall mean the shares of stock or other securities or property (including cash) attributable in the Fundamental Transaction to, or to be received in connection with the Fundamental Transaction with respect to, the shares of Common Stock issuable upon conversion of the shares of Series C Preferred, Series B Preferred or Series A Preferred, as the case may be, in accordance with Section 2(d)(i).

(iii) If upon any General Liquidation Event for Series C Preferred, the assets to be distributed to the holders of Series C Preferred shall be insufficient to permit the payment to such holders of the Series C Liquidation Preference, then all the net assets of the corporation available for distribution to its stockholders shall be distributed ratably (per share) to the holders of Series C Preferred. If upon any General Liquidation Event for Series B Preferred and Series A Preferred and after payment in full of the Series C Liquidation Preference, the assets to be distributed to the holders of Series B Preferred and Series A Preferred shall be insufficient to permit the payment to such holders of their respective Liquidation Preferences in full, then all of the remaining net assets of the corporation available for distribution to its stockholders shall be distributed ratably (per share) to the holders of Series B Preferred and Series A Preferred on a *pari passu* basis. In either such event, no amounts shall be distributed to the holders of Common Stock.

(e) Valuation of Securities. Any securities to be delivered pursuant to this Section 2 shall be valued as follows:

(i) For securities not subject to investment letter or other similar restrictions on free marketability covered by Section 2(e)(ii):

(A) If traded on a securities exchange, the value shall be deemed to be the closing price of the securities on such exchange on the third trading day prior to the payment date set forth in the Notice (as defined in Section 2(f));

(B) If actively traded over-the-counter, the value shall be deemed to be the closing bid or sale price (whichever is applicable) on the third trading day prior to the payment date set forth in the Notice; and

(C) If there is no active public market, the value shall be the fair market value thereof, as determined in good faith by a majority of the Board.

(ii) The method of valuation of securities subject to investment letter or other restrictions on free marketability, other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate of the corporation, shall be to make an appropriate discount from the market value determined as provided in Sections 2(e)(i)(A), (B) or (C) to reflect the adjusted fair market value thereof, such discount to be determined in good faith by a majority of the Board.

(iii) In the event that the holders of a majority of the outstanding shares of Series A Preferred and Series B Preferred, considered together as a single class on an as-converted basis, or the holders of at least sixty-five percent (65%) of the outstanding shares of Series C Preferred (in any case, a "**Disputing Party**") give prompt written notice to the corporation that they dispute the determination of the Board made pursuant to Section 2(e)(i)(C) or Section 2(e)(ii), a committee of the Board comprised of (A) at least one director who is not an employee of the corporation or a designee of a single holder, or a group of holders, of Series A Preferred, Series B Preferred or Series C Preferred, (B) at least one director who is a designee of a single holder, or a group of holders, of Series A Preferred or Series B Preferred and (C) at least one director who is a designee of a single holder, or a group of holders, of Series C Preferred shall select an investment banking firm or other expert of recognized standing which shall determine conclusively the fair market value (in the case of Section 2(e)(i)(C)) or the discount (in the case of Section 2(e)(ii)). The cost of such firm or expert shall be divided equally between the Disputing Party (jointly and severally), on the one hand, and the corporation, on the other hand.

(f) Notice. Written notice (the "**Notice**") of any General Liquidation Event, which states the payment date, the place where said payments shall be made and the date on which Conversion Rights (as defined in Section 4) terminate as to such shares (which shall be not less than five (5) days after the date of such Notice), shall be given not less than fifteen (15) days prior to the payment date stated therein, to holders of record of each of the Preferred Series and Common Stock.

3. Voting Rights.

(a) Generally.

(i) Except as otherwise expressly provided herein or as required by law, the holder of each then outstanding share of Preferred Stock shall be entitled to the number of votes equal to the number of shares of Common Stock into which such share of Preferred Stock would be convertible on the appropriate record date and shall have voting rights and powers equal to the voting rights and powers of the Common Stock (except as otherwise expressly provided herein or as required by law, voting together with the Common Stock and the holders of all other Preferred Series as a single class and not as a separate voting group) and shall be entitled to notice of any stockholders' meeting in accordance with the bylaws of the corporation and applicable law. Fractional votes shall not be permitted and any fractional voting rights resulting from the above formula (after aggregating all shares of Common Stock into which shares of Preferred Stock held by each holder would be convertible) shall be rounded to the nearest whole number (with one-half being rounded upward).

(ii) Each holder of Common Stock shall be entitled to one vote per share of Common Stock owned by such holder.

(b) Series A Preferred Protective Covenants. From December 6, 2004 (the "**Series C Follow-On Issue Date**") until the earlier to occur of (i) a Qualified IPO (as defined in Section 4(b)) and (ii) the time that no shares of Series A Preferred remain outstanding, the corporation shall not, directly or indirectly, take any of the following actions without first obtaining the affirmative vote or the written approval of the holders of a majority of the then outstanding shares of Series A Preferred:

(i) only to the extent Section 3(d)(iii) does not apply, create, authorize, designate, reclassify, issue or sell any class or series of capital stock of the corporation, or rights, options, warrants or other securities convertible into or exercisable or exchangeable for any capital stock of the corporation, or any "**phantom**" equity or stock appreciation rights that rank as to payment of dividends, distribution of assets or redemption prior to or *pari passu* with the Series A Preferred or that in any manner materially adversely affect the terms, designations, powers, preferences or other rights of the holders of Series A Preferred (other than shares of Series C Preferred issued as of the Series C Follow-On Issue Date under the Purchase Agreement, as defined in Section 3(d)(vi));

(ii) alter or modify the terms, rights, preferences or privileges of the shares of the Series A Preferred; or increase the authorized number of shares of Series A Preferred;

(iii) amend this Second Amended and Restated Certificate of Incorporation or the bylaws of the corporation if such amendment would be materially adverse to the holders of Series A Preferred;

(iv) agree or otherwise commit to take any of the actions set forth in the foregoing Sections 3(b)(i)-(iii).

(c) Series B Preferred Protective Covenants. From the Series C Follow-On Issue Date until the earlier to occur of (i) a Qualified IPO (as defined in Section 4(b)) and (ii) the time that no shares of Series B Preferred remain outstanding, the corporation shall not, directly or indirectly, take any of the following actions without first obtaining the affirmative vote or the written approval of the holders of at least two-thirds of the then outstanding shares of Series B Preferred:

(i) only to the extent Section 3(d)(iii) does not apply, create, authorize, designate, reclassify, issue or sell any class or series of capital stock of the corporation, or rights, options, warrants or other securities convertible into or exercisable or exchangeable for any capital stock of the corporation, or any “**phantom**” equity or stock appreciation rights that rank as to payment of dividends, distribution of assets or redemption prior to or *pari passu* with the Series B Preferred or that in any manner materially adversely affect the terms, designations, powers, preferences or other rights of the holders of Series B Preferred (other than shares of Series C Preferred issued as of the Series C Follow-On Issue Date under the Purchase Agreement, as defined in Section 3(d)(vi));

(ii) alter or modify the terms, rights, preferences or privileges of the shares of the Series B Preferred; or increase the authorized number of shares of Series B Preferred;

(iii) amend this Second Amended and Restated Certificate of Incorporation or the bylaws of the corporation if such amendment would be materially adverse to the holders of Series B Preferred;

(iv) agree or otherwise commit to take any of the actions set forth in the foregoing Sections 3(c)(i)-(iii).

(d) Additional Series A Preferred and Series B Preferred Protective Covenants. From the Series C Follow-On Issue Date until the earlier to occur of (i) a Qualified IPO (as defined in Section 4(b)) and (ii) the time that no shares of Series A Preferred or Series B Preferred remain outstanding, the corporation shall not, directly or indirectly, take any of the following actions without first obtaining the affirmative vote or the written approval of the holders of a majority of the then outstanding shares of Series A Preferred and Series B Preferred, considered together as a single class on an as-converted basis:

(i) voluntarily effect a General Liquidation Event;

(ii) consummate a Fundamental Transaction;

(iii) create, authorize, designate, reclassify, issue or sell any class or series of capital stock of the corporation, or rights, options, warrants or other securities convertible into or exercisable or exchangeable for any capital stock of the corporation, or any "**phantom**" equity or stock appreciation rights that rank as to payment of dividends, distribution of assets or redemption prior to, or *pari passu* with, both the Series A Preferred and the Series B Preferred or that in any manner materially adversely affect the terms, designations, powers, preferences or other rights of both the holders of Series A Preferred and the holders of Series B Preferred (other than shares of Series C Preferred issued as of the Series C Follow-On Issue Date under the Purchase Agreement, as defined in Section 3(d)(vi));

(iv) redeem, repurchase or otherwise acquire any outstanding shares of its capital stock or any other of its outstanding securities, except for (A) repurchases of shares pursuant to agreements entered into to evidence grants or awards under the corporation's 2000 Equity Incentive Plan, as amended and as may be further amended (the "**2000 Plan**"), or any other successor plan that is approved by the holders of at least a majority of the then outstanding shares of Series A Preferred and Series B Preferred, considered together as a single class on an as-converted basis, and at least sixty-five percent (65%) of the then outstanding shares of Series C Preferred (together with the 2000 Plan, "**Plans**"), or (B) redemptions pursuant to Section 6;

(v) create, incur, assume or suffer to exist any indebtedness of the corporation for borrowed money (which shall include for purposes hereof capitalized lease obligations and guarantees or other contingent obligations for indebtedness for borrowed money) other than trade payables and accrued expenses incurred in the ordinary course of business and other debt not in excess at any point in time of $2,500,000 in the aggregate;

(vi) enter into any material transactions with any "affiliate" or "associate" (as such terms are defined under Rule 12b-2 under the Exchange Act) of the corporation, except as (x) expressly permitted by this Second Amended and Restated Certificate of Incorporation, (y) contemplated by the Series C Convertible Preferred Stock Purchase Agreement dated as of the Series C Follow-On Issue Date, as may be amended (the "**Purchase Agreement**"), or (z) approved by a majority of the members of the Board excluding, solely for this purpose, any directors who are affiliates or associates of such affiliate or associates of the corporation; or

(vii) agree or otherwise commit to take any of the actions set forth in the foregoing Sections 3(d)(i)-(vi).

(e) <u>Series C Preferred Protective Covenants</u>. From the Series C Follow-On Issue Date until the earlier to occur of (i) a Qualified IPO (as defined in Section 4(b)) and (ii) the time that no shares of Series C Preferred remain outstanding, (1) the Board shall not be comprised of more than nine (9) members and (2) the corporation shall not, directly or indirectly, take any of the following actions, in each case without first obtaining the affirmative vote or the written approval of the holders of at least sixty-five percent (65%) of the then outstanding shares of Series C Preferred:

(i) create, authorize, designate, reclassify, issue or sell any class or series of capital stock of the corporation, or rights, options, warrants or other securities convertible into or exercisable or exchangeable for any capital stock of the corporation, or any "**phantom**" equity or stock appreciation rights that rank as to payment of dividends, distribution of assets or redemption prior to or *pari passu* with the Series C Preferred or that in any manner materially adversely affect the terms, designations, powers, preferences or other rights of the holders of Series C Preferred (other than shares of Series C Preferred issued as contemplated by the Purchase Agreement);

(ii) increase the authorized number of shares of Series C Preferred;

(iii) authorize, create or issue any capital stock of the corporation or securities exercisable or exchangeable for, or convertible into, capital stock of the corporation (collectively, "**Company Equity**"), except for Company Equity issued: (A) in connection with a joint venture, strategic alliance, licensing or other contractual arrangement with a third party that, together with all other issuances of Company Equity theretofore made in reliance on this Section 3(e)(iii)(A), represents (on a fully diluted, Common Stock equivalent basis) less than ten percent (10%) of the corporation's outstanding capital stock (on a fully diluted, Common Stock equivalent basis) immediately following the sale (or, if more than one as contemplated by the Purchase Agreement, the last sale) of shares of Series C Preferred under the Purchase Agreement; (B) upon conversion of shares of any Preferred Series; (C) upon exercise of options or warrants (1) outstanding as of the Series C Follow-On Issue Date or (2) if the approval contemplated by this Section 3(e)(iii) is either not required or obtained with respect to the issuance of such options or warrants, issued after the Series C Follow-On Issue Date; (D) pursuant to a Plan; or (E) upon conversion, exchange or exercise of any Company Equity issued as permitted under clauses (A) – (D) above;

(iv) consummate a Fundamental Transaction;

(v) redeem, repurchase or otherwise acquire any outstanding shares of its capital stock or any other of its outstanding securities, except for (A) repurchases of shares pursuant to agreements entered into to evidence grants or awards under Plans, or (B) redemptions pursuant to Section 6;

(vi) create, incur, assume or suffer to exist any indebtedness of the corporation for borrowed money (which shall include for purposes hereof capitalized lease obligations and guarantees or other contingent obligations for indebtedness for borrowed money) other than trade payables and accrued expenses incurred in the ordinary course of business and other debt not in excess at any point in time of $2,500,000 in the aggregate;

(vii) enter into any material transactions with any "**affiliate**" or "**associate**" (as such terms are defined under Rule 12b-2 under the Exchange Act) of the corporation, except as (x) expressly permitted by this Third Amended and Restated Certificate of Incorporation, (y) contemplated by the Purchase Agreement or (z) approved by a majority of the Board excluding, solely for this purpose, any directors who are affiliates or associates of such affiliate or associates of the corporation;

(viii) alter or modify the terms, rights, preferences or privileges of the shares of the Series C Preferred;

(ix) amend or waive any provision of this Third Amended and Restated Certificate of Incorporation or the bylaws of the corporation if such amendment or waiver would be adverse to the holders of Series C Preferred;

(x) agree or otherwise commit to take any of the actions set forth in the foregoing Sections 3(e)(i)-(ix).

(f) Quorum. Except as otherwise required by law, the presence in person or by proxy of the holders of at least fifty percent (50%) of the votes held by the outstanding shares of Common Stock and Preferred Stock, considered together as a single class on an as-converted basis, shall constitute a quorum, except that, in the case of matters voted on by a class or series of the corporation's capital stock voting separately as a class or series, the presence in person or by proxy of the holders of a majority of the votes held by the outstanding shares of such class or series shall constitute a quorum.

4. Conversion.

The holders of Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

(a) Right to Convert.

(i) Series A Preferred. Each outstanding share of Series A Preferred shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share (but prior to the date that Conversion Rights terminate as set forth in the Notice issued pursuant to Section 2(f), if any), at the office of the corporation or any transfer agent for such stock, into fully paid and nonassessable shares of Common Stock. The number of shares of Common Stock into which each share of the Series A Preferred may be converted shall be determined by dividing $4.65 (the "**Series A Original Price**") by the Series A Conversion Price in effect at the time of conversion. The Series A Conversion Price shall, initially and as of the Series C Follow-On Issue Date, be equal to the Series A Original Price, and shall be subject to adjustment as provided pursuant to the other provisions of this Section 4.

(ii) Series B Preferred. Each outstanding share of Series B Preferred shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share (but prior to the date that Conversion Rights terminate as set forth in the Notice issued pursuant to Section 2(f), if any), at the office of the corporation or any transfer agent for such stock, into fully paid and nonassessable shares of Common Stock. The number of shares of Common Stock into which each share of the Series B Preferred may be converted shall be determined by dividing $4.65 (the "**Series B Original Price**") by the Series B Conversion Price in effect at the time of conversion. The Series B Conversion Price shall: (A) initially be equal to the Series B Original Price; (B) be adjusted to $1.95 as of March 14, 2003 and as of the Series C Follow-On Issue Date only for those holders of Series B Preferred as of November 26, 2002 (the "**Series C Original Issue Date**") that had not waived adjustments to the Series B Conversion Price resulting from the issuance of Series C Preferred at the Series C Original Price; and (C) be subject to adjustment pursuant to the other provisions of this Section 4.

(iii) Series C Preferred. Each outstanding share of Series C Preferred shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share (but prior to the date that Conversion Rights terminate as set forth in the Notice issued pursuant to Section 2(f), if any), at the office of the corporation or any transfer agent for such stock, into fully paid and nonassessable shares of Common Stock. The number of shares of Common Stock into which each share of the Series C Preferred may be converted shall be determined by dividing $1.21 (the "**Series C Original Price**") by the Series C Conversion Price in effect at the time of conversion. The Series C Conversion Price shall be, as of March 14, 2003 and as of the Series C Follow-On Issue Date, equal to $1.12, and shall be subject to adjustment pursuant to the other provisions of this Section 4. The Series C Conversion Price, Series B Conversion Price and Series A Conversion Price are sometimes referred to hereinafter collectively as the "**Conversion Prices**" and each, individually, as a "**Conversion Price**."

(b) Automatic Conversion. Each share of all the Preferred Series shall automatically be converted into shares of Common Stock in the manner provided for in

Sections 4(a)(i), 4(a)(ii) and 4(a)(iii), respectively, immediately upon the closing of the sale of Common Stock in a firm commitment, underwritten public offering registered under the Securities Act of 1933, as amended (the "**1933 Act**") (other than a registration relating solely to a transaction under Rule 145 under such Act or any successor rule thereto) in which (i) the public offering price per share of Common Stock equals or exceeds Two Dollars and 15/100 ($2.15) (subject to adjustment for stock splits, stock dividends, reverse stock splits and other similar corporate reorganizations occurring after the Series C Follow-On Issue Date) or such lesser amount as is approved in writing after the Series C Follow-On Issue Date by the holders of (i) a majority of the then outstanding shares of Series A Preferred and Series B Preferred, considered together as a single class on an as-converted basis, and (ii) at least sixty-five percent (65%) of the then outstanding shares of Series C Preferred, and (ii) the gross proceeds to the corporation are not less than Fifty Million Dollars ($50,000,000) (a "**Qualified IPO**") (before the deduction of expenses and before applying any underwriter's discounts or commission).

(c) Mechanics of Voluntary Conversion. Before any holder of Preferred Stock shall be entitled to convert the same into shares of Common Stock, such holder shall surrender the certificate or certificates thereof, duly endorsed, at the office of the corporation or of any transfer agent for such stock, and shall give written notice to the corporation at such office that it elects to convert the same and shall state therein the name or names in which it wishes the certificate or certificates for shares of Common Stock to be issued. The corporation shall, as soon as practicable thereafter and at its expense, issue and deliver at such office to such holder a certificate or certificates for the number of shares of Common Stock to which it shall be entitled as aforesaid. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of surrender of the shares of Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on such date.

(d) Adjustment for Stock Splits and Combinations. If the corporation shall at any time or from time to time after the Series C Follow-On Issue Date (as defined in Section 3(b)) effect a subdivision of the outstanding shares of Common Stock (by stock split or otherwise), the respective Conversion Prices then in effect immediately before the subdivision shall be proportionately decreased; conversely, if the corporation shall at any time or from time to time after the Series C Follow-On Issue Date reduce the outstanding shares of Common Stock by combination or otherwise, the respective Conversion Prices then in effect immediately before the combination shall be proportionately increased. Any adjustment under this Section 4(d) shall become effective at the close of business on the date the subdivision or combination becomes effective.

(e) Adjustment for Certain Dividends and Distributions. In the event the corporation at any time or from time to time after the Series C Follow-On Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in additional shares of Common Stock, then and in each such event the respective Conversion Prices then in effect shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the respective Conversion Prices then in effect by a fraction:

(i) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date; and

(ii) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution; provided, however, if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the respective Conversion Prices shall be recomputed accordingly as of the close of business on such record date and thereafter the respective Conversion Prices shall be adjusted pursuant to this Section 4(e) as of the time of actual payment of such dividends or distributions.

(f) Adjustments for Other Dividends and Distributions. In the event the corporation at any time or from time to time after the Series C Follow-On Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the corporation other than shares of Common Stock, then, and in each such event, provision shall be made so that the holders of Preferred Stock shall receive upon conversion thereof, in addition to the number of shares of Common Stock receivable thereupon, the amount of securities of the corporation that they would have received had their Preferred Stock been converted into Common Stock on the date of such event and had thereafter, during the period from the date of such event to and including the conversion date, retained such securities receivable by them as aforesaid during such period giving application to all adjustments called for during such period under this Section 4 with respect to the rights of the holders of the Preferred Stock.

(g) Adjustment for Reorganization, Reclassification or other Change. If the Common Stock issuable upon the conversion of the Preferred Stock shall be changed into the same or different number of shares of any class or classes of stock, whether by capital reorganization, reclassification or otherwise (other than a subdivision or combination of shares or stock dividend provided for above, or a reorganization, merger, consolidation or sale of assets provided for elsewhere in this Section 4), then and in each such event the holder of each share of Preferred Stock shall have the right thereafter to convert such share into the kind and amounts of shares of stock and other securities and property receivable upon such reorganization, reclassification or other change by holders of the number of shares of Common Stock into which such shares of Preferred Stock might have been converted immediately prior to such reorganization, reclassification or other change, all subject to further adjustment as provided herein.

(h) Mergers, etc. (i) In the event of a share exchange, consolidation, merger or other similar transaction in which (A) the corporation is a party and (B) the Series C Preferred, Series B Preferred or Series A Preferred is not canceled, exchanged, converted, redeemed or otherwise retired, then provision shall be made so that the holders of Series C Preferred, Series B Preferred and Series A Preferred, as the case may be, shall thereafter be entitled to receive, upon conversion thereof, the number of shares of stock or other securities or property of the corporation to which a holder of that number of shares of Common Stock deliverable upon conversion thereof would have been entitled on such share exchange, consolidation, merger or other similar transaction. In any such case, appropriate adjustment shall be made in the application of the provisions of this Section 4 with respect to the rights of the holders of the Preferred Stock after the share exchange, consolidation, merger or other similar transaction to the end that the provisions of this Section 4 (including adjustment of the respective Conversion Prices then in effect and the number of shares into which such Preferred Stock is convertible) shall be applicable after that event as nearly equivalent as may be practicable.

(i) Sale of Shares Below Conversion Price.

(i) Unless waived as provided in Section 4(i)(vii), if at any time or from time to time after the Series C Follow-On Issue Date, the corporation shall issue or sell Additional Shares of Common Stock (as defined in Section 4(j)), other than as a dividend as provided in Section 4(e), and other than upon a subdivision or combination of shares of Common Stock as provided in Section 4(d), for a consideration per share less than the then existing Series C Conversion Price, then and in each case the Series C Conversion Price shall be reduced, as of the opening of business on the date of such issue or sale, to a price determined as follows: the new Series C Conversion Price shall be determined by multiplying the then-existing Series C Conversion Price by a fraction (A) the numerator of which shall be (1) the number of shares of Common Stock into which the outstanding shares of Series C Preferred immediately prior to such issue or sale are convertible based on the then-existing Series C Conversion Price plus (2) the number of shares of Common Stock that the aggregate consideration received by the corporation for the total number of Additional Shares of Common Stock so issued would purchase at such Series C Conversion Price, and (B) the denominator of which shall be (1) the number of shares of Common Stock into which the outstanding shares of Series C Preferred immediately prior to such issue or sale are convertible based on the then-existing Series C Conversion Price plus (2) the number of such Additional Shares of Common Stock so issued.

(ii) Unless waived as provided in Section 4(i)(vii), if at any time or from time to time after the Series C Follow-On Issue Date, the corporation shall issue or sell Additional Shares of Common Stock (as defined in Section 4(j)), other than as a dividend as provided in Section 4(e), and other than upon a subdivision or combination of shares of Common Stock as provided in Section 4(d), for a consideration per share less than the then existing Series C Conversion Price, then and in each case the Series B Conversion Price shall be reduced, as of the opening of business on the date of such issue or sale, to a price determined as follows: the new Series B Conversion Price shall be determined by multiplying the then-existing Series B Conversion Price by a fraction (A) the numerator of which shall be the Series C Conversion Price, as adjusted after giving effect to such issuance or sale of Additional Shares of Common Stock, and

(B) the denominator of which shall be the Series C Conversion Price immediately before giving effect to such issuance or sale of Additional Shares of Common Stock.

(iii) Unless waived as provided in Section 4(i)(vii), if at any time or from time to time after the Series C Follow-On Issue Date, the corporation shall issue or sell Additional Shares of Common Stock (as defined in Section 4(j)), other than as a dividend as provided in Section 4(e), and other than upon a subdivision or combination of shares of Common Stock as provided in Section 4(d), for a consideration per share less than the then existing Series C Conversion Price, then and in each case the Series A Conversion Price shall be reduced, as of the opening of business on the date of such issue or sale, to a price determined as follows: the new Series A Conversion Price shall be determined by multiplying the then-existing Series A Conversion Price by a fraction the numerator of which shall be (A) the Series C Conversion Price, as adjusted after giving effect to such issuance or sale of Additional Shares of Common Stock, and (B) the denominator of which shall be the Series C Conversion Price immediately before giving effect to such issuance or sale of Additional Shares of Common Stock.

(iv) For the purpose of the adjustments provided in Sections 4(i)(i), 4(i)(ii) and 4(i)(iii), the consideration received by the corporation for any issue or sale of securities shall:

(A) to the extent it consists of cash, be computed at the net amount of cash received by the corporation after deduction of any underwriting or similar commissions, concessions or compensation paid or allowed by the corporation in connection with such issue or sale;

(B) to the extent it consists of services or property other than cash, be computed at the fair value of such services or property as determined in good faith by a majority of the Board; and

(C) if Additional Shares of Common Stock, Convertible Securities (as hereinafter defined), or rights or options to purchase either Additional Shares of Common Stock or Convertible Securities are issued or sold together with other stock or securities or other assets of the corporation for a consideration that covers both, be computed as the portion of the consideration so received that may be reasonably determined in good faith by the Board to be allocable to such Additional Shares of Common Stock, Convertible Securities or rights or options.

(v) For the purpose of the adjustments provided in Sections 4(i)(i), 4(i)(ii) and 4(i)(iii), if at any time or from time to time, the corporation shall issue any rights or options for the purchase of, or stock or other securities convertible into, Additional Shares of Common Stock (such convertible stock or securities being hereinafter referred to as "**Convertible Securities**"), then, in each case, if the Effective Price (as hereinafter defined) of such rights, options or Convertible Securities shall be less than the then existing Series C Conversion Price, Series B Conversion Price or Series A

Conversion Price, as the case may be, the corporation shall be deemed to have issued at the time of the issuance of such rights or options or Convertible Securities the maximum number of Additional Shares of Common Stock issuable upon exercise or conversion thereof (determined as set forth in the instrument(s) relating thereto, but without regard to any provision contained therein designed to protect against dilution) and to have received as consideration for the issuance of such shares an amount equal to the total amount of the consideration, if any, received by the corporation for the issuance of such rights or options or Convertible Securities, plus, in the case of such options or rights, the minimum amounts of consideration, if any, payable to the corporation upon exercise or conversion of such options or rights (determined as set forth in the instrument(s) relating thereto, but without regard to any provision contained therein designed to protect against dilution). For purposes of the foregoing, "**Effective Price**" shall mean the quotient determined by dividing the total of all such consideration by such maximum number of Additional Shares of Common Stock. No further adjustment of the existing Series C Conversion Price, Series B Conversion Price or Series A Conversion Price adjusted upon the issuance of such rights, options or Convertible Securities shall be made as a result of the actual issuance of Additional Shares of Common Stock on the exercise of any such rights or options or the conversion of any such Convertible Securities.

If any such rights or options or the conversion privilege represented by any such Convertible Securities shall expire without having been exercised, the existing Series C Conversion Price, Series B Conversion Price or Series A Conversion Price, as the case may be, adjusted upon the issuance of such rights, options or Convertible Securities shall be readjusted to the existing Series C Conversion Price, Series B Conversion Price or Series A Conversion Price that would have been in effect had an adjustment been made on the basis that the only Additional Shares of Common Stock so issued were the Additional Shares of Common Stock, if any, actually issued or sold on the exercise of such rights or options, or rights of conversion of such Convertible Securities, and such Additional Shares of Common Stock, if any, were issued or sold for the consideration actually received by the corporation upon such exercise, plus the consideration, if any, actually received by the corporation for the granting of all such rights and options, whether or not exercised, plus the consideration received for issuing or selling the Convertible Securities actually converted plus the consideration, if any, actually received by the corporation on the conversion of such Convertible Securities.

(vi) For the purpose of the adjustments provided for in Sections 4(i)(i), 4(i)(ii) and 4(i)(iii), if at any time or from time to time, the corporation shall issue any rights or options for the purchase of Convertible Securities, then in each such case, if the Effective Price thereof is less than then existing Series C Conversion Price, Series B Conversion Price or Series A Conversion Price, as the case may be, the corporation shall be deemed to have issued at the time of the issuance of such rights or options the maximum number of Additional Shares of Common Stock issuable upon conversion of the total amount of Convertible Securities covered by such rights or options (determined as set forth in the instrument(s) relating thereto, but without regard to any provision contained therein designed to protect against dilution) and to have received as consideration for the issuance of such Additional Shares of Common Stock an amount equal to the amount of consideration, if any, received by the corporation for the issuance of such rights or options, plus the minimum amounts of consideration, if any, payable to the corporation upon the conversion of such Convertible Securities (in each case determined as set forth in the instrument(s) relating thereto, but without regard to any provision contained therein designed to protect against dilution). For the purposes of the foregoing, "**Effective Price**" shall mean the quotient determined by dividing the total amount of such consideration by such maximum number of Additional Shares of Common Stock. No further adjustment of such Series C Conversion Price, Series B Conversion Price or Series A Conversion Price adjusted upon the issuance of such rights or options shall be made as a result of the actual issuance of the Convertible Securities upon the exercise of such rights or options or upon the actual issuance of Additional Shares of Common Stock upon the conversion of such Convertible Securities.

The provisions of Section 4(i)(v) for the readjustment of the Series C Conversion Price, Series B Conversion Price and Series A Conversion Price upon the expiration of rights or options or the rights of conversion of Convertible Securities, shall apply *mutatis mutandis* to the rights, options and Convertible Securities referred to in this Section 4(i)(vi).

(vii) Notwithstanding anything in this Section 4(i) to the contrary, the operation of, and any adjustment of the Series C Conversion Price, Series B Conversion Price and/or the Series A Conversion Price pursuant to this Section 4(i) may be waived with respect to any one or more of the Preferred Series, either prospectively or retroactively and either generally or in a particular instance, by a writing executed by (A) in the case of Series C Preferred, the holders of at least 65% of the then outstanding shares of Series C Preferred, (B) in the case of Series B Preferred, the holders of a majority of the then outstanding shares of Series B Preferred or (C) in the case of Series A Preferred, the holders of a majority of the then outstanding shares of such Series A Preferred. Any waiver pursuant to this Section 4(i)(vii) shall bind all future holders of shares of the Preferred Series for which such rights have been waived.

Notwithstanding anything in this Section 4(i) to the contrary, the operation of, and any adjustment of the Series B Conversion Price and/or the Series A Conversion Price pursuant to, this Section 4(i) may be waived with respect to any specific share or shares of Series B Preferred Stock and/or Series A Preferred Stock, either prospectively or retroactively and either generally or in a particular instance, by a writing executed by the record holder of such shares, including without limitation the corporation's Investor Rights Agreement dated as of August 22, 2000, as may be amended or restated; provided that no such waiver may be effected pursuant to this paragraph after March 14, 2003. Any waiver pursuant to this paragraph shall bind all future holders of such shares of Series B Preferred Stock and/or Series A Preferred Stock, as the case may be, for which such rights have been waived. In the event that a waiver of adjustment of the Series B Conversion Price and/or the Series A Conversion Price under this paragraph results in different Conversion Prices for shares of Series B Preferred Stock and/or shares of Series A Preferred Stock, the Secretary of the corporation shall maintain a written ledger identifying the applicable Conversion Price for each such share, which ledger shall be available upon request. If different shares of Series B Preferred Stock and/or different shares of Series A Preferred Stock have different Conversion Prices as a result of application of this paragraph, the Conversion Price for triggering any future adjustment of the Conversion Price for the Series B Preferred Stock and/or Series A Preferred Stock, as the case may be, that have not waived such adjustment shall be the lowest Conversion Price in effect with respect to such shares of Series B Preferred Stock and/or Series A Preferred Stock, as the case may be.

(j) Definition. The term "**Additional Shares of Common Stock**" as used herein shall mean all shares of Common Stock issued or deemed issued by the corporation after the Series C Follow-On Issue Date, whether or not subsequently reacquired or retired by the corporation, other than (i) shares of Series C Preferred issued as contemplated by the Purchase Agreement, (ii) shares of Common Stock issued as a stock dividend or in a stock split subdivision, recapitalization and the like, (iii) shares of Common Stock issuable upon conversion of the Preferred Stock, (iv) 1,612,903 shares of Common Stock (as adjusted for all stock dividends, stock splits, subdivisions, combinations and the like), issuable to R.J. Reynolds Tobacco Holdings, Inc. ("**RJRH**") upon exercise of the Warrant to Purchase Common Stock dated as of August 22, 2000 originally issued by the corporation to RJRH's affiliate, (v) up to 7,721,772 shares of Common Stock (as adjusted for all stock dividends, stock splits, subdivisions, combinations and the like and as adjusted to reflect an increase in the number of shares subject to the 2000 Plan pursuant to any validly effected amendment thereto) issuable after the Series C Follow-On Issue Date to employees, officers, directors, consultants or other persons performing services for or on behalf of the corporation (if so issued solely because of any such person's status as an officer, director, employee, consultant or other person performing services for or on behalf of the corporation and not as part of any offering of the corporation's securities) pursuant to any Plan, (vi) securities issued in consideration of the acquisition by the corporation of the assets, capital stock or other equity interests of another entity (and any securities issued upon conversion or exercise thereof), and (vii) securities issued in connection with a joint venture, strategic alliance or licensing or other contractual arrangement with a third party (A) the issuance of which does not require the approval contemplated by Section 3(e)(iii) or (B) with (x) the consent contemplated by Section 3(e)(iii) and (y) the affirmative vote or written approval of the holders of a majority of the then outstanding shares of Series A Preferred and Series B Preferred, considered together as a single class on an as-converted basis (and, in either case, any securities issued upon conversion or exercise thereof).

(k) Certificate of Adjustment. In each case of an adjustment or readjustment of the respective Conversion Prices for the number of shares of Common Stock or other securities issuable upon conversion of the Preferred Stock, the corporation shall cause its Chief Financial Officer to compute, or, at the request of the holders of a majority of the shares of Preferred Stock (on an as-converted to Common Stock prior to such adjustment or readjustment basis), shall cause independent certified public accountants of recognized standing elected by the corporation (who may be the independent certified public accountants then auditing the books of the corporation) to compute, at the corporation's expense, such adjustment or readjustment in accordance herewith and prepare a certificate showing such adjustment or readjustment, and shall mail such certificate, by first class mail, postage prepaid, to each registered holder of the Preferred Stock at the holder's address as shown in the corporation's books. The certificate shall set forth such adjustment or readjustment, showing in detail the facts upon which such adjustment or readjustment is based including a statement of (i) the consideration received or to be received by the corporation for any Additional Shares of Common Stock issued or sold or deemed to have been issued or sold, if applicable to such adjustment, (ii) the Conversion Prices at the time in effect for each such series of the Preferred Stock, and (iii) the number of Additional Shares of Common Stock and the type and amount, if any, of other property which at the time would be received upon conversion of the Preferred Stock.

(l) Notice of Certain Events. In the event of (i) any taking by the corporation of a record of the holders of any class or series of securities for the purpose of determining the holders thereof who are entitled to receive any dividend or other distribution or (ii) any reclassification or recapitalization of the capital stock of the corporation or (iii) any Fundamental Transaction, the corporation shall give notice to each holder of Preferred Stock at least ten (10) days prior to the record date specified therein (in the case of (i) and (ii)) or at least fifteen (15) days prior to the expected effective date thereof (in the case of (iii)), specifying, to the extent applicable, (A) the date on which any such record is to be taken for the purpose of such dividend or distribution, (B) the date on which any such reclassification, recapitalization or Fundamental Transaction is expected to become effective, and (C) the time, if any is to be fixed, as to when the holders of record of Common Stock (or other securities) shall be entitled to exchange their shares of Common Stock (or other securities) for securities or other property deliverable upon such reclassification, recapitalization or Fundamental Transaction; provided, that such notice may be waived by the holders of at least sixty-five percent (65%) of the then outstanding shares of Series C Preferred and the holders of a majority of the then outstanding shares of Series B Preferred and Series A Preferred, considered together as a single class on an as-converted basis.

(m) Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of shares of Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the corporation shall pay cash equal to the product of such fraction multiplied by the fair market value of one share of the corporation's Common Stock on the date of conversion, as determined in good faith by a majority of the Board. Whether or not fractional shares are issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock and the number of shares of Common Stock issuable upon such aggregate conversion.

(n) Reservation of Stock Issuable Upon Conversion. The corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of the Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Preferred Stock. As a condition precedent to the taking of any action which would cause an adjustment to the Conversion Price, the corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient in order that it may validly and legally issue the shares of its Common Stock issuable based upon such adjusted Conversion Price, including without limitation using its best efforts to obtain the requisite stockholder approval of any necessary amendment to this Third Amended and Restated Certificate of Incorporation.

(o) Reserved.

(p) Payment of Taxes. The corporation will pay all taxes and other governmental charges (other than taxes measured by the revenue or income of the holders of the Preferred Stock) that may be imposed in respect of the issue or delivery of shares of Common Stock upon conversion of the shares of the Preferred Stock.

(q) No Impairment. The corporation shall not, by amendment of this Third Amended and Restated Certificate of Incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the corporation, but will at all times in good faith assist in the carrying out of all the provisions of this Section 4 and in taking of all such action as may be necessary or appropriate in order to protect the Conversion Rights of the holders of Preferred Stock against impairment.

5. No Preemptive Rights. Except as otherwise provided in any valid agreement between the corporation and one or more of its stockholders (including, without limitation, the Second Amended and Restated Investor Rights Agreement dated as of the Series C Original Issue Date among the corporation and certain of its stockholders, as may be amended or restated from time to time), the holders of Common Stock and Preferred Stock shall not have (solely by reason of the ownership of such stock) any rights to acquire shares of capital stock of the corporation (whether now authorized or not), which the corporation may, from time to time, propose to sell and issue, including without limitation rights, options or warrants to purchase capital stock, or securities of any type whatsoever that are, or may become, convertible into capital stock.

6. Mandatory Redemption.

(a) Redemption Election.

(i) So long as any Series C Preferred shall be outstanding, the corporation shall, at the written election (a "**Series C Mandatory Redemption Election**") of the holders of at least sixty-five percent (65%) of the outstanding shares of Series C Preferred at any time or from time to time after the sixth anniversary of the Series C Original Issue Date, redeem for cash at the Series C Mandatory Redemption Price (as hereinafter defined) all of the outstanding shares of Series C Preferred within sixty (60) days after receipt of such written election (the "**Series C Mandatory Redemption Date**").

(ii) So long as any Series A Preferred or Series B Preferred shall be outstanding, the corporation shall, at the written election (a "**Series A/B**

Mandatory Redemption Election and, together with a Series C Mandatory Redemption Election, a "Redemption Election") of the holders of a majority of the outstanding shares of Series A Preferred, or at the written election of the holders of a majority of the outstanding shares of Series B Preferred, at any time or from time to time after the later of (i) August 22, 2005 or (ii) the date on which no shares of Series C Preferred remain outstanding, redeem for cash at the Series A/B Mandatory Redemption Price (as hereinafter defined) the number of shares of Series A Preferred or Series B Preferred, as the case may be, elected to be redeemed within sixty (60) days after receipt of such written election (each a "**Series A/B Mandatory Redemption Date**" and, together with any Series C Redemption Date, a "**Redemption Date**").

(b) Mandatory Redemption Price.

(i) The Series C Mandatory Redemption Price for each share of Series C Preferred shall be an amount in cash equal to the Series C Original Price (subject to adjustment for stock splits, stock dividends, reverse stock splits and other similar corporate reorganizations) plus any previously declared or accumulated but unpaid dividends thereon, including without limitation the accrued but unpaid Series C Dividend (the "**Series C Mandatory Redemption Price**").

(ii) The Series A/B Mandatory Redemption Price for each share of Series A Preferred or Series B Preferred shall be an amount in cash equal to $4.65 (subject to adjustment for stock splits, stock dividends, reverse stock splits and other similar corporate reorganizations) plus (i) any previously declared or accumulated but unpaid dividends thereon and (ii) an amount equal to $0.081375 (subject to adjustment for stock splits, stock dividends, reverse stock splits and other similar corporate reorganizations) multiplied by the number of complete three-month periods that have elapsed from the date such share was originally issued to the Series A/B Mandatory Redemption Date (plus a prorated amount attributable to the period from the most recently completed three-month period to the Series A/B Mandatory Redemption Date) (the "**Series A/B Mandatory Redemption Price**" and, together with the Series C Mandatory Redemption Price, the "**Redemption Price**").

(c) Payment of Series A/B Mandatory Redemption Price. Notwithstanding anything in this Section 6 to the contrary, upon a Series A/B Mandatory Redemption Election pursuant to Section 6(a)(ii), the corporation may pay the aggregate Series A/B Mandatory Redemption Price as follows: (i) 33 1/3% in cash at the applicable Series A/B Mandatory Redemption Date and (ii) the remainder by execution and delivery of promissory notes that provide for (A) equal principal installments on each of the next two (2) successive annual anniversaries of the applicable Series A/B Mandatory Redemption Date (each an "**Anniversary Date**"), with the first installment payable on the first such Anniversary Date, (B) interest payable at the Prime Rate as of such Anniversary Date (as reported in the Wall Street Journal – Eastern Edition) and (C) the right at any time and from time to time to prepay all or any part of the remaining Series A/B Mandatory Redemption Price together with interest accrued thereon, without penalty. Compliance with this Section 6(c) shall constitute payment in full of the Series A/B Mandatory Redemption Price.

(d) Notice of Redemption. Not less than twenty (20) days prior to each Mandatory Redemption Date, written notice (the "**Redemption Notice**") shall be mailed, postage prepaid, to each holder of record of shares of Series A Preferred and Series B Preferred to be redeemed (in the case of a Series A/B Mandatory Redemption Election) and to each holder of record of shares of Series C Preferred (in the case of a Series C Mandatory Redemption Election) at its post office address last shown on the records of the corporation. The Redemption Notice shall state:

(i) the total number of shares of each Preferred Series subject to the Redemption Election;

(ii) the number of shares of each Preferred Series held by the holder that the corporation intends to redeem;

(iii) the applicable Redemption Date and the Redemption Price and, if permitted, whether the corporation intends to pay as provided in Section 6(c);

(iv) the date upon which the holder's Conversion Rights as to such Preferred Stock terminate; and

(v) that the holder is to surrender to the corporation, in the manner and at the place designated, his certificate or certificates representing the shares of each Preferred Series to be redeemed.

(e) Surrender of Certificates. On or before each Redemption Date, each holder of shares of Preferred Series to be redeemed, unless such holder has exercised his right to convert the shares as provided in Section 4, shall surrender the certificate or certificates representing such shares to the corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Redemption Price for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof, and each surrendered certificate shall be cancelled and retired. If a holder fails to surrender its certificate or certificates within sixty (60) days after the Redemption Date, such holder shall thereafter have no right to the Redemption Price. In the event less than all of the shares represented by such certificate are redeemed, a new certificate shall be issued representing the unredeemed shares.

(f) Effect of Payment. If the Redemption Notice shall have been duly given, and if, on such Redemption Date, the Redemption Price shall have been paid (including, if permitted, payment as provided in Section 6(c)), then, notwithstanding that the certificates evidencing any of the shares of the Preferred Series so called for redemption shall not have been surrendered, all rights with respect to such shares thereafter shall terminate.

(g) Insufficient Funds. In the event that (i) there are insufficient funds legally available to pay in full the Redemption Price for shares of Series A Preferred, Series B Preferred or Series C Preferred, as the case may be, and (ii) if permitted, the corporation does not pay the applicable Redemption Price as provided in Section 6(c), at any time thereafter when additional funds of the corporation become legally available, such funds will be used as soon as practicable thereafter to redeem the balance of the shares that the corporation has become obligated to redeem but that it has not redeemed. This Section 6(g) shall not limit or otherwise affect any right or remedy available to any holder of shares that the corporation has become obligated to redeem but that it has not redeemed.

7. No Reissuance of Preferred Stock. No share or shares of Preferred Stock acquired by the corporation by reason of redemption, purchase, conversion or otherwise shall be reissued as shares of Preferred Stock. All such shares shall be canceled and shall not be held as treasury shares.

8. Notices. Except to the extent otherwise expressly provided herein, all notices (including, without limitation, any Notice under Section 2(f)) required hereunder, whether to the holders of Preferred Stock or Common Stock or to the corporation, shall be deemed given or submitted: (i) when personally delivered to the recipient (if to the corporation, to the Chief Executive Officer); (ii) three (3) business days after such notice is sent by certified or registered mail, return receipt requested, postage prepaid (if to a stockholder, addressed to such stockholder at its record address appearing on the books of the corporation and, if to the corporation, addressed to the corporation at its principal offices to the attention of the Chief Executive Officer); or (iii) the next business day after deposit with a nationally recognized overnight courier or messenger for delivery at the applicable address referenced in clause (ii).

FIFTH: The corporation is to have perpetual existence.

SIXTH: Whenever a compromise or arrangement is proposed between this corporation and its creditors or any class of them and/or between this corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for this corporation under Section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for this corporation under Section 279 of Title 8 of the Delaware Code order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this corporation, as the case may be, and also on this corporation.

SEVENTH: For the management of the business and for the conduct of the affairs of the corporation, and in further definition, limitation, and regulation of the powers of the corporation and of its directors and of its stockholders or any class thereof, as the case may be, it is further provided:

1. The management of the business and the conduct of the affairs of the corporation shall be vested in its Board of Directors. The number of directors which shall constitute the whole Board of Directors shall be fixed by, or in the manner provided in, the Bylaws. No election of directors need be by written ballot

2. After the original or other Bylaws of the corporation have been adopted, amended or repealed, as the case may be, in accordance with the provisions of Section 109 of the General Corporation Law of the State of Delaware, and, after the corporation has received any payment for any of its stock, the power to adopt, amend or repeal the Bylaws of the corporation may be exercised by the Board of Directors of the corporation; provided, however, that any provision for the classification of directors of the corporation for staggered terms pursuant to the provisions of subsection (d) of Section 141 of the General Corporation law of the State of Delaware shall be set forth in an initial Bylaw or in a Bylaw adopted by the stockholders entitled to vote of the corporation unless provisions for such classification shall be set forth in this Third Amended and Restated Certificate of Incorporation.

3. Whenever the corporation shall be authorized to issue only one class of stock, each outstanding share shall entitle the holder thereof to notice of, and the right to vote at, any meeting of stockholders. Whenever the corporation shall be authorized to issue more than one class of stock, no outstanding share of any class of stock which is denied voting power under the provisions of the Third Amended and Restated Certificate of Incorporation shall entitle the holder thereof to the right to vote at any meeting of stockholders except as the provisions of paragraph (2) of subsection (b) of Section 242 of the General Corporation Law of the State of Delaware shall otherwise require; provided, that no share of any such class which is otherwise denied voting power shall entitle the holder thereof to vote upon the increase or decrease in the number of authorized shares of said class.

EIGHTH: A director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (a) for any breach of the director's duty of loyalty to the corporation or its stockholders, (b) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (c) under Section 174 of the General Corporation Law of Delaware, or (d) for any transaction from which the director derived an improper personal benefit. If the General Corporation Law of Delaware is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law of Delaware as so amended. Neither any amendment, repeal or modification of this article nor the adoption of any provision of this certificate of incorporation or the Bylaws of the corporation inconsistent with this article shall adversely affect any right or protection of a director of the corporation existing at the time of such amendment, repeal, modification or adoption.

NINTH: The corporation shall, to the fullest extent permitted by the provisions of Section 145 of the General Corporation Law of the State of Delaware, as the same may be amended and supplemented, indemnify any person who is or was a director or officer of the corporation, or is or was serving at the request of the corporation as a director, officer or trustee of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, from and against any and all of the expenses, liabilities, or other matters referred to in or covered by said section, and the indemnification provided for herein shall not be deemed exclusive of any other rights to which such persons may be entitled under any Bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a director or officer and shall inure to the benefit of the heirs, executors, and administrators of such a person. In addition, the corporation may, to the extent authorized from time to time by the Board, grant indemnification rights to other employees or agents of the corporation or other persons serving the corporation and such rights may be equivalent to, or greater or less than, those indemnification rights of directors and officers set forth in this article or the Bylaws. Neither any amendment, repeal or modification of this article nor the adoption of any provision of this certificate of incorporation or the Bylaws of the corporation inconsistent with this article shall adversely affect any right or protection of a director or officer of the corporation existing at the time of such amendment, repeal, modification or adoption.

TENTH: From time to time any of the provisions of this Third Amended and Restated Certificate of Incorporation may be amended, altered, or repealed and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted in the manner and at the time prescribed by said laws and consistent with the terms of this Third Amended and Restated Certificate of Incorporation. All rights conferred upon stockholders of the corporation by this Third Amended and Restated Certificate of Incorporation are granted subject to the provisions of this Article TENTH.

EXHIBIT 3.2(a)

AMENDED AND RESTATED

BYLAWS

OF

TARGACEPT, INC.

Effective August 22, 2000

AMENDED AND RESTATED
BYLAWS
OF
TARGACEPT. INC.

ARTICLE I

Offices

Section 1. Principal and Registered Offices. The principal office of the Corporation shall be located at such place as the Board of Directors may specify from time to time. The registered office of the Corporation shall be located at such place as set forth in the Corporation's Certificate of Incorporation, as may be amended from time to time.

Section 2. Other Offices. The Corporation may have offices at such other places, either within or without the State of Delaware, as the Board of Directors may from time to time determine.

ARTICLE II

Meetings of Stockholders

Section 1. Place of Meeting. Meetings of stockholders shall be held at the principal office of the Corporation or at such other place or places, either within or without the State of Delaware, as shall either (i) be designated in the notice of the meeting or (ii) be agreed upon at or before the meeting by a majority of the stockholders entitled to vote at the meeting.

Section 2. Annual Meetings. The annual meeting shall be held on the date and at the time fixed, from time to time, by the directors.

Section 3. Substitute Annual Meeting. If the annual meeting is not held on the day designated by these bylaws, a substitute annual meeting may be called in accordance with Section 4 of this Article II. A meeting so called shall be designated and treated for all purposes as the annual meeting.

Section 4. Special Meetings. Special meetings of the stockholders for any purpose or purposes may be called at any time by the President or by order of the Board of Directors, and shall be called by the President or by order of the Board of Directors upon the written request of any member of the Board of Directors or the holder or holders of at least 10% of all the shares of capital stock entitled to vote at the meeting.

Section 5. Notice of Meetings. Written or printed notice, stating the time and place of the meeting and, in the case of a special meeting, briefly describing the purpose or purposes of the meeting, shall be given not less than ten nor more than sixty days before the date of the meeting, to each stockholder of record entitled to vote at the meeting, by delivering a written notice thereof to him personally, or by mailing such notice in a postage prepaid envelope directed to him at his last address as it appears on the stock records of the Corporation. It shall be the primary responsibility of the Secretary to give the notice, but notice may be given by or at the direction of the President or other person or persons calling the meeting. If a matter (other than the election of directors) is to be considered at an annual meeting on which a vote of stockholders is required by law or otherwise, notice shall be given as if the meeting were a special meeting. If any stockholder shall, in person or by attorney thereunto authorized, waive in writing notice of any meeting of the stockholders, whether prior to or after such meeting, notice thereof need not be given to him. Notice of any adjourned meeting of the stockholders shall not be required to be given, except where expressly required by law.

Section 6. Proxies. A stockholder may attend, represent, and vote his shares at any meeting in person, or be represented and have his shares voted for by a proxy which such stockholder has duly executed in writing. No proxy shall be valid after three years from the date of its execution unless a longer period is expressly provided in the proxy. Each proxy shall be revocable unless otherwise expressly provided therein or unless otherwise made irrevocable by law.

Section 7. Quorum. Except as otherwise provided by law, the holders of a majority of the shares entitled to vote, represented in person or by proxy, shall constitute a quorum at a meeting of stockholders. In the absence of a quorum, any officer entitled to preside at, or act as Secretary of, such meeting, shall have the power to adjourn the meeting from time to time until a quorum shall be constituted. At any such adjourned meeting at which a quorum shall be present any business may be transacted which might have been transacted at the meeting as originally called. When a quorum is once present to organize a meeting, the stockholders present may continue to do business at the meeting or at any adjournment thereof notwithstanding the withdrawal of enough stockholders to leave less than a quorum.

Section 8. Voting of Shares. Each outstanding share of voting capital stock of the Corporation shall be entitled to one vote on each matter submitted to a vote at a meeting of the stockholders, except as otherwise provided in the certificate of incorporation. The vote by the holders of a majority of the shares voted on any matter at a meeting of stockholders at which a quorum is present shall be the act of the stockholders on that matter, unless the vote of a greater number is required by law, by the certificate of incorporation, or by these bylaws of the Corporation. Voting on all matters shall be by voice vote or by a show of hands, unless the holders of a majority of the shares represented at the meeting shall demand a vote by written ballot on a particular matter.

Section 9. Action Without Meeting. Any action which the stockholders could take at a meeting may be taken without a meeting if a consent in writing, setting forth the action taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. The consent shall be filed with the Secretary of the Corporation as part of the corporate records. Such written consent shall have the same force and effect as a vote of stockholders, and may be stated as such in any articles, certificates or documents filed with the Secretary of State of Delaware, or any other state wherein the Corporation may do business.

Section 10. Meeting by Use of Conference Telephone. Subject to the requirement for notice of meetings and if permitted by applicable law, stockholders may participate in and hold a meeting of such stockholders by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in such a meeting shall constitute presence in person at such meeting, except where a person participates in the meeting for the express purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called or convened.

Section 11. Record Date. The Board of Directors may fix, in advance, a date as the record date for the purpose of determining stockholders entitled to notice of or to vote at any meeting of stockholders, or stockholders entitled to receive payment of any dividend or the allotment of any rights, or in order to make a determination of stockholders for any other proper purpose. Such date, in any case, shall be not more than sixty days, and in case of a meeting of stockholders not less ten days, prior to the date on which the particular action requiring such determination of stockholders is to be taken. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting unless the Board of Directors fixes a new record date for the adjourned meeting. If the stock transfer books are not closed, and no record date is fixed for the determination of stockholders, or of stockholders entitled to receive payment of a dividend, the date on which notice of the meeting is mailed, or the date on which the resolution of the Board of Directors declaring the dividend is adopted, as the case may be, shall be the record date for the determination of stockholders.

Section 12. List of Stockholders. It shall be the duty of the Secretary or other officer of the Corporation who shall have charge of the stock records, either directly or through a transfer agent appointed by the Board of Directors, to prepare and make, at least ten days before every stockholders meeting, a complete list of stockholders entitled to vote at such meeting arranged in alphabetical order. Such list shall be open to the examination of any stockholder at the principal office of the Corporation for said ten days before such meeting, and shall be produced and kept at the time and place of the meeting during the whole time thereof and shall be subject to the inspection of any stockholder who may be present. The stock records of the Corporation shall be the only evidence of who are the stockholders entitled to examine such list or the books of the Corporation or to vote in person or by proxy at such meeting.

ARTICLE III

Board of Directors

Section 1. General Powers. The business and affairs of the Corporation shall be managed by the Board of Directors except as otherwise provided by law, by the certificate of incorporation of the Corporation or by these bylaws.

Section 2. Number, Term and Qualification. The Board of Directors of the Corporation shall consist of one or more members. The initial number of directors shall be four, which number may be changed only by amendment of these bylaws, except as provided in Article VIII, Section 10.

Each director shall hold office until the next annual meeting of stockholders and until a successor is elected and qualified, or until his death, resignation or removal pursuant to these bylaws. Directors need not be residents of the State of Delaware or stockholders of the Corporation.

Section 3. Removal. Directors may be removed from office with or without cause by a vote of stockholders who hold a majority of the shares then entitled to vote at an election of directors. If any directors are so removed, new directors may be elected at the same meeting.

Section 4. Resignation. Any director of the Corporation may resign at any time by giving written notice to the President or the Secretary of the Corporation. The resignation of any director shall take effect upon receipt of notice thereof or at such later time as shall be specified therein. The acceptance of such resignation shall not be necessary to make it effective.

Section 5. Vacancies. Any vacancy in the Corporation's Board of Directors may be filled by a majority of the remaining directors. Any vacancy created by an increase in the authorized number of directors shall be filled only by election at an annual meeting or at a special meeting of stockholders called for that purpose. The stockholders may elect a director at any time to fill a vacancy not filled by the directors.

Section 6. Compensation. The directors shall not receive compensation for their services as such, except that the directors shall be entitled to be reimbursed for any reasonable expenses paid by them by reason of their attendance at any regular or special meeting of the Board of Directors or any of its committees, and by resolution of the Board of Directors, the directors may be paid fees, which may include but are not restricted to fees for attendance at meetings of the Board or any of its committees. Any director may serve the Corporation in any other capacity and receive compensation therefor.

ARTICLE IV

Meetings of Directors

Section 1. Annual and Regular Meetings. The annual meeting of the Board of Directors for the purpose of electing officers and transacting such other business as may be brought before the meeting shall be held immediately following the annual meeting of the stockholders. The Board of Directors may by resolution provide for the holding of regular meetings of the Board on specified dates and at specified times. If any date for which a regular meeting is scheduled shall be a legal holiday, the meeting shall be held on the next business day that is not a legal holiday or on a date designated in the notice of the meeting during either the same week in which the regularly scheduled date falls or during the preceding or following week. Regular meetings of the Board shall be held at the principal office of the Corporation or at such other place as may be designated in the notice of the meeting. Notice of annual meetings or any regular meetings held at the principal office of the Corporation and at the usual scheduled time shall not be required.

Section 2. Special Meetings. Special meetings of the Board of Directors may be called by or at the request of the Chairman of the Board, the President or any one director. Such meetings may be held at the time and place designated in the notice of the meeting.

Section 3. Notice of Meetings. The Secretary or other person or persons calling a meeting for which notice is required shall give notice by mail or telegram at least five days before the meeting, or by telephone at least twenty-four hours before the meeting. Oral notice may be substituted for such written notice if given not less than five days before the meeting. Notice of the time, place and purpose of such meeting may be waived in writing before or after such meeting, and shall be equivalent to the giving of the notice. Attendance by a director at a meeting for which notice is required shall constitute a waiver of notice, except where a director attends the meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called. Except as otherwise herein provided, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board of Directors need be specified in this notice of such meeting.

Section 4. Quorum. A majority of the directors in office shall constitute a quorum for the transaction of business at a meeting of the Board of Directors, but a smaller number may adjourn the meeting from time to time until a quorum shall be present. Any regular or special directors' meeting may be adjourned from time to time by those present, whether a quorum is present or not.

Section 5. Manner of Acting. Except as otherwise provided by law, these bylaws or the certificate of incorporation of the Corporation or otherwise, the act of the majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors.

Section 6. Action Without Meeting. Action taken by a majority of the directors or of a committee of directors without a meeting is nevertheless Board or committee action, if written consent to the action is signed by all the director or members of the committee, as the case may be, and filed with the minutes of the proceedings of the Board or committee, whether done before or after the action is taken. Such unanimous written consent shall have the same force and effect as a unanimous vote at a meeting, and may be stated as such in any articles, certificates or documents filed with the Secretary of State of Delaware, or any other state wherein the Corporation may do business.

Section 7. Meeting by Use of Conference Telephone. Any one or more directors or members of a committee may participate in a meeting of the Board or any of its committees by means of a conference telephone or similar communications device which allows all persons participating in the meeting to hear each other, and such participation in a meeting shall be deemed presence in person at such meeting, except where a person participates in the meeting for the express purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called or convened.

ARTICLE V

Committees

Section 1. Designation of Committees. The Board of Directors may, by resolution passed by a majority of the whole Board of Directors, designate one or more committees, each committee to consist of one or more of the directors of the Corporation. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. Any such committee, to the extent provided in these bylaws or in the resolution of the Board of Directors establishing the same, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation. Such committees or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board of Directors.

Section 2. Executive Committee. There may be an Executive Committee of not more than three directors designated by resolution passed by a majority of the whole Board of Directors. Such committee may meet at stated times, or on notice to all by any of their own number. During intervals between meetings of the Board of Directors, the Executive Committee shall have and may exercise the powers of the Board of Directors in the management of the business and affairs of the Corporation, except that the Executive Committee shall not have authority to authorize or approve the following matters:

(a) The dissolution, merger or consolidation of the Corporation or the sale, lease or exchange of all or substantially all the property or assets of the Corporation.

(b) The designation of an Executive Committee or any other committee of directors having power to exercise any of the authority of the Board of Directors in the management of the Corporation or the filling of vacancies in the Board of Directors or in such committee.

(c) The fixing of compensation of the directors for serving on the Board or on such committee.

(d) The amendment or repeal of the bylaws, or the adoption of new bylaws.

(e) The amendment or repeal of any resolution of the Board of Directors which by its terms shall not be so amendable or repealable.

Vacancies in the membership of the Executive Committee shall be filled by a majority of the whole Board of Directors at a regular meeting or at a special meeting called for that purpose.

Section 3. Minutes. Each committee shall keep minutes of its proceedings and shall report thereon to the Board of Directors at or before the next meeting of the Board.

Section 4. Action Without Meeting; Telephonic Meeting. Action may be taken by each committee in the manner allowed by the Board of Directors pursuant to Sections 6 and 7 of Article IV.

ARTICLE VI

Officers

Section 1. Titles. The officers of the Corporation shall be elected by the Board of Directors and shall consist of a Chief Executive Officer, a President, a Secretary and a Treasurer. The Board of Directors may also elect a Chairman of the Board of Directors, one or more additional Vice Presidents, a Controller, one or more Assistant Secretaries, one or more Assistant Treasurers, one or more Assistant Controllers, and such other officers as it shall deem necessary. Except as otherwise provided in these bylaws, the additional officers shall have the authority and perform the duties as from time to time may be prescribed by the Board of Directors. Any two or more offices may be held by the same individual, but no officer may act in more than one capacity where action of two or more officers is required.

Section 2. Election and Term. The officers of the Corporation shall be elected by the Board of Directors at the regular meeting of the Board held each year immediately following the annual meeting of the stockholders. Each officer shall hold office until the next regular meeting at which officers are to be elected and until a successor is elected and qualifies or until his death, resignation, or removal pursuant to these bylaws.

Section 3. Removal. Any officer or agent elected or appointed by the Board of Directors may be removed by the Board whenever in its judgment the best interests of the Corporation will be served, but removal shall be without prejudice to any contract rights of the individual removed. Election or appointment of an officer or agent shall not of itself create contract rights.

Section 4. Vacancies. Vacancies among the officers may be created and filled by the Board of Directors.

Section 5. Compensation. The compensation and all other terms of employment of the officers shall be fixed by the disinterested members of the Board of Directors. No officer shall be prevented from receiving such compensation by reason of the fact that such officer is also a director of the Corporation.

Section 6. Chairman of the Board of Directors. The Chairman of the Board of Directors, if such officer is elected, shall preside at meetings of the Board of Directors and shall have such other authority and perform such other duties as the Board of Directors shall designate.

Section 7. President. The President shall be in general charge of the affairs of the Corporation in the ordinary course of its business, and shall preside at meetings of the stockholders. The President may perform such acts, not inconsistent with the applicable law or the provisions of these bylaws, as may be performed by the president of a corporation and may sign and execute all authorized notes, bonds, contracts and other obligations in the name of the Corporation. The President shall have such other powers and perform such other duties as the Board of Directors shall designate or as may be provided by applicable law or elsewhere in these bylaws.

Section 8. Chief Executive Officer. The Chief Executive Officer shall be in general charge of the external affairs of the Corporation in the ordinary course of its business and shall preside at meetings of the stockholders. The Chief Executive Officer may perform such acts, not inconsistent with the applicable law or the provisions of these bylaws, as may be performed by the president of a corporation and may sign and execute all authorized notes, bonds, contracts and other obligations in the name of the Corporation. The Chief Executive Officer shall have such other powers and perform such other duties as the Board of Directors shall designate or as may be provided by applicable law or elsewhere in these bylaws.

Section 9. Vice Presidents. The Vice Presidents, if such officers are elected, shall exercise the powers of the President during that officer's absence or inability to act. Any action taken by a Vice President in the performance of the duties of the President shall be presumptive evidence of the absence or inability to act of the President at the time the action was taken. The Vice Presidents shall have such other powers and perform such other duties as may be assigned by the Board of Directors.

Section 10. Treasurer. The Treasurer shall have custody of all funds and securities belonging to the Corporation and shall receive, deposit or disburse the same under the direction of the Board of Directors. The treasurer shall keep full and accurate accounts of the finances of the Corporation and shall cause a true statement of the assets and liabilities of the Corporation as of the close of each fiscal year and of the results of its operations and of changes in surplus, all in reasonable detail, to be made and filed at the principal office of the Corporation within four months after the end of the fiscal year. The statement shall be available for inspection by any stockholder for a period of ten years, and the Treasurer shall mail or otherwise deliver a copy of the latest statement to any stockholder upon written request. The Treasurer shall in general perform all duties incident to the office and such other duties as may be assigned from time to time by the President or by the Board of Directors.

Section 11. Assistant Treasurers. Each Assistant Treasurer shall have such powers and perform such duties as may be assigned by the Board of Directors, and the Assistant Treasurers shall exercise the powers of the Treasurer during that officer's absence or inability to act.

Section 12. Controller and Assistant Controllers. The Controller shall have charge of the accounting affairs of the Corporation and shall have such other powers and perform such other duties as the Board of Directors shall designate. Each Assistant Controller shall have such powers and perform such duties as may be assigned by the Board of Directors and the Assistant Controllers shall exercise the powers of the Controller during that officer's absence or inability to act.

Section 13. Secretary. The Secretary shall keep accurate records of the acts and proceedings of all meetings of stockholders and of the Board of Directors and shall give all notices required by law and by these bylaws. The Secretary shall have general charge of the corporate books and records and of the corporate seal and shall affix the corporate seal to any lawfully executed instrument requiring it. The Secretary shall have general charge of the stock transfer books of the Corporation and shall keep at the principal office of the Corporation a record of stockholders, showing the name and address of each stockholder and the number and class of the shares held by each. The Secretary shall sign such instruments as may require the signature of the Secretary, and in general shall perform the duties incident to the office of Secretary and such other duties as may be assigned from time to time by the President or by the Board of Directors.

Section 14. Assistant Secretaries. Each Assistant Secretary shall have such powers and perform such duties as may be assigned by the Board of Directors, and the Assistant Secretaries shall exercise the powers of the Secretary during that officer's absence or inability to act.

Section 15. Voting Upon Stocks. Unless otherwise ordered by the Board of Directors, the President shall have full power and authority on behalf of the Corporation to attend, act and vote at meetings of the stockholders of any Corporation in which this Corporation may hold stock, and at such meetings shall possess and may exercise any and all rights and powers incident to the ownership of such stock and which, as the owner, the Corporation might have possessed and exercised if present. The Board of Directors may by resolution from time to time confer such power and authority upon any other person or persons.

ARTICLE VII

Capital Stock

Section 1. Certificates. Certificates for shares of the capital stock of the Corporation shall be in such form not inconsistent with the certificate of incorporation of the Corporation as shall be approved by the Board of Directors. The certificates shall be consecutively numbered or otherwise identified. The name and address of the persons to whom they are issued, with the number of shares and date of issue, shall be entered on the stock transfer records of the Corporation. Each certificate shall be signed by the President or any Vice President and by the Secretary, Assistant Secretary, Treasurer or Assistant Treasurer; provided, that where a certificate is signed by a transfer agent or assistant transfer agent of the Corporation, the signatures of such officers of the Corporation upon the certificate may be by facsimile, engraved or printed. Each certificate shall be sealed with the seal of the Corporation or a facsimile thereof.

Section 2. Transfer of Shares. Transfer of shares shall be made on the stock transfer books of the Corporation only upon surrender of the certificate for the shares sought to be transferred by the record holder or by a duly authorized agent, transferee or legal representative. All certificates surrendered for transfer shall be cancelled before new certificates for the transferred shares shall be issued.

Section 3. Restrictions on Transfer of Shares. Shares of capital stock of the Corporation shall not be transferred except as provided under the terms of any agreements among the holders of such shares. Each stock certificate issued by the Corporation representing shares of its common or preferred stock shall bear an appropriate reference to the above-mentioned restriction.

Section 4. Transfer Agent and Registrar. The Board of Directors may appoint one or more transfer agents and one or more registrars of transfers and may require all stock certificates to be signed or countersigned by the transfer agent and registered by the registrar of transfers.

Section 5. Regulations. The Board of Directors shall have power and authority to make rules and regulations as it may deem expedient concerning the issue, transfer and registration of certificates for shares of capital stock of the Corporation.

Section 6. Lost Certificates. The Board of Directors may authorize the issuance of a new certificate in place of a certificate claimed to have been lost or destroyed, upon receipt of an affidavit from the person explaining the loss or destruction. When authorizing issuance of a new certificate, the Board may require the claimant to give the Corporation a bond in a sum as it may direct to indemnify the Corporation against loss from any claim with respect to the certificate claimed to have been lost or destroyed; or the Board may, by resolution reciting that the circumstances justify such action, authorize the issuance of the new certificate without requiring a bond.

ARTICLE VIII

General Provisions

Section 1. Dividends. The Board of Directors may from time to time declare, and the Corporation may pay, dividends out of its earned surplus on its outstanding shares in the manner and upon the terms and conditions provided by law.

Section 2. Seal. The seal of the Corporation shall have inscribed thereon the name of the Corporation and “Delaware” around the perimeter, and the words “Corporate Seal” in the center.

Section 3. Waiver of Notice. Whenever notice is required to be given to a stockholder, director or other person under the provisions of these bylaws, the certificate of incorporation of the Corporation or by applicable law, a waiver in writing signed by the person or persons entitled to the notice, whether before or after the time stated in the notice, shall be equivalent to giving the notice.

Section 4. Depositories and Checks. All funds of the Corporation shall be deposited in the name of the Corporation in such bank, banks, or other financial institutions as the Board of Directors may from time to time designate and shall be drawn out on checks, drafts or other orders signed on behalf of the Corporation by such person or persons as the Board of Directors may from time to time designate.

Section 5. Bond. The Board of Directors may by resolution require any or all officers, agents and employees of the Corporation to give bond to the Corporation, with sufficient sureties, conditioned on the faithful performance of the duties of their respective offices or positions, and to comply with such other conditions as may from time to time be required by the Board.

Section 6. Loans. No loans shall be contracted on behalf of the Corporation and no evidence of indebtedness shall be issued in its name unless authorized by a resolution of the Board of Directors. Such authority may be general or confined to specific instances.

Section 7. Taxable Year. The taxable year of the Corporation shall be the period ending on December 31 of each year or such other period as the Board of Directors shall from time to time determine.

Section 8. Indemnification of Directors and Officers.

(a) Right to Indemnification. Each person who was or is made a party to or is threatened to be made a party to or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (hereinafter a "proceeding"), by reason of the fact that he or she is or was a director, officer or employee of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans (hereinafter an "indemnitee"), whether the basis of such proceeding is alleged action in an official capacity as a director, officer, employee or agent, shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the Delaware General Corporation Law, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), against all expense, liability and loss (including attorneys' fees, judgments, finds, ERISA excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such indemnitee in connection therewith and such indemnification shall continue as to an indemnitee who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the indemnitee's heirs, executors and administrators; provided, however, that, except as provided in paragraph (b) hereof with respect to proceedings to enforce rights to indemnification, the Corporation shall indemnify any such indemnitee in connection with a proceeding (or part thereof) initiated by such indemnitee only if such proceeding (or part thereof) was authorized by the Board of Directors of the Corporation. The right to indemnification conferred in this Section shall be a contract right and shall include the right to be paid by the Corporation the expenses incurred in defending any such proceeding in advance of its final disposition (hereinafter an "advancement of expenses"); provided, however, that if the Delaware General Corporation Law requires, an advancement of expenses incurred by an indemnitee in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such indemnitee, including without limitation, service to an employee benefit plan) shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that such indemnitee is not entitled to be indemnified for such expenses under this Section or otherwise (hereinafter an "undertaking").

(b) Right of Indemnitee to Bring Suit. If a claim under paragraph (a) of this Section is not paid in full by the Corporation within sixty days after a written claim has been received by the Corporation, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be twenty days, the indemnitee may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim. If successful in whole or in part in any such suit or in a suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the indemnitee shall be entitled to be paid also the expense of prosecuting or defending such suit. In (i) any suit brought by the indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the indemnitee to enforce a right to an advancement of expenses) it shall be a defense that, and (ii) any suit by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking the Corporation shall be entitled to recover such expenses upon a final adjudication that, the indemnitee has not met the applicable standard of conduct set forth in the Delaware General Corporation Law. Neither the failure of the Corporation (including its Board of Directors, independent legal counsel or its stockholders) to have made a determination prior to the commencement of such suit that indemnification of the indemnitee is proper in the circumstances because the indemnitee has met the applicable standard of conduct set forth in the Delaware General Corporation Law, nor an actual determination by the Corporation (including its Board of Directors, independent legal counsel or its stockholders) that the indemnitee has not met such applicable standard of conduct, shall create a presumption that the indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the indemnitee, be a defense to such suit. In any suit brought by the indemnitee to enforce a right hereunder, or by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the indemnitee is not entitled to be indemnified or to such advancement of expenses under this Section or otherwise shall be on the Corporation.

(c) Non-Exclusivity of Rights. The rights to indemnification and to the advancement of expenses conferred in this Section shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, this certificate of incorporation, these bylaws, by agreement, by vote of stockholders or disinterested directors or otherwise.

(d) Insurance. The Corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss under the Delaware General Corporation Law.

(e) Indemnification of Agents of the Corporation. The Corporation may, to the extent authorized from time to time by the Board of Directors, grant rights to indemnification and to the advancement of expenses, to any agent of the Corporation to the fullest extent of the provisions of the Section with respect to the indemnification and advancement of expenses of directors, officers and employees of the Corporation.

Section 9. Amendments. Except as otherwise provided herein, these bylaws may be amended or repealed and new bylaws may be adopted by the affirmative vote of the holders of shares of the Corporation then issued and entitled to vote at any annual meeting or at any special meeting of stockholders called for the purpose of considering such action that constitute at least a majority of the aggregate voting power of the outstanding capital stock of the Corporation.

These bylaws may also be amended or repealed and new bylaws may be adopted by the Board of Directors acting pursuant to Article IV, but the stockholders of the Corporation may alter or repeal any bylaw whether adopted by the Board of Directors or otherwise.

Section 10. Stockholders Agreement. To the extent that the provisions of these Amended and Restated Bylaws are inconsistent with any stockholders agreement subsequently entered into by the holders of the Corporation's capital stock, the stockholders agreement shall control.

* * * * *

THIS IS TO CERTIFY that the above Amended and Restate Bylaws of Targacept, Inc. were duly adopted by the Board of Directors of the Corporation by action taken by unanimous written consent effective the 22nd day of August, 2000.

This 22nd day of August, 2000.

/s/ August Borschke

Secretary

[Corporate Seal]

TARGACEPT, INC.

a Delaware corporation

AMENDMENT TO AMENDED AND RESTATED BYLAWS

June 21, 2001

Article III, Section 2 of the ByLaws of the Corporation be and it hereby is, amended by striking out Article III, Section 2 in its entirety and by substituting the following as Section 2 of Article III:

"Section 2. Number, Term and Qualification. The Board of Directors of the Corporation shall consist of not less than one nor more than nine members as fixed from time to time by resolution adopted by the Board of Directors. Each director shall hold office until the next annual meeting of stockholders and until a successor is elected and qualified, or until his death, resignation or removal pursuant to these bylaws. Directors need not be residents of the State of Delaware or stockholders of the Corporation."

Exhibit 4.2(a)

THIRD AMENDED AND RESTATED
INVESTOR RIGHTS AGREEMENT

THIS THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT (this “**Agreement**”) dated as of May 12, 2004, is by and among TARGACEPT, INC., a Delaware corporation (the “**Company**”), and the undersigned holders (the “**Series C Investors**”) of the Company’s Series C Convertible Preferred Stock, $0.001 par value per share (the “**Series C Stock**”), the undersigned holder (the “**Series A Investor**”) of the Company’s Series A Convertible Preferred Stock, $0.001 par value per share (the “**Series A Stock**”), and the undersigned holders (the “**Series B Investors**” and, together with the Series C Investors and the Series A Investor, the “**Investors**”) of the Company’s Series B Convertible Preferred Stock, $0.001 par value per share (the “**Series B Stock**” and, together with the Series C Stock and Series A Stock, the “**Preferred Stock**”).

W I T N E S S E T H:

WHEREAS, the Company and the Investors are parties to the Second Amended and Restated Investor Rights Agreement dated November 26, 2002 (the “**Current Agreement**”), which amended, restated and superseded the Amended and Restated Investor Rights Agreement dated July 16, 2001 (the “**Original Agreement**”); and

WHEREAS, the Company is contemplating a registered offering of Common Stock to the general public that is to be (i) approved by a majority of the members of the Board of Directors of the Company (the “**Board**”), with such majority to include (A) two directors who shall have been designated by either the Series A Investor or the Series B Investors (including any director designated by a specific Series B Investor or by a group of Series B Investors), and (B) one director designated by the Series C Investors (including any director designated by a specific Series C Investor or by a group of Series C Investors), and (ii) effected pursuant to a registration statement filed with, and declared effective by, the Commission under the Act (the “**Initial Public Offering**”); and

WHEREAS, effective as of the date of, and conditional on, consummation of the Initial Public Offering (the “**Effective Date**”), the Company and the Investors wish to amend and fully restate the Current Agreement in its entirety as set forth herein;

NOW, THEREFORE, in consideration of the premises and the mutual terms and provisions hereof, the parties hereto hereby agree as follows:

1. Definitions. For purposes of this Agreement, the following terms shall have the following respective meanings:

(a) “**Act**” shall mean the Securities Act of 1933, as amended, or any similar federal statute enacted hereafter, and the rules and regulations of the Commission thereunder, all as shall be in effect from time to time.

(b) “**Commission**” shall mean the Securities and Exchange Commission or any other federal agency that administers the Act.

(c) “**Common Stock**” shall mean the Company’s common stock, $0.001 par value per share.

(d) “**Eligibility Date**” shall mean 180 days following the Effective Date.

(e) “**Holder**” shall mean an Investor that holds Registrable Securities or any transferee of an Investor that holds Registrable Securities to which registration rights hereunder have been transferred pursuant to Section 2.12.

(f) The terms “**register**,” “**registered**” and “**registration**” refer to a registration effected by preparing and filing a registration statement in compliance with the Act and the declaration or ordering of effectiveness of such registration statement by the Commission.

(g) “**Registrable Securities**” shall mean Series A Registrable Securities, Series B Registrable Securities and Series C Registrable Securities, collectively.

(h) “**Series A Registrable Securities**” shall mean (i) shares of Common Stock issued or issuable upon conversion of the Series A Stock, (ii) shares of Common Stock issued or issuable upon exercise of the warrant issued by the Company as of August 22, 2000 to R.J. Reynolds Tobacco Company, a New Jersey corporation (“**RJRT**”), and subsequently transferred to R.J. Reynolds Tobacco Holdings, Inc., to purchase up to 1,612,903 shares of Common Stock (the “**Special Warrant**”), and (iii) shares of Common Stock issued upon any subdivision, combination or reclassification of the foregoing or issued as a stock dividend or other distribution with respect to the foregoing; provided, that Series A Registrable Securities shall cease to be Series A Registrable Securities if (A) a registration statement with respect to the sale thereof shall have been filed and declared effective under the Act, (B) they are sold pursuant to Rule 144 under the Act (or any successor provision) or become saleable pursuant to Rule 144(k) under the Act (or any successor provision), (C) with respect to any Holder’s Series A Registrable Securities, all of such Holder’s Series A Registrable Securities become saleable under Rule 144 without impact from the volume limitations of Rule 144(e) (or any successor provision), or (D) they are sold in a private transaction in which a Holder’s rights hereunder are not validly transferred.

(i) “**Series B Registrable Securities**” shall mean (i) shares of Common Stock issued or issuable upon conversion of the Series B Stock, and (ii) shares of Common Stock issued upon any subdivision, combination or reclassification of the foregoing or issued as a stock dividend or other distribution with respect to the foregoing; provided, that Series B Registrable Securities shall cease to be Series B Registrable Securities if (A) a registration statement with respect to the sale thereof shall have been filed and declared effective under the Act, (B) they are sold pursuant to Rule 144 under the Act (or any successor provision) or become saleable pursuant to Rule 144(k) under the Act (or any successor provision), (C) with respect to any Holder’s Series B Registrable Securities, all of such Holder’s Series B Registrable Securities become saleable under Rule 144 without impact from the volume limitations of Rule 144(e) (or any successor provision), or (D) they are sold in a private transaction in which a Holder’s rights hereunder are not validly transferred.

(j) “**Series C Registrable Securities**” shall mean (i) shares of Common Stock issued or issuable upon conversion of the Series C Stock, and (ii) shares of Common Stock issued upon any subdivision, combination or reclassification of the foregoing or issued as a stock dividend or other distribution with respect to the foregoing; provided, that Series C Registrable Securities shall cease to be Series C Registrable Securities if (A) a registration statement with respect to the sale thereof shall have been filed and declared effective under the Act, (B) they are sold pursuant to Rule 144 under the Act (or any successor provision) or become saleable pursuant to Rule 144(k) under the Act (or any successor provision), (C) with respect to any Holder’s Series C Registrable Securities, all of such Holder’s Series C Registrable Securities become saleable under Rule 144 without impact from the volume limitations of Rule 144(e) (or any successor provision), or (D) they are sold in a private transaction in which a Holder’s rights hereunder are not validly transferred.

(k) “**1934 Act**” shall mean the Securities Exchange Act of 1934, as amended, or any similar federal statute enacted hereafter, and the rules and regulations of the Commission thereunder, all as shall be in effect from time to time.

2. Registration Rights.

2.1 Demand Registration.

(a) Subject to the other provisions of this Section 2.1, Section 2.8 and Section 2.9, if, at any time or from time to time following the Eligibility Date (but in no event within three months after the effective date of any registration of the Company’s securities, other than registrations on Form S-4, Form S-8 or comparable or successor forms and other than registrations for the account of selling stockholders on Form S-3 or a comparable or successor form), the Company shall receive a written request (specifying that it is being made pursuant to this Section 2.1) from (i) Holders of at least a majority of the Series A Registrable Securities and Series B Registrable Securities, considered together, or (ii) Holders of Series C Registrable Securities that the Company file a registration statement under the Act covering the registration for offer and sale of at least thirty percent (30%) of, in the case of clause (i) above, all Series A Registrable Securities and Series B Registrable Securities, considered together, and at least thirty percent (30%) of, in the case of clause (ii) above, all Series C Registrable Securities, then the Company shall, within ten (10) business days notify in writing all other Holders of such request. Within twenty (20) calendar days after such notice has been sent by the Company, any other Holder of Series A Registrable Securities or Series B Registrable Securities, in the case of clause (i) above, and any other Holder of Series C Registrable Securities, in the case of clause (ii) above, may give written notice to the Company of its intent to include its Registrable Securities in the registration, which notice shall specify the number of Registrable Securities to be included. As soon as practicable after the expiration of such 20-day period, the Company shall use its best efforts to cause all Registrable Securities that Holders have requested be registered to be registered under the Act. The Holders may, if they so desire, individually or collectively condition their request or participation on price or other market terms being available at the time of registration.

(b) Notwithstanding the provisions of Section 2.1(a) and Section 2.3, if the Board, in its good faith judgment, determines by written resolution that any registration of Registrable Securities should not be made or continued because it would materially and detrimentally interfere with any material financing, acquisition, corporate reorganization or merger or other similar transaction involving the Company or any of its subsidiaries or any registration that the Company has already taken definite and substantial steps toward effecting, or would otherwise be materially detrimental to the stockholders of the Company (a "**Valid Business Reason**"), the Company may postpone filing a registration statement request under Section 2.1(a) or 2.3 until such Valid Business Reason no longer exists, but in no event for more than 90 days or more than once in any twelve-month period, and, in the event a registration statement has been filed relating to a registration request under Section 2.1(a) or Section 2.3, if the Valid Business Reason has not resulted from actions taken by the Company, the Company may cause such registration statement to be withdrawn and its effectiveness terminated or may postpone amending or supplementing such registration statement; and the Company shall give written notice of its determination to postpone or withdraw a registration statement and of the fact that the Valid Business Reason for such postponement or withdrawal no longer exists, in each case, promptly after the occurrence thereof.

(c) Each Holder of Registrable Securities agrees that, upon receipt of any notice from the Company that the Company has determined to withdraw any registration statement pursuant to Section 2.1(b), such Holder will discontinue its disposition of Registrable Securities pursuant to such registration statement and, if so directed by the Company, will deliver to the Company (at the Company's expense) all copies, other than permanent file copies, then in such Holder's possession of the prospectus covering such Registrable Securities that was in effect at the time of receipt of such notice. If the Company shall have withdrawn or prematurely terminated a registration statement filed under Section 2.1(a) or Section 2.3, the Company shall not be considered to have effected an effective registration for the purposes of this Agreement until the Company shall have filed a new registration statement covering the Registrable Securities covered by the withdrawn registration statement and such registration statement shall have been declared effective and shall not have been withdrawn. If the Company shall give any notice of withdrawal or postponement of a registration statement, the Company shall, at such time as the Valid Business Reason that caused such withdrawal or postponement no longer exists (but in no event later than 90 days after the date of the postponement), use its best efforts to effect the registration under the Securities Act of the Registrable Securities covered by the withdrawn or postponed registration statement in accordance with this Section 2.1(c) (unless the Holders making the registration request shall have withdrawn such request, in which case the Company shall not be considered to have effected an effective registration for the purposes of this Agreement).

2.2 Piggyback Registration.

(a) Subject to Section 2.8, if at any time after the Effective Date the Company proposes to register any of its securities under the Act, either for its own account or for the account of others, in connection with the public offering of such securities solely for cash, on a registration form that would also permit the registration of Registrable Securities, the Company shall, each such time, promptly give each Holder written notice of such proposal. Upon the written request of any Holder given within 20 days after receipt of such notice from the Company, the Company shall use its best efforts to cause to be included in such registration under the Act all the Registrable Securities that each such Holder has requested be registered.

(b) The Holders' rights to registration under this Section 2.2 are in addition to, and not in lieu of, their rights to registration under Sections 2.1 and 2.3.

2.3 Registration on Form S-3.

(a) Subject to Section 2.1(b) and Section 2.8, if at any time or from time to time after the Company has become eligible to register securities on Form S-3 (or any successor form), and while the Company is so eligible, Holders request in writing (specifying that such request is being made pursuant to this Section 2.3) that the Company file under the Act a registration statement on Form S-3 (or any successor form) for a public offering from which the total gross proceeds reasonably expected to be received by the requesting Holders is at least $1,000,000, then the Company shall use its best efforts to cause such shares to be registered on Form S-3 (or any successor form).

(b) The Holders' rights to registration under this Section 2.3 are in addition to, and not in lieu of, their rights to registration under Sections 2.1 and 2.2.

2.4 Obligations of the Company. Whenever required under this Agreement to use its best efforts to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) Prepare and file with the Commission a registration statement covering such Registrable Securities and use its best efforts to cause such registration statement to be declared effective by the Commission as expeditiously as possible and to keep such registration effective until the earlier of (i) the date when all Registrable Securities covered by the registration statement have been sold or (ii) 150 days from the effective date of the registration statement; provided, that before filing a registration statement or prospectus or any amendments or supplements thereto, the Company will furnish to each Holder of Registrable Securities covered by such registration statement and the underwriters, if any, copies of all such documents proposed to be filed (excluding exhibits, unless any such person shall specifically request exhibits), which documents will be subject to the review of such Holders and underwriters, and the Company will not file such registration statement or any amendment thereto or any prospectus or any supplement thereto (including any documents incorporated by reference therein) with the Commission if (i) the Holders of a majority of the Registrable Securities covered by such registration statement or the underwriters, if any, reasonably object to such filing or (ii) information in such registration statement or prospectus concerning a particular selling Holder has changed and such Holder or the underwriters, if any, reasonably objects;

(b) Prepare and file with the Commission such amendments and post-effective amendments to such registration statement as may be necessary to keep such registration statement effective during the period referred to in Section 2.4(a) and to comply with the provisions of the Act with respect to the disposition of all securities covered by such registration statement; and cause the prospectus to be supplemented by any required prospectus supplement and to file such supplement with the Commission pursuant to Rule 424 under the Act;

(c) Furnish to the selling Holders such numbers of copies of such registration statement, each amendment thereto, the prospectus included in such registration statement (including each preliminary prospectus), each supplement thereto and such other documents as they may reasonably request in order to facilitate the disposition of Registrable Securities owned by them;

(d) Use its best efforts to register and qualify the Registrable Securities under such other securities laws of such jurisdictions as shall be reasonably requested by any selling Holder and do any and all other acts and things which may be reasonably necessary or advisable to enable such selling Holder to consummate the disposition of the Registrable Securities owned by such Holder in such jurisdictions; provided, that the Company shall not be required in connection therewith or as a condition thereto to qualify to transact business or to file a general consent to service of process in any such states or jurisdictions and that, notwithstanding any provision of this Agreement to the contrary, to the extent that any jurisdiction in which the Registrable Securities are to be qualified requires that expenses incurred in connection with the qualification of the Registrable Securities in that jurisdiction be borne by selling shareholders, then such expenses shall be payable by the selling Holders pro rata;

(e) Promptly notify each selling Holder of such Registrable Securities at any time when a prospectus relating thereto is required to be delivered under the Act of the happening of any event which results in the prospectus included in such registration statement containing an untrue statement of a material fact or omitting a fact necessary to make the statements therein not misleading; and, at the request of any such Holder, the Company will prepare a supplement or amendment to such prospectus so that, as thereafter delivered to the purchasers of such Registrable Securities, such prospectus will not contain an untrue statement of a material fact or omit to state any fact necessary to make the statements therein not misleading;

(f) Provide a transfer agent and registrar for all such Registrable Securities not later than the effective date of such registration statement;

(g) Enter into such customary agreements (including underwriting agreements in customary form for a primary offering) and take all such other actions as the Holders of a majority of the Registrable Securities being sold or the underwriters, if any, reasonably request in order to expedite or facilitate the disposition of such Registrable Securities (including, without limitation, effecting a stock split or a combination of shares);

(h) Make available for inspection by any selling Holder of Registrable Securities, any underwriter participating in any disposition pursuant to such registration statement and any attorney, accountant or other agent retained by any such selling Holder or underwriter, all financial and other records, pertinent corporate documents and properties of the Company, and cause the officers, directors, employees and independent accountants of the Company to supply all information reasonably requested by any such seller, underwriter, attorney, accountant or agent in connection with such registration statement;

(i) Promptly notify the Holders of Registrable Securities and the underwriters, if any, of the following events and (if requested by any such person) confirm such notification in writing: (1) the filing of the prospectus or any prospectus supplement and the registration statement and any amendment or post-effective amendment thereto and, with respect to the registration statement or any post-effective amendment thereto, the declaration of the effectiveness of such documents; (2) any requests by the Commission for amendments or supplements to the registration statement or the prospectus or for additional information; (3) the issuance or threat of issuance by the Commission of any stop order suspending the effectiveness of the registration statement or the initiation of any proceedings for that purpose; and (4) the receipt by the Company of any notification with respect to the suspension of the qualification of the Registrable Securities for sale in any jurisdiction or the initiation or threat of initiation of any proceeding for such purpose;

(j) Use its best efforts to prevent the entry of any order suspending the effectiveness of the registration statement and to obtain the withdrawal of any such order, if entered, as expeditiously as possible;

(k) If reasonably requested by any underwriter or a selling Holder of Registrable Securities in connection with any underwritten offering, promptly incorporate in a prospectus supplement or post-effective amendment such information as the underwriters and the Holders of a majority of the Registrable Securities covered by such registration statement reasonably request be included therein relating to the sale of the Registrable Securities, including, without limitation, information with respect to the number of Registrable Securities being sold to such underwriters, the purchase price being paid therefor by such underwriters and any other terms of the underwritten offering of the Registrable Securities to be sold pursuant thereto, and make all required filings of such prospectus supplement or post-effective amendment promptly after being notified of the matters to be incorporated in such prospectus supplement or post-effective amendment;

(l) Prior to the filing of any document which is to be incorporated by reference into the registration statement or the prospectus (after the initial filing of the registration statement with the Commission), (i) promptly provide copies of such document to counsel for the selling Holders of the Registrable Securities and the counsel for the underwriters, if any; (ii) make representatives of the Company available for discussion of such document; and (iii) make such changes in such document prior to the filing thereof as counsel for such Holders or underwriters may reasonably request;

(m) Cooperate with the selling Holders of Registrable Securities and the underwriters, if any, to facilitate the timely preparation and delivery of certificates representing Registrable Securities to be sold that do not bear restrictive legends, and enable such Registrable Securities to be in such lots and registered in such names as the underwriters may request at least two business days prior to any delivery of Registrable Securities to the underwriters;

(n) Provide a CUSIP number for all Registrable Securities not later than the effective date of the registration statement; and

(o) Use its best efforts to obtain an opinion from the Company's counsel and a "cold comfort" letter from the Company's independent public accountants in customary form and covering such matters as are customarily covered by such opinions and "cold comfort" letters delivered to underwriters in underwritten public offerings, which opinion and letter shall be reasonably satisfactory to the underwriter, and to the Holders of a majority of the Registrable Securities participating in such offering, and furnish to each Holder participating in the offering and to each underwriter a copy of such opinion and letter addressed to such Holder or underwriter.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company (i) to take any action pursuant to this Agreement that the Holders shall furnish to the Company such information regarding them, the Registrable Securities held by them and the intended method of disposition of such Registrable Securities as the Company shall reasonably request and as shall be required in connection with the action to be taken by the Company; and (ii) to cause any registration pursuant to this Agreement to have become effective for the Holders to have exercised their rights of conversion or exercise, as the case may be, with respect to any Registrable Securities proposed to be registered.

2.6 Suspension of Disposition of Registrable Securities. Each selling Holder of Registrable Securities agrees that, upon receipt of any notice from the Company of the happening of any event of the kind described in Section 2.4(e), such Holder will forthwith discontinue disposition of Registrable Securities until such Holder receives a supplemented or amended prospectus as contemplated by Section 2.4(e) or is advised in writing by the Company (the "**Advice**") that the use of the prospectus may be resumed, and until such Holder has received copies of any additional or supplemental filings that are incorporated by reference in the prospectus, and, if so directed by the Company, such Holder will deliver to the Company (at the expense of the Company) all copies, other than permanent file copies then in such Holder's possession, of the prospectus covering such Registrable Securities current at the time of receipt of such notice. In the event the Company shall give any such notice, the time periods set forth in Section 2.4(a) shall be extended by the number of days during the period from and including the date of the giving of such notice pursuant to Section 2.4(e) to and including the date when each selling Holder of Registrable Securities shall have received the copies of the supplemented or amended prospectus contemplated by Section 2.4(e) or the Advice.

2.7 Expenses of Registration. All expenses incurred in connection with a registration pursuant to Sections 2.1, 2.2 and 2.3 (excluding underwriters' discounts and commissions, but including the reasonable fees and expenses of one legal counsel to the Holders, not to exceed $20,000 per registration), including, without limitation all registration and qualification fees, printing and accounting fees, fees and disbursements of counsel for the Company shall be borne by the Company; provided, however, that (i) the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 2.1 if the registration request is subsequently withdrawn at the request of the Holders, unless (A) the Holders agree to forfeit their right to one demand registration pursuant to Section 2.1 or (B) there has been a withdrawal or postponement of such registration by the Company due to a Valid Business Reason, and (ii) if there has been a material adverse change in the business or prospects of the Company after the date of any demand for registration made pursuant to Section 2.1, which change has caused such request to be withdrawn, then the Holders shall not be required to pay any of the expenses for such registration and shall retain all of their rights under Section 2.1.

2.8 Underwriting Requirements; Priorities.

(a) The Holders of a majority of the Registrable Securities included in any registration under Sections 2.1 or 2.3 will have the right to select the underwriter(s) and manager(s) to administer the offering, if any, subject to the approval of the Company, which will not be unreasonably withheld. The Company will not include in any registration under Sections 2.1 or 2.3 any securities that are not Registrable Securities without the written consent of the Holders of a majority of the Registrable Securities requesting such registration. If the managing underwriters in an underwritten public offering advise the Company in writing that, in their opinion, the number of Registrable Securities and other securities requested to be included exceeds the number of Registrable Securities and other securities that can be sold in an orderly manner and at the desired price in such offering, the Company will include in such registration (i) first, prior to the inclusion of any securities that are not Registrable Securities, the number of Registrable Securities requested to be included that, in the opinion of such managing underwriters, can be sold, pro rata among the respective Holders on the basis of the amount of Registrable Securities requested to be included in such registration, (ii) second, all securities proposed to be included by the Company, and (iii) third, all other securities permitted to be included in such registration.

(b) The Company will have the right to select the underwriter(s) and manager(s) to administer any offering to which Section 2.2 is applicable. If in any registration under Section 2.2 the managing underwriters advise the Company in writing that, in their opinion, the number of securities requested to be included in such registration exceeds the number which can be sold in an orderly manner and at the desired price in such offering, the Company will include in such registration (i) first, all securities proposed to be included by the Company, (ii) second, the Registrable Securities requested to be included in such registration by the Holders, pro rata among the Holders thereof on the basis of the number of Registrable Securities requested to be included in such registration, and (iii) third, all other securities permitted to be included in such registration.

(c) No person may participate in any underwritten registration hereunder unless such person (i) agrees to sell such person's securities on the basis provided in any underwriting arrangements containing reasonable and customary terms for transactions of that type or as otherwise approved by the Holders of a majority of the Registrable Securities being included in such underwritten registration; and (ii) completes and executes all questionnaires, powers of attorney, customary indemnities, underwriting agreements and other documents required under the term of such underwriting arrangements.

2.9 Termination of the Company's Obligations under Section 2.1. The Company shall have no further obligations pursuant to Section 2.1 with respect to any request or requests made by any Holder after the Company has effected one (1) registration under Section 2.1(a)(i) and one (1) registration under Section 2.1(a)(ii) with respect to which the Company has complied with its obligations hereunder or under which all Registrable Securities covered thereby have been sold pursuant thereto.

2.10 Reports under the 1934 Act. With a view to making available to the Holders the benefits of Rule 144 promulgated under the Act and any other rule or regulation of the Commission that may at any time permit a Holder to sell securities of the Company to the public without registration, the Company agrees to use its best efforts to:

(a) make and keep public information available, as those terms are understood and defined in Rule 144, at all times subsequent to ninety (90) days after the effective date of the first registration statement covering an underwritten public offering filed under the Act by the Company;

(b) file with the Commission in a timely manner all reports and other documents required of the Company under the Act and the 1934 Act at any time after it is subject to such registration requirements; and

(c) furnish to any Holder, so long as such Holder owns any of the Registrable Securities, forthwith upon request a written statement by the Company that it has complied with the reporting requirements of Rule 144 (at any time after ninety (90) days after the effective date of said first registration statement filed by the Company), the Act and the 1934 Act (at any time after it has become subject to such reporting requirements), a copy of the most recent annual or quarterly report of the Company, and such other reports and documents so filed by the Company as may be reasonably requested by any Holder in availing any Holder of any rule or regulation of the Commission permitting the selling of any such securities without registration.

2.11 Certain Limitations in Connection with Future Grants of Registration Rights. From and after the Effective Date, the Company shall not enter into any agreement with any holder or prospective holder of any securities of the Company providing for the granting to such holder of registration rights unless such agreement includes a provision that, in the case of a registration involving an underwritten offering under Section 2.1, protects the Holders in the manner contemplated by Section 2.8 if marketing factors require a limitation on the number of securities to be included in the underwritten offering.

2.12 Transfer of Registration Rights. The registration rights granted hereunder may be transferred in whole or in part in connection with the transfer of Registrable Securities at any time as long as the Company receives prior written notice from the Holder at the time of such transfer stating the name and address of the transferee and identifying the Registrable Securities with respect to which the rights hereunder are being assigned.

2.13 Indemnification. In the event any Registrable Securities are included in a registration statement under this Agreement:

(a) To the full extent permitted by law, the Company will, and hereby does indemnify and hold harmless each Holder requesting or joining in a registration, each director, officer, partner, employee, or agent for such Holder, any underwriter (as defined in the Act) for such Holder, and each person, if any, who controls such Holder or underwriter within the meaning of Section 15 of the Act, against any losses, claims, damages or liabilities, joint or several, to which they may become subject under the Act and applicable state securities laws insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based on any untrue or alleged untrue statement of any material fact contained in such registration statement, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading or arise out of any violation by the Company of the Act, any rule or regulation promulgated under the Act or state securities laws applicable to the Company and relating to action or inaction required of the Company in connection with any such registration; and will reimburse each such person or entity for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability, or action; provided, however, that the indemnity agreement contained in this Section 2.13(a) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability, or action if such settlement is effected without the consent of the Company (which consent shall not be unreasonably withheld) nor shall the Company be liable in any such case for any such loss, claim, damage, liability or action to the extent that it arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in connection with such registration statement, preliminary prospectus, final prospectus, or amendment or supplement thereto, in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by or on behalf of any such Holder, underwriter or controlling person.

(b) To the full extent permitted by law, each Holder requesting or joining in a registration under this Agreement will indemnify and hold harmless the Company, each of its directors and officers, each person who controls the Company within the meaning of the Act, and any underwriter (within the meaning of the Act) for the Company, each other selling Holder and each person, if any, who controls such other selling Holder within the meaning of Section 15 of the Act against any losses, claims, damages or liabilities, joint or several, to which the Company or any such director, officer, controlling person or underwriter may become subject, under the Act and applicable state securities laws, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of any material fact contained in such registration statement, including any preliminary prospectus or final prospectus contained therein or any amendment or supplement thereto, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances under which they were made, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in such registration statement, preliminary or final prospectus, or amendments or supplements thereto, in reliance upon and in conformity with written information furnished by such Holder expressly for use in connection with such registration; and each such Holder will reimburse any legal or other expenses reasonably incurred by the Company or any such director, officer, controlling person or underwriter in connection with investigating or defending any such loss, claim, damage, liability or action; provided, however, that the indemnity agreement contained in this Section 2.13(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of such Holder (which consent shall not be unreasonably withheld). Notwithstanding the foregoing, in no event shall the liability of any selling Holder of Registrable Securities hereunder be greater than the dollar amount of the proceeds received by such Holder upon the sale of the Registrable Securities giving rise to such indemnification obligation.

(c) Promptly after receipt by an indemnified party under this Section 2.13 of notice of the commencement of any action or knowledge of a claim that would, if asserted, give rise to a claim for indemnity hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.13, notify the indemnifying party in writing of the commencement thereof or knowledge thereof and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties. The failure to notify an indemnifying party promptly of the commencement of any such action or of the knowledge of any such claim, if prejudicial to its ability to defend such action, shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.13, but the omission so to notify the indemnifying party will not relieve him of any liability that he may have to any indemnified party otherwise than under this Section.

2.14 Contribution by Indemnifying Party.

(a) If the indemnification provided for in Section 2.13 is unavailable to an indemnified party hereunder in respect of any losses, claims, damages, liabilities or expenses referred to therein, then each indemnifying party, in lieu of indemnifying such indemnified party, shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages, liabilities or expenses in such proportion as is appropriate to reflect the relative fault of the indemnifying party and indemnified parties in connection with the actions which resulted in such losses, claims, damages, liabilities or expenses, as well as any other relevant equitable considerations. The relative fault of each indemnifying party and indemnified parties shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact, has been made by, or relates to information supplied by, such indemnifying party or parties or indemnified parties, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action. The amount paid or payable by a party as a result of the losses, claims, damages, liabilities and expenses referred to above shall be deemed to include any reasonable legal or other fees or expenses incurred by such party in connection with any investigation or proceeding.

(b) The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 2.14 were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to in Section 2.14(a). No Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation.

3. Amendments and Waivers. Except as provided below or as otherwise provided herein, the provisions of this Agreement may not be amended, waived, modified or supplemented without the prior written consent of the Company and the holders of (i) a majority of the outstanding Series A Registrable Securities and Series B Registrable Securities and (ii) at least 65% of the outstanding Series C Registrable Securities; provided, however, that if any amendment, waiver, modification or supplement (but not any termination) would (a) treat the Series A Investors different from the manner in which it would treat the Series B Investors, then such amendment, waiver, modification or supplement shall not be effective against the Series A Investor without the written consent of the holders of a majority of the outstanding Series A Registrable Securities and shall not be effective against the Series B Investors without the written consent of the holders of a majority of the outstanding Series B Registrable Securities, or (b) treat any Series A Investor, Series B Investor or Series C Investor, as the case may be, in a manner different from the manner in which it would treat all other Series A Investors, Series B Investors or Series C Investors, as the case may be, such amendment, waiver, modification or supplement shall not be effective against the differently treated Investor without the written consent of such Investor. Any amendment, waiver, modification or supplement effected in accordance with this Section 3 shall be binding upon the Company and, except as provided in the immediately preceding sentence, each Investor, whether or not such Investor executed such amendment, waiver, modification or supplement.

4. Notices. All notices and other communications required or permitted hereunder shall be in writing and shall be mailed by certified mail, postage prepaid, or otherwise delivered by hand or by nationally-recognized overnight delivery service to the address set forth beneath each party’s counterpart signature hereto; provided that, notwithstanding the foregoing, notices delivered in any other manner (including, without limitation, by email) shall be effective with respect to any particular Investor if and when actually received by that Investor. All such notices and communications required hereunder shall be deemed to have been received; at the time delivered by hand, if personally delivered; three business days after being deposited in the mail, postage prepaid, if mailed; and on the second business day after deposit with a nationally-recognized overnight courier.

5. Counterparts. This Agreement may be executed in any number of counterparts and by the parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

6. Headings. The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof.

7. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the principles of conflicts of laws.

8. Severability. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable, the validity, legality and enforceability of any such provision in every other respect and of the remaining provisions contained herein shall not be affected or impaired thereby.

9. Effectiveness; Entire Agreement. Unless and until the Effective Date occurs, this Agreement shall not become effective or affect the Current Agreement, and the Current Agreement shall continue in full force and effect. Upon the occurrence of the Effective Date, this Agreement will automatically amend, restate and supersede the Current Agreement in its entirety. Notwithstanding anything to the contrary contained in this Agreement, if the Effective Date does not occur on or before December 31, 2004, this Agreement shall not become effective and be of no force or effect. As of the Effective Date, this Agreement is intended by the parties as a final expression of their agreement and to be a complete and exclusive statement of the agreement and understanding of the parties hereto in respect of the subject matter contained herein; provided that any waiver of convertible preferred stock conversion price adjustment previously made by a Series A Investor or Series B Investor pursuant to Section 4.7 of the Original Agreement shall survive such amendment and restatement and continue in full force and effect. There are no restrictions, promises, warranties or undertakings, other than those set forth or referred to in the Current Agreement and herein, with respect to the registration rights granted by the Company.

10. Parties Benefited. Nothing in this Agreement, express or implied, is intended to confer upon any third party any rights, remedies, obligations or liabilities.

IN WITNESS WHEREOF, the parties have executed this Third Amended and Restated Investor Rights Agreement as of the date first above written.

TARGACEPT, INC.
200 East First Street, Suite 300
Winston-Salem, North Carolina 27101-4165

By: /s/ J. DONALD DEBETHIZY

Name: J. Donald deBethizy
Title: President and CEO

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

NOMURA INTERNATIONAL PLC Nomura House
1 St. Martin's-le-Grand
London EC1A 4NP
England

By: /s/ DENISE POLLARD-KNIGHT
Name: Denise Pollard-Knight
Title: Head of Phase 4 Venture

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

NEW ENTERPRISE ASSOCIATES 10, LIMITED PARTNERSHIP
1119 St. Paul Street
Baltimore, Maryland 21202

By: NEA Partners 10, Limited Partnership,
General Partner

By: /s/ EUGENE A. TRAINOR, III

Name: Eugene A. Trainor, III
Title: Administrative General Partner

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

NEA VENTURES, 2002 LIMITED PARTNERSHIP
1119 St. Paul Street
Baltimore, Maryland 21202

By: /s/ PAMELA J. CLARK
Name: Pamela J. Clark
Title: General Partner

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

CDIB BIOSCIENCE VENTURES I, INC.
30th Floor, 99 Tun Hwa South Road
Section 2, Taipei 106
Taiwan

By: /s/ BENNY T. HU
Name: Benny T. Hu
Title: Chairman

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

EASTON HUNT CAPITAL PARTNERS, L.P.
641 Lexington Avenue, 21st Floor
New York, New York 10022

By: EHC GP, LP, its General Partner,

By: EHC Inc., its General Partner

By: /s/ JOHN H. FRIEDMAN

Name: John H. Friedman
Title: President

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

R.J. REYNOLDS TOBACCO HOLDINGS, INC.
401 North Main St.
Winston-Salem, NC 27102

By: /s/ CHARLES A. BLIXT
Name: Charles A. Blixt
Title: EVP & General Counsel

Acknowledged and agreed to:

R.J. REYNOLDS TOBACCO COMPANY

By: /s/ CHARLES A. BLIXT
Name: Charles A. Blixt
Title: EVP & General Counsel

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

EUCLIDSR PARTNERS, L.P.
Four Tower Bridge
200 Barr Harbor Drive, Suite 250
West Conshohocken, PA 19428-2977

By: EUCLIDSR ASSOCIATES, L.P. its general partner

By: /s/ ELAINE V. JONES
Name: Elaine V. Jones
Title: General Partner

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

EUCLIDSR BIOTECHNOLOGY
PARTNERS, L.P.
Four Tower Bridge
200 Barr Harbor Drive, Suite 250
West Conshohocken, PA 19428-2977

By: EUCLIDSR BIOTECHNOLOGY
ASSOCIATES, L.P., its general partner

By: /s/ ELAINE V. JONES
Name: Elaine V. Jones
Title: General Partner

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

BURRILL BIOTECHNOLOGY CAPITAL FUND, L.P.
One Embarcadero Center, Suite 2700
San Francisco, California 94111

By: Burrill & Company (Biotechnology GP, LLC,
its General Partner

By: /s/ G.S. BURRILL
Name: G.S. Burrill
Title:

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

Advent Private Equity Fund II ‘A’ Limited Partnership
Advent Private Equity Fund II ‘B’ Limited Partnership
Advent Private Equity Fund II ‘C’ Limited Partnership
Advent Private Equity Fund II ‘D’ Limited Partnership

25 Buckingham Gate, London SW1E 6LD

By: Advent Venture Partners, General Partner

By: /s/ PATRICK LEE

Name: Patrick Lee
Title: General Partner

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

FCPR CDC Innovation 2000, a venture capital fund represented by CDC IXIS Innovation, its management company ("Societe de gestion") with a share capital of EUR 762,000

Tour Maine Montparnasse
33 Avenue du Maine – B.P. 180
75755 Paris Cedex

By: 05/13/04 /s/ MR. STEPHANE BOUDON
Name: Mr. Stephane Boudon
Title: CEO

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

Academy Venture Fund, LLC
920 Main Campus Drive, Suite 400
Raleigh, North Carolina 27606

By: Academy Ventures, LLC, Manager

By: /s/ JOHN CIANNAMEA
Name: John Ciannamea
Title: Manager

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

Auriga Ventures, a venture capital fund represented by Auriga Partners, a French limited company with a share capital of Eur 456,250, having its registered office at 18 Avenue Matignon, 75008 PARIS (France) registered with the Paris Trade and Companies registry under number B 419 156 351

By: /s/ BERNARD DAUGERAS
Name: Bernard Daugeras
Title: Managing Partner

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

GENAVENT FUND
c/o Société Générale Asset Management
2, place de la Coupole,
92078 Paris – La Défense cedex
France Attn: Jean Grimaldi

By: Société Générale Asset Management,
S.A., its Manager

By: /s/ JEAN V. GRIMALDI
Name: Jean V. Grimaldi
Title: Head of Private Equity

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

FCPR SGAM BIOTECHNOLOGY FUND
Represented by SG Asset Management, its management company with a share capital of 292 800 000 euros, having its registered office at 2, place de la Coupole, 92078 Paris – La Défense cedex France, registered with the Nanterre Trade and Companies registry under the number B 308 396308

By: /s/ JEAN V. GRIMALDI
Name: Jean V. Grimaldi
Title: Head of Private Equity

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

FCPR SGAM BIOTECHNOLOGY FUND
Represented by SG Asset Management, its management company with a share capital of 292 800 000 euros, having its registered office at 2, place de la Coupole, 92078 Paris – La Défense cedex France, registered with the Nanterre Trade and Companies registry under the number B 308 396308

By: /s/ GREG BETTERTON
Name: Greg Betterton
Title: Manager

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

JAFCO G-9(A) Venture Capital Investment
Limited Partnership
Tekko Building, 1-8-2, Marunouchi, Chiyoda-Ku
Tokyo 100-005, Japan
By: JAFCO Co., Ltd.
Its General Partner

By: /s/ H. AGATA

Name: Hisaji Agata
Title: Managing Director

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

JAFCO G-9(B) Venture Capital Investment
Limited Partnership
Tekko Building, 1-8-2, Marunouchi, Chiyoda-Ku
Tokyo 100-005, Japan
By: JAFCO Co., Ltd.
Its General Partner

By: /s/ H. AGATA
Name: Hisaji Agata
Title: Managing Director

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

Cogene Biotech Ventures
Five Post Oak Park
4400 Post Oak Parkway, Suite 1400
Houston, Texas 77027

By: /s/ C. THOMAS CASKEY
Name: C. Thomas Caskey
Title: President/CEO

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

Rock Castle Ventures, L.P.
23822 W. Valencia Blvd., Ste 202
Valencia, CA 91355
By: Rock Castle Management LLC,
its General Partner

By: /s/ ERIC Y. SATO
Name: Eric Y. Sato
Title: General Partner

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

Oxford Bioscience Partners IV L.P.
By: OBP Management IV L.P., General Partner

By: /s/ ALAN G. WALTON
Name:
Title:

COUNTERPART SIGNATURE PAGE

TARGACEPT, INC.
THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the undersigned has executed this Third Amended and Restated Investor Rights Agreement under seal as of this 12th day of May 2004.

mRNA Fund II L.P.
By: OBP Management IV L.P., General Partner

By: /s/ ALAN G. WALTON
Name:
Title:

Amendment No. 1 to
Third Amended and Restated Investor Rights Agreement

THIS AMENDMENT NO. 1 to the Third Amended and Restated Investor Rights Agreement dated December 6, 2004 (this "**Amendment**") amends the Third Amended and Restated Investor Rights Agreement dated May 12, 2004 (the "**Future IRA**") by and among Targacept, Inc. (the "**Company**") and the holders of shares of the Company's Series C Convertible Preferred Stock, $0.001 par value per share ("**Series C Stock**"), Series B Convertible Preferred Stock, $0.001 par value per share ("**Series B Stock**"), or Series A Convertible Preferred Stock, $0.001 par value per share ("**Series A Stock**" and, together with the Series C Stock and Series B Stock, "**Preferred Stock**") party thereto. Capitalized terms used herein and not otherwise defined shall have the meanings ascribed to them in the Future IRA.

R E C I T A L S:

WHEREAS, the Future IRA was entered into in contemplation of an initial public offering of the Company's common stock in order to amend, effective as of the closing of such initial public offering, the Company's Second Amended and Restated Investor Rights Agreement dated November 26, 2002, as amended (the "**Current IRA**"), which is currently in effect; and

WHEREAS, by its terms, the Future IRA will not become effective or affect the Current IRA unless and until the prospective initial public offering is completed and will not become effective at all if such initial public offering is not completed on or before December 31, 2004 (the "**Trigger Date**"); and

WHEREAS, Section 3 of the Future IRA provides that the Future IRA may be amended only with the prior written consent of the Company and the holders of a majority of the outstanding Series A Registrable Securities and Series B Registrable Securities and at least 65% of the outstanding Series C Registrable Securities (collectively, the "**Required Investors**"); and

WHEREAS, the prospective initial public offering may not be completed on or before the Trigger Date, and the Company and the undersigned holders of Preferred Stock, constituting the Required Investors, desire to amend the Future IRA as provided herein to extend the Trigger Date;

NOW, THEREFORE, the undersigned parties agree as follows:

1. Section 2.1(a) of the Future IRA is hereby amended by deleting the first sentence in its entirety and replacing it with the following:

"Subject to the other provisions of this Section 2.1, Section 2.8 and Section 2.9, if, at any time or from time to time following the Eligibility Date (but in no event prior to (x) six months after the effective date of the first registration of the Company's securities on Form S-1 or (y) three months after the effective date of any other registration of the Company's securities, other than registrations on Form S-4, Form S-8 or comparable or successor forms and other than registrations for the account of selling stockholders on Form S-3 or a comparable or successor form), the Company shall receive a written request (specifying that it is being made pursuant to this Section 2.1) from (i) Holders of at least a majority of the Series A Registrable Securities and Series B Registrable Securities, considered together, or (ii) Holders of Series C Registrable Securities that the Company file a registration statement under the Act covering the registration for offer and sale of (A) in the case of clause (i) above, at least thirty percent (30%) of all Series A Registrable Securities and Series B Registrable Securities, considered together, or (B) in the case of clause (ii) above, at least (1) thirty percent (30%) of all Series C Registrable Securities or (2) a number of Series C Registrable Securities for which the total gross proceeds in a public offering reasonably expected to be received by the requesting Holders is at least $7,500,000, then the Company shall, within ten (10) business days notify in writing all other Holders of such request."

2. Section 9 of the Future IRA is hereby amended by replacing "December 31, 2004" therein with "June 30, 2005."

3. As expressly amended hereby, the Future IRA shall continue in full force and effect.

4. For the avoidance of doubt, as used in the Future IRA and the Current IRA, the term "Series C Stock" shall include, without limitation, shares of Series C Stock issued and sold pursuant to the Series C Convertible Preferred Stock Purchase Agreement entered into on or about the date hereof.

[signature page follows]

IN WITNESS WHEREOF, this Amendment No. 1 to the Third Amended and Restated IRA is executed as of the day and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
Name: J. Donald deBethizy
Title: President & CEO

R.J. REYNOLDS TOBACCO HOLDINGS, INC.

By: /s/ Charles A. Blixt
Name: Charles A. Blixt
Title: President

EUCLIDSR PARTNERS, L.P.

By: EuclidSr Associates, L.P., its general partner

By: /s/ Elaine V. Jones
Elaine V. Jones
General Partner

EUCLIDSR BIOTECHNOLOGY PARTNERS, L.P.

By: EuclidSr Biotechnology Associates, L.P., its general partner

By: /s/ Elaine V. Jones
Elaine V. Jones
General Partner

BURRILL BIOTECHNOLOGY CAPITAL FUND, L.P.

By: Burrill & Company (Biotechnology GP), LLC, its General Manager

By: /s/ G. S. Burrill
G. Steven Burrill
Managing Member

[signatures continue on following page]

GENAVENT FUND

By: Société Générale Asset Management, S.A.,
its Manager

By: /s/ Ferriere
Corinne Ferriere
Deputy Head of Private Equity

FCPR SGAM AI BIOTECHNOLOGY FUND
Represented by SGAM Alternative Investments, its management company with a share capital of 35 576 725 euros, having its registered office at 2, place de la Coupole, 92078 Paris – La Défense cedex France,
registered with the Nanterre Trade and Companies registry under the number B 410 704 571

By: /s/ Ferriere
Corinne Ferriere
Deputy Head of Private Equity

FCPR CDC INNOVATION 2000, a venture capital fund represented by CDC ENTREPRISES INNOVATION, its management company (“Societe de gestion”) with a share capital of EUR 762,000

By: /s/ T. Laugel
Name: T. Laugel
Title: Director d’investissement

ADVENT PRIVATE EQUITY FUND II,
‘A’ LIMITED PARTNERSHIP
ADVENT PRIVATE EQUITY FUND II,
‘B’ LIMITED PARTNERSHIP
ADVENT PRIVATE EQUITY FUND II,
‘C’ LIMITED PARTNERSHIP
ADVENT PRIVATE EQUITY FUND II,
‘D’ LIMITED PARTNERSHIP

By: Advent Venture Partner, General Partner

By: /s/ Patrick Lee
Name: Patrick Lee
Title: General Partner

[signatures continue on following page]

NOMURA PHASE4 VENTURES LIMITED AS MANAGER ON BEHALF OF INTERNATIONAL PLC AND NOMURA PHASE4 VENTURES LP

By: /s/ Denise Pollard-Knight
Name: Denise Pollard-Knight
Title: Head of Nomura Phase4 Ventures Ltd.

NEW ENTERPRISE ASSOCIATES 10, LIMITED PARTNERSHIP

By: NEA Partners 10, Limited Partnership, General Partner

By: /s/ E. A. Trainor
Name: Eugene A. Trainor, III
Administrative General Partner & Chief Operating Officer

NEA VENTURES, 2002 LIMITED PARTNERSHIP

By: /s/ Pamela J. Clark
Pamela J. Clark
General Partner

CDIB BIOSCIENCE VENTURES I, INC.

By: /s/ Benny T. Hu
Name: Benny T. Hu
Title: Chairman

JAFCO G-9(A) VENTURE CAPITAL INVESTMENT LIMITED PARTNERSHIP

By: JAFCO CO., LTD., its general partner

By: /s/ Tomio Kezuka
Name: Tomio Kezuka
Title: Executive Vice President

[signatures continue on following page]

JAFCO G-9(B) VENTURE CAPITAL
INVESTMENT LIMITED PARTNERSHIP

By: /s/ Tomio Kezuka
Name: Tomio Kezuka
Title: Executive Vice President

NEITHER THIS WARRANT NOR THE SECURITIES ISSUABLE UPON EXERCISE HEREOF HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY APPLICABLE STATE SECURITIES LAW AND NEITHER MAY BE SOLD OR OTHERWISE TRANSFERRED UNTIL (i) A REGISTRATION STATEMENT UNDER SUCH SECURITIES ACT AND SUCH APPLICABLE STATE SECURITIES LAWS SHALL HAVE BECOME EFFECTIVE WITH REGARD THERETO, OR (ii) THE COMPANY SHALL HAVE RECEIVED A WRITTEN OPINION OF COUNSEL ACCEPTABLE TO THE COMPANY THE EFFECT THAT REGISTRATION UNDER SUCH SECURITIES ACT AND SUCH APPLICABLE STATE SECURITIES LAWS IS NOT REQUIRED IN CONNECTION WITH SUCH PROPOSED TRANSFER.

TARGACEPT, INC.
WARRANT TO PURCHASE COMMON STOCK

August 22, 2000

FOR VALUE RECEIVED, R.J. REYNOLDS TOBACCO COMPANY, a New Jersey corporation (together with any subsequent holder or holders hereof, the “Holder”), is entitled to subscribe for and purchase from Targacept, Inc., a Delaware corporation (the “Company”), 1,612,903 shares (“Shares”) of the Company’s common stock, $0,001 par value per share (“Common Stock”), in accordance with the terms of this Warrant to Purchase Common Stock (this “Warrant”) as hereinafter set forth. All Shares issued upon the exercise of this Warrant will, upon issuance and full payment therefor, be fully paid and nonassessable and free from all taxes, liens and charges with respect thereto.

This Warrant is subject to the following terms and conditions:

1. Term of Warrant. This Warrant shall be exercisable, in whole or in part, upon the earliest to occur of the date on which: (i) an initial public offering of Common Stock is consummated; (ii) a share exchange, consolidation or merger of the Company with or into any other corporation or other entity or any other corporate reorganization in which the Company is not the surviving entity (unless the stockholders of the Company immediately prior to such share exchange, consolidation, merger or reorganization hold in excess of fifty percent (50%) of the general voting power of the surviving corporation) is consummated; (iii) a transaction or series of related transactions in which in excess of fifty percent (50%) of the Company’s general voting power is transferred to a third party (or group of affiliated third parties) that were not previously stockholders of the Company (other than an issuance by the Company of shares of its capital stock) is consummated; or (iv) a sale of all or substantially all of the assets of the Company

(unless the stockholders of the Company immediately prior to such sale hold in excess of fifty percent (50%) of the general voting power of the purchasing party or parties) is consummated (such earliest date, the “Exercise Date”). Any unexercised portion of this Warrant shall terminate and become unexercisable as of 11:59 p.m., Eastern time, on the Exercise Date. As used herein, the term “general voting power” is to be determined based on the aggregate number of votes that are attributable to outstanding securities entitled to vote in the election of directors, general partners, managers or persons performing analogous functions to directors of the entity in question, without regard to contractual arrangements that establish a management structure or that vest the right to designate directors in certain parties.

2. Exercise Price.

(a) The price per Share at which this Warrant may be exercised shall be $4.65 (the “Warrant Price”), as adjusted as provided in Section 3. Upon delivery of this Warrant, together with the payment of the Warrant Price for the Shares to be purchased, at the principal office of the Company, the Holder shall be deemed to have exercised this Warrant and shall be entitled to be issued the Shares so purchased.

(b) In lieu of exercising this Warrant by payment of the Warrant Price in accordance with Section 2(a), the Holder may elect to receive, without the payment of any additional consideration, Shares equal to the value of this Warrant or any portion hereof exercised, as determined below, by the surrender of this Warrant to the Company (with a duly executed notice of exercise), at the principal office of the Company. Thereupon, the Company shall issue to the Holder such number of fully paid and nonassessable Shares as is computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where X	=	the number of Shares to be issued to the Holder pursuant to this Section 2(b)
Y	=	the number of Shares in respect of which the election is made pursuant to this Section 2(b)
A	=	the Market Price of one Share which may be purchased under Section 2(a) at the time the election is made pursuant to this Section 2(b)
B	=	the Warrant Price in effect under this Warrant at the time the election is made pursuant to this Section 2(b)

For purposes hereof, the term “Market Price” shall mean the average of the daily closing prices per Share for the ten (10) consecutive trading days immediately preceding the day as of which Market Price is being determined. The closing price for each day shall be the last sale price regular way or, in case no such sale takes place on such day, the average of the closing bid and asked prices regular way, in either case on the New York Stock Exchange, or, if the Shares are not listed or admitted to trading on the New York Stock Exchange, on the principal national securities exchange on which the Shares are listed or admitted to trading, or if the Shares are not so listed or admitted to trading, the average of the closing bid and asked prices as quoted on NASDAQ. If the Shares are not listed or admitted to trading on any exchange or quoted on NASDAQ, the Market Price shall be determined in good faith by the Board of Directors of the Company (the “Board”).

3. Adjustment of Warrant Price and Number of Shares Purchasable Hereunder. The Warrant Price and the number of Shares purchasable hereunder shall be subject to adjustment from time to time in accordance with the following provisions:

(a) In the event of any distribution of money or property by the Company, either tangible or intangible (other than distributions of shares of Common Stock), to the holders of shares of Common Stock, the Warrant Price for the Shares then subject to this Warrant shall be reduced by the per share amount of such distribution unless and until the Warrant Price is reduced to zero. If and when the Warrant Price is equal to zero, the Holder shall be entitled to receive, concurrently with the holders of the shares of Common Stock then outstanding, the per share amount of any such distribution with respect to the number of Shares then purchasable upon exercise of this Warrant in the same manner and to the same extent as if the Holder were then the registered owner of such number of Shares. For purposes of this Section 3(a), the per share amount of any distribution of property shall be the fair market value thereof as determined by the Board in good faith in the resolutions authorizing any such distribution.

(b) In case the Company shall at any time subdivide the outstanding shares of Common Stock, the Warrant Price in effect immediately prior to such subdivision shall be proportionately decreased, and in case the Company shall at any time combine the outstanding shares of Common Stock, the Warrant Price in effect immediately prior to such combination shall be proportionately increased, effective from and after the record date of such subdivision or combination, as the case may be. Upon any adjustment in the Warrant Price per Share pursuant to this Section 3(b), the Holder shall thereafter be entitled to purchase, at the adjusted Warrant Price, the number of Shares, calculated to the nearest full Share obtained by (X) multiplying the number of Shares purchasable hereunder immediately prior to such adjustment by the Warrant Price in effect immediately prior to such adjustment, and (Y) dividing the product thereof by the Warrant Price resulting from such adjustment. No such adjustment in the number of Shares that may be purchased upon exercise of this Warrant shall be required in the event of an adjustment in the Warrant Price per Share pursuant to Section 3(a).

(c) In the event of the issuance of additional shares of Common Stock as a dividend or distribution to the holders of outstanding shares of Common Stock, from and after the day which is the record date for the determination of stockholders entitled to such dividend or distribution, the Holder shall (until another adjustment) be entitled to purchase the number of Shares purchasable hereunder immediately prior to said record date multiplied by the percentage which the number of additional shares of Common Stock constituting any such distribution is of the total number of shares of Common Stock outstanding immediately prior to said record date plus the number of shares of Common Stock issuable upon conversion of the outstanding convertible securities or upon exercise of any outstanding warrants, options or rights (including those with respect to convertible securities) and adding the result so obtained to the number of Shares purchasable hereunder immediately prior to said record date. Upon each adjustment pursuant to this Section 3(c), the Warrant Price in effect immediately prior to such adjustment shall be reduced to an amount determined by dividing (X) the product obtained by multiplying such Warrant Price by the number of Shares purchasable hereunder immediately prior to such adjustment by (Y) the number of Shares purchasable hereunder immediately following such adjustment.

(d) In the event that the Company shall issue or sell Additional Shares of Common Stock (as defined in Section 3(f)) after August 22, 2002 (the "Protection Date"), other than as a dividend or distribution as provided in Section 3(c), and other than upon a subdivision or combination of shares of Common Stock as provided in Section 3(b), for a consideration per share less than then existing Warrant Price, then the Warrant Price shall be reduced, as of the date of such issue or sale, to a price determined as follows: the new Warrant Price shall be determined by multiplying the old Warrant Price by a fraction (A) the numerator of which shall be (1) the number of shares of Common Stock (on an as-converted basis) outstanding immediately prior to such issue or sale plus (2) the number of shares of Common Stock that the aggregate consideration received by the Company for the total number of Additional Shares of Common Stock so issued would purchase at such Warrant Price, and (B) the denominator of which shall be (1) the number of shares of Common Stock (on an as-converted basis) outstanding immediately prior to such issue or sale plus (2) the number of such Additional Shares of Common Stock so issued.

(e) For the purpose of making the adjustments provided in Section 3(d), the consideration received by the Company for any issue or sale of securities shall:

(i) to the extent it consists of cash, be computed at the net amount of cash received by the Company after deduction of any underwriting or similar commissions, concessions or compensation paid or allowed by the Company in connection with such issue or sale;

(ii) to the extent it consists of services or property other than cash, be computed at the fair value of such services or property as determined in good faith by the Board; and

(iii) if Additional Shares of Common Stock are issued or sold together with other stock or securities or other assets of the Company for a consideration that covers both, be computed as the portion of the consideration so received that may be reasonably determined in good faith by the Board to be allocable to such Additional Shares of Common Stock.

(f) Definition. The term “Additional Shares of Common Stock” as used herein shall mean all shares of Common Stock or securities convertible into or exercisable for shares of Common Stock issued or deemed issued by the Company after the date hereof, whether or not subsequently reacquired or retired by the Company, other than (i) up to 5,000,000 shares of the Company’s Series A Convertible Preferred Stock, $0.001 par value, and up to 5,000,000 shares of Common Stock issuable upon conversion thereof, (ii) up to 6,537,634 shares of the Company’s Series B Convertible Preferred Stock, $0.001 par value, and up to 6,537,634 shares of Common Stock issuable upon conversion thereof, (iii) securities exercisable for up to 2,011,259 shares of Common Stock issuable to employees, officers, directors, consultants or other persons performing services for or on behalf of the Company (if so issued solely because of any such person’s status as an officer, director, employee, consultant or other person performing services for or on behalf of the Company and not as part of any offering of the Company’s securities) pursuant to any stock option plan, stock purchase plan, management incentive plan, consulting agreement or similar arrangement approved by the Board, and shares of Common Stock issuable upon the exercise thereof (as adjusted, in the case of clauses (i-iv), for all stock dividends, stock splits, subdivisions, combinations and other similar transactions and, in the case of clause (iii), to reflect an increase in the number of shares subject to the Company’s 2000 Equity Incentive Plan pursuant to any validly effected amendment thereto) and (iv) securities issued in consideration of the acquisition by the corporation of the assets, capital stock or other equity interests of another entity.

4. Reorganization, Reclassification, Consolidation or Merger. If at any time while this Warrant is outstanding there shall be any reorganization or reclassification of the shares of Common Stock (other than a subdivision or combination of shares provided for in Section 3(b)), or any consolidation or merger of the Company with another corporation, the Holder shall thereafter be entitled to receive, during the term hereof and upon payment of the Warrant Price, the number of shares of stock or other securities or property of the Company or of the successor corporation resulting from such transaction, as the case may be, to which a holder of the Shares deliverable upon the exercise of this Warrant would have been entitled upon such reorganization, reclassification, consolidation, incorporation, exchange or merger if this Warrant had been exercised immediately prior to such reorganization, reclassification, consolidation, incorporation, exchange or merger; and in any such case, appropriate equitable adjustment (as determined by the Board) shall be made in the application of the provisions herein set forth with respect to the rights and interest thereafter of the Holder to the end that the provisions set forth herein (including the adjustment of the Warrant Price and the number of Shares issuable upon the exercise of this Warrant) shall thereafter be applicable, as near as reasonably may be, in relation to any shares or other property thereafter deliverable upon the exercise hereof.

5. Notice of Adjustments. Upon any adjustment of the Warrant Price and any increase or decrease in the number of Shares purchasable upon the exercise of this Warrant, then,

and in each such case, the Company, within 30 days after a Holder's request, shall give written notice thereof to the Holder at its address as shown on the books of the Company, which notice shall state the Warrant Price as adjusted and the increased or decreased number of Shares purchasable upon the exercise of this Warrant, setting forth in reasonable detail the method of calculation of each.

6. Charges, Taxes and Expenses. The issuance of Shares upon any exercise of this Warrant shall be made without charge to the Holder for any tax or other expense in respect to such issuance (other than taxes based on the income or revenues of the Holder), all of which taxes and expenses shall be paid by the Company, and, subject to Sections 8 and 9(d), such Shares shall be issued in the name of, or in such name or names as may be directed by, the Holder; provided, however, that in the event that Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by an instrument of transfer in form satisfactory to the Company, duly executed by the Holder in person or by an attorney duly authorized in writing and the Holder shall pay all transfer taxes payable upon issuance of such Shares.

7. Stockholders Agreement. It shall be a condition to the exercise of this Warrant that the Holder execute and deliver a counterpart signature page to the Company's Stockholders Agreement dated August 22, 2000, as may be amended (the "Stockholders Agreement"), if the Holder is not already a party thereto. By accepting this Warrant, the Holder expressly acknowledges and agrees that all Shares issuable pursuant to the exercise hereof shall be subject to the Stockholders Agreement.

8. Compliance with Securities Laws:

(a) Investment Representations. By its acceptance hereof, the Holder represents and warrants that:

(i) this Warrant is, and the Shares will be, acquired for investment for its own account, not as a nominee or agent, and not with a view to the sale or distribution of any part thereof; it has no present intention of selling, granting participation in, or otherwise distributing this Warrant or the Shares; and it does not have any contract, undertaking, agreement, or arrangement with any person to sell, transfer or grant participations to such person, or to any third person, with respect to the Warrant or the Shares;

(ii) it understands that this Warrant and the Shares have not been registered under the Securities Act of 1933, as amended (the "1933 Act"), on the grounds that the issuance of the Warrant and the Shares are exempt from registration under the 1933 Act, and that the Company's reliance on such exemption is predicated in part upon the Holder's representations and warranties set forth herein. The Holder realizes that the basis for such exemption may not be present in the event that, notwithstanding such representations and warranties, the Holder has in mind merely acquiring the Warrant for a fixed or determined period in the future, or for a market rise, or for sale if the market does not rise. The Holder does not have any such intentions;

(iii) it is an accredited investor, as defined under Regulation D of the 1933 Act, as amended, experienced in evaluating companies such as the Company, is able to fend for itself in the transactions contemplated by this Warrant, has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment in the Warrant and the Shares, and has the ability to bear the economic risks of its investment in the Warrant and the Shares, including the risk that it may lose its entire investment. The Holder further represents that it has had the opportunity to consult with its own legal counsel with respect hereto, and has had access, during the course of the transactions and prior to the issuance of this Warrant, to all such information as it deemed necessary or appropriate (to the extent the Company possessed such information or could acquire it without unreasonable effort or expense) and that it has had, during the course of the transactions and prior to the issuance of this Warrant, the opportunity to ask questions of, and receive answers from, the Company concerning the terms and conditions of the offering and to obtain additional information (to the extent the Company possessed such information or could acquire it without unreasonable effort or expense) necessary to verify the accuracy of any information furnished to it or to which it had access;

(iv) it understands that the Warrant and the Shares may not be sold, transferred or otherwise disposed of without registration under the 1933 Act or an exemption therefrom, and that in the absence of an effective registration statement covering the Warrant (or the Shares) or an available exemption from registration under the 1933 Act, the Warrant and the Shares must be held indefinitely. In particular, the Holder is aware that the Warrant and the Shares may not be sold pursuant to Rule 144 promulgated under the 1933 Act unless all of the conditions of that Rule are met. Among the conditions for use of Rule 144 is the availability to the public of current information about the Company. Such information is not now available to the public and the Company has no present plans to make such information available to the public. The Holder represents that, in the absence of an effective registration statement covering the Warrant or the Shares, it will sell, transfer or otherwise dispose of the Warrant or the Shares only in a manner consistent with its representations set forth herein;

(v) in no event will it make a transfer or disposition of the Warrant or the Shares other than in compliance with all applicable laws; and

(vi) it understands that each certificate or instrument representing the Warrant or the Shares will be endorsed with restrictive legends as required by applicable state securities laws and substantially as follows:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “1933 ACT”), OR APPLICABLE STATE SECURITIES LAWS. THESE

SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO DISTRIBUTION OR RESALE, AND MAY NOT BE SOLD, MORTGAGED, PLEDGED, HYPOTHECATED OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE 1933 ACT AND ANY APPLICABLE STATE SECURITIES LAWS, OR DELIVERY TO THE ISSUER OF AN OPINION OF LEGAL COUNSEL REASONABLY ACCEPTABLE TO IT TO THE EFFECT THAT AN EXEMPTION FROM THE REGISTRATION PROVISIONS OF THE 1933 ACT AND APPLICABLE STATE SECURITIES LAWS IS AVAILABLE FOR THE PROPOSED TRANSACTION.

(b) No Public Market. The Holder understands that no public market now exists for any of the securities issued by the Company and that there is no assurance that a public market will ever exist for the Warrant or the Shares.

9. Miscellaneous.

(a) The terms of this Warrant shall be binding upon and shall inure to the benefit of any successors or assigns of the Company and the Holder and of the Shares issued or issuable upon the exercise hereof.

(b) No Holder, as such, shall be entitled to vote or receive distributions (except as provided in paragraph 3) or be a stockholder of the Company for any purpose.

(c) Except as otherwise provided herein, this Warrant and all rights hereunder are transferable by the registered Holder hereof in person or by duly authorized attorney on the books of the Company upon surrender of this Warrant, properly endorsed, to the Company. The Company may deem and treat the registered Holder of this Warrant at any time as the absolute owner hereof for all purposes and shall not be affected by any notice to the contrary.

(d) Notwithstanding any provision herein to the contrary, the Holder may not exercise, sell, transfer or otherwise assign this Warrant unless the Company is provided with an opinion of counsel satisfactory in form and substance to the Company, to the effect that such exercise, sale, transfer or assignment does not violate the Securities Act of 1933, as amended, or applicable state securities laws.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, the Company has caused this Warrant to be signed by its duly authorized officer.

DATED as of the 22nd day of August, 2000.

Targacept, Inc.

By: /s/ J. Donald deBethizy
J. Donald deBethizy
President

<u>ASSIGNMENT</u>

FOR VALUE RECEIVED, the undersigned hereby sells, and assigns and transfers unto R. J. Reynolds Tobacco Holdings, Inc. that certain warrant (the "Warrant") to purchase 1,612,903 shares of the common stock, $0.001 par value per share, of Targacept, Inc. (the "Company") and the rights represented thereto in accordance with the terms and conditions thereof, and does hereby irrevocably constitute and appoint ____ attorney-in-fact to transfer the Warrant on the books of the Company, with full power of substitution.

Holder:

R. J. REYNOLDS TOBACCO COMPANY

By: /s/ Charles A. Blixt
Name: Charles A. Blixt
Title: EVP and General Counsel

Dated: July 16, 2001

In the presence of:

/s/ Lynn L. Lane
Name: Lynn L. Lane, Treasurer

By affixing its signature below, the undersigned expressly assumes all of the obligations under the Warrant of the holder thereof.

Accepted and Agreed to by:

R. J. REYNOLDS TOBACCO HOLDINGS, INC.

By: /s/ McDara P. Folan, III
Name: McDara P. Folan, III
Title: Vice President,
Deputy General Counsel,
Secretary

Exhibit 10.2(a)

NORTH CAROLINA

LEASE

FORSYTH COUNTY

This Lease (the “Lease” or the “Agreement”), made effective the 1st day of August, 2002, by and between Wake Forest University Health Sciences, a North Carolina non-profit corporation having its principal office in Winston-Salem, North Carolina, (“Landlord”); and Targacept, Inc., a Delaware corporation, having its principal office in Winston-Salem, North Carolina, (“Tenant”).

WHEREAS, Landlord is the owner of certain real property (the “Land”) improved with a commercial building known as One Technology Place (the “Building”) located in Winston-Salem, North Carolina, which Land is more specifically described in Exhibit A-l hereto; and whereas Tenant desires to lease certain premises located within the Building; and whereas Landlord desires to lease such premises to Tenant;

NOW, THEREFORE, Landlord and Tenant hereby agree as follows:

1. DEMISED PREMISES.

1.1 Landlord, in consideration of the rents to be paid and the covenants and agreements to be performed by Tenant, demises and leases to Tenant and Tenant hires and leases from Landlord the premises described on Exhibit A attached and incorporated by reference (the “Demised Premises” or the “Premises”), in the building known locally as “One Technology Place” (the “Building”) located on the land described on attached Exhibit A-l (the “Land”), and situated at 200 E. First Street, Winston-Salem, North Carolina, 27101, together with all improvements, appurtenances, rights, privileges and easements in any way appertaining thereto.

1.2 As of the Commencement Date (as defined below) of the term of this Lease, the Demised Premises will consist of 40,432 rentable square feet in the Building, as more particularly described in Exhibit A attached hereto, and including within the meaning of “Premises” or “Demised Premises” the entire fourth floor of the Building, to be utilized as Tenant’s laboratory facilities, encompassing 20,216 rentable square feet, and 20,216 rentable square feet of general office space on the third floor of the Building.

1.3 In addition to the Demised Premises, Tenant will have exclusive use of 191 square feet of chemical storage space in the basement level of the Building, “as is”, as shown on the attached Exhibit A-2. Landlord shall have no obligations to Tenant with respect to such space, except for providing exclusive access to the space.

2. INITIAL TERM, OPTION TO RENEW, RIGHT OF FIRST REFUSAL ON ADDITIONAL SPACE, TERMINATION RIGHTS.

2.1 The Initial Term of this Lease will be for five (5) years (the “Initial Term”) and will begin on August 1,2002 (the “Commencement Date”).

2.2 Renewal Rights. So long as Tenant is not in default under this Lease, Tenant has the right, but not the obligation, to extend the term of this Lease (“Renewal Option”) under the same terms and conditions for one (1) additional five (5) year term (the “Renewal Term”). Tenant must exercise its right for the Renewal Term by written notice to Landlord given on or before the date that is one hundred eighty (180) days prior to the expiration of the Initial Term. If Tenant does not exercise its right to extend in a timely manner, Tenant will have irretrievably lost its right to extend the term of this Lease. Rental payments applicable for the Renewal Term, if exercised, shall be as set forth in paragraphs 3.1 and 3.2. Any extension of this Lease beyond the Renewal Term (if exercised) shall be upon the terms and conditions mutually agreed upon by Landlord and Tenant, and unless such agreement is reached, this Lease shall expire.

2.3 Landlord hereby grants Tenant an option to lease additional space in the Building as and when it becomes available (the “Option to Lease”). This Option to Lease may be exercised at any time during the Initial Term or the Renewal Term, and may be exercised on one or more occasions. Exercise shall occur by written notice by Tenant to Landlord not later than thirty (30) days following written notice to Tenant by Landlord that additional space is available. Unless Landlord otherwise agrees, Tenant may exercise its Option to Lease only with respect to all of the additional space available. Tenant will pay Rent for such additional space leased during the Initial Term or the Renewal Term at the then current market rates for a building and space of similar class (condition) in the Winston-Salem or other comparable marketplace (including, but not limited to, leases executed in the subject Building within six months prior to Tenant’s exercise of this Option to Lease), making certain the then current market rate reflects the separate market rates for comparable laboratory space and comparable commercial office space, and reflects the “effective rent,” meaning a rent that takes into account size of space, length of term, other pertinent data and concessions, including (but not limited to) upfit allowances and costs, free rents, and similar items. If the amount of Rent for the expansion space cannot be agreed upon by the parties, then the amount of the Rent will be submitted to arbitration in accordance with the rules and procedures of the American Arbitration Association. Upon determination of the Rent as provided herein, the parties will execute an Amendment to this Lease incorporating the additional space as a part of the Demised Premises and the Rent as determined, and the Tenant may then occupy the space. Notwithstanding the foregoing, Tenant may not, unless Landlord otherwise agrees in writing a) exercise its Option to Lease in the fourth or fifth year of the Initial Term unless it simultaneously exercises its Renewal Option; or b) exercise its Option to Lease in the third or later years of the Renewal Term.

2.4 Except as otherwise provided in this subparagraph, Tenant shall have the unilateral right to terminate this Lease ("Termination Right") at any time after the end of the third year of the Initial Term of this Lease, and upon payment of the termination fee ("Termination Fee") set forth in paragraph 2.4.1. In order to exercise the Termination Right, Tenant shall provide Landlord with not less than one hundred eighty (180) days' prior written notice. Provided, however, Tenant shall have waived its Termination Right in each of the following circumstances and for the periods stated: a) upon exercise of the Renewal Option, and continuing until three (3) years of the Renewal Term have elapsed; b) upon Tenant's request pursuant to paragraph 6 to require Landlord to provide Tenant an allowance for redecorating of the Demised Premises, and continuing for the remainder of the Renewal Term; and c) upon Tenant's exercise of an Option to Lease, and continuing for a period of three (3) years or until the end of the applicable term, whichever is shorter.

2.4.1 Tenant shall pay to Landlord a Termination Fee upon Tenant's exercise of its Termination Right, in accordance with the schedule set forth in attached Exhibit C. The amounts set forth in such schedule reflect the unearned amounts at each date of the $2,013,234.00 in additional funding made available by Landlord to Tenant (the "Additional Funding") in connection with the upfitting of the property and Tenant's occupancy thereof. Such Termination Fee will be paid to Landlord on the effective date of such termination.

2.4.2 In the event that Tenant defaults under the Lease and/or abandons the Lease so that the Lease is terminated prior to the expiration of the Initial Term, Tenant will pay to Landlord, in addition to any other amounts which may be due Landlord, that portion of the Additional Funding which is unearned as of the date of such termination (the "Unearned Additional Funding"). The Unearned Additional Funding due is calculated by dividing the Additional Funding ($2,013,324.00) by the sixty (60) total months in the Initial Term, and multiplying such result ($33,553.90) by the number of months or portions thereof remaining in the Initial Term. Such sum represents Tenant's reimbursement to Landlord of the Unearned Additional Funding.

3. RENTAL.

3.1 Beginning on the Commencement Date, Tenant will pay annual rental pursuant to the following schedule ("rsf" indicates "rentable square foot"):

Term	**Demised Premises**
Initial Term	$36.00 per rsf
Renewal Term	$36.00 per rsf

(herein collectively "Rent"). Rent is payable in equal monthly installments, in advance on the first day of each calendar month of each calendar year during the Initial Term and the Renewal Term, pro rated for any partial month. Any increases or decreases in the amount of square footage leased during a month will be adjusted in the subsequent monthly payment. Rent payments shall be payable to "Wake Forest University Health Sciences" and sent to Landlord in care of Controller's Office, Attention: Joel Landreth, Medical Center Boulevard, Winston-Salem, NC, 27157.

3.2 Additional rental.

3.2.1 Taxes. During the Initial Term and the Renewal Term, Tenant will pay to Landlord, as Additional Rent, Tenant's pro rata share of any annual increase in ad valorem taxes over ad valorem taxes for calendar year 2002 (the "Tax Base Year"). Tenant's share of such increase in ad valorem taxes over ad valorem taxes for the Tax Base Year will be computed by multiplying such increase in ad valorem taxes over the Tax Base Year ad valorem taxes by a fraction, the numerator of which is the rentable square footage of the Demised Premises and the denominator of which is the total rentable square footage which is subject to taxation in the Building (currently 81,286). If the rentable square footage for the Demised Premises using the aforesaid computation is not adequate to account for all of the rentable square footage in the Building, when combined with the rentable square footage reflected in leases for space in the Building executed prior to the date of execution of this Lease, an adjustment will be made to Tenant's share of the increase in such taxes such that Landlord will not absorb any portion of the total increase which might otherwise be allocated to it as a result of any discrepancy in the shares as reflected in the individual leases. Landlord will submit an invoice to Tenant showing Tenant's pro rata share of such increase in ad valorem taxes, adjusted as aforesaid, within 30 days after receipt of the final tax bill for the Demised Premises. Accompanying the invoice will be a copy of the current and previous tax bills received by Landlord and a statement showing the calculation of Tenant's pro rata share (adjusted as aforesaid) of the increase in such taxes. Tenant will pay Landlord its share of the increase in such taxes before December 15 of the tax year. Tenant will also list and pay all ad valorem taxes on its personal property and any other property which Tenant brings into the Demised Premises. In determining the amount of taxes for any calendar year, the amount of special assessments to be included shall be limited to the amount of the installment of the special assessment required to be paid during that year as if Landlord had elected to have the special assessment paid over the maximum period of time permitted by law.

3.2.2 Building Operating Costs.

3.2.2.1 During the Initial Term and Renewal Term, Tenant will pay to Landlord, as Additional Rent, the amounts provided in subparagraph 3.2.2 based on Tenant's pro rata share (adjusted in accordance with 3.2.2.2 below) of the amount by which the Building Operating Costs for each 12-month period (or part thereof, pro-rated) beginning April 1, 2003, exceed the Building Operating Costs for the Operating Base Year. The "Operating Base Year" is the 12-month period ending March 31, 2003. (Tenant will pay no share of Building Operating Costs for the Operating Base Year.) Those Building Operating Costs which vary with occupancy (i.e., janitorial services, HVAC costs) will be adjusted to reflect the Building Operating Costs for such expenses Landlord would have incurred if the Building is not fully occupied. Building Operating Costs which do not vary with occupancy, such as insurance and lobby maintenance, will continue to be allocated on a pro rata basis (adjusted in accordance with 3.2.2.2 below) over the space in the Building whether or not occupied.

3.2.2.2 Tenant's share of the increases in Building Operating Costs over Building Operating Costs for the Operating Base Year will be computed by multiplying such increases in Building Operating Costs by a fraction, the numerator of which is the rentable square footage in the Demised Premises and the denominator of which is the rentable square feet in the Building (currently 81,286). If the rentable square footage for the Demised Premises using the aforesaid computation is not adequate to account for all of the rentable square footage in the Building, when combined with the rentable square footage reflected in leases for space in the Building executed prior to the date of execution of this Lease, an adjustment will be made to Tenant's share of the increase in such Building Operating Costs such that Landlord will not absorb any portion of the total increase which might otherwise be allocated to it as a result of any discrepancy in the shares as reflected in the individual leases. "Building Operating Costs" means and includes all costs, expenses, taxes (other than ad valorem taxes) and disbursements which Landlord pays in connection with the management, operation, maintenance, and repair of the Building and of all building systems, components and appurtenances, including the Common Area. Such costs include, but are not limited to, the costs of all utilities (not separately metered to a particular tenant), fuel, building supplies, door locks and keys, light bulbs, plumbing and electrical repairs, garbage removal, drainage, lighting, facilities, parking lot and drive repair and maintenance, security services, pest control, alterations required by government authorities (unless such constitute capital expenditures), janitorial services, window cleaning, maintenance and repairs, elevator service, wages of employees who work customarily in and about the building and whose duties are connected with its operation, maintenance or repair (including social security taxes, unemployment insurance costs, cost of providing disability benefits, and cost of pension, hospitalization or retirement plan), costs of general commercial replacement and liability insurance, water and sewer rents (to the extent not included in taxes in Section 3.2.1 hereof), professional and consulting fees consistent with those reasonably incurred in the management or operation of office buildings in the Winston-Salem area, management fees (charges for which shall clearly reflect Landlord's actual management efforts and expenses with respect to the Building), charges or fees for governmental permits, and other expenses, dissimilar or similar, incurred in the operation, repair, and maintenance of the Building, its systems and components, and the Land on which it stands.

3.2.2.3 On or before May 15, 2004, and on or before each May 15 thereafter, Landlord will notify Tenant of Tenant's share of the increase in Building Operating Costs for the previous 12-month period ending March 31 over the Building Operating Costs for the Operating Base Year. Tenant will pay such increase along with the Rent due on the first day of the following month. Commencing with the 12-month period following the Operating Base Year, Controllable Building Operating Costs will not increase by more than 5% during any 12-month period for which Building Operating Costs are calculated in accordance with this section. "Controllable Building Operating Costs" means costs which are incurred regularly and which are subject to Landlord's reasonable control. Landlord will maintain records to support expenditures for Building Operating Costs. If Tenant disputes the amount of Building Operating Costs set forth in Tenant's annual statement of actual Building Operating Costs, Tenant will notify Landlord and Landlord will make its records available to Tenant. Tenant shall have the right to audit or cause to be audited Landlord's records, the cost of which shall be borne by Tenant unless it is demonstrated that Landlord has overcharged Tenant by more than 5%, in which case Landlord shall bear the cost of the audit (which cost shall not be included as a Building Operating Cost).

4. PARKING.

4.1 Tenant shall have the right, subject to the Landlord's obligations to existing tenants, to the exclusive use (without payment of any additional rent) of a pro rata share of the underground parking available for the Building based on Tenant's rentable square footage; such spaces shall be designated for use by Tenant and are as shown on attached Exhibit A-2. Landlord shall designate (in accordance with Landlord's reasonably approved method for such) the spaces to be used exclusively by Tenant. Tenant has converted five (5) parking spaces in the Building for a chemical storage facility and mechanical equipment room, with Landlord's approval, including two (2) spaces previously designated as handicapped parking. Landlord has redesignated three (3) of the remaining Tenant spaces as two (2) handicapped spaces in order to effect compliance with applicable laws regarding handicapped parking, so that Tenant has converted a total of six (6) spaces. Such conversion of such spaces for the chemical storage facility and mechanical equipment room which exclusively benefits the Tenant or the Demised Premises will be counted in the pro rata share of parking allocated to Tenant. Additional parking for Tenant's employees, invitees, visitors, etc., as required by the protective covenants of Piedmont Triad Research Park or otherwise, shall be obtained by Tenant at no cost or expense to Landlord.

4.2 Tenant agrees to comply with all reasonable rules and regulations promulgated or implemented by Landlord with respect to parking facilities owned by Landlord.

5. BROKERAGE.

Tenant warrants that it has not consulted or negotiated with any broker or finder with regard to the Demised Premises or this Lease other than Carter and Associates Oncor (the "Tenant's Broker"). Tenant acknowledges that Landlord has no obligation for any fees or commissions payable to Tenant's Broker and that Tenant is solely and exclusively liable for same. Tenant further agrees to indemnify Landlord against any loss, liability and expense (including attorneys' fees and court costs) arising out of claims for fees or commissions from anyone with whom Tenant has dealt, including but not limited to Tenant's Broker, with regard to the Demised Premises or this Lease. Landlord warrants that it has not consulted or negotiated with any broker or finder with regard to the Demised Premises or this Lease. Landlord agrees to indemnify Tenant against any loss, liability and expense (including attorneys' fees and court costs) arising out of claims for broker's fees or commissions from anyone with whom the Landlord has dealt, with regard to the Demised Premises or this Lease.

6. UPFITTING/CONDITION OF DEMISED PREMISES.

Tenant accepts the Demised Premises in their present condition, which condition includes certain upfitting and improvements made by Landlord at its cost and expense and to Tenant's specifications prior to the Commencement Date and in accordance with that prior lease agreement between the parties dated April 20, 2001. At any time during the second year of the Renewal Term, Landlord will provide Tenant, upon Tenant's request, an allowance of Ten Dollars ($10.00) per rentable square foot of the Demised Premises for use by Tenant in redecoration of the Demised Premises.

7. COMMON AREA.

7.1. The Common Area is defined to be those areas within the area designated as such on Exhibit A attached; and the term Common Area also includes those common access areas which are for the non-exclusive use of tenants (including the Tenant) of the Building of which the Demised Premises are a part, as more particularly described on Exhibit A-2. The term Common Area excludes any areas constructed or allocated for the exclusive use of Tenant or for the exclusive use of Landlord or any other tenant of the Building of which the Demised Premises are a part.

7.2. Landlord grants to Tenant, its licensees, invitees, customers, employees, successors and permitted assigns, during the term of this Lease and any renewal term, the non-exclusive right to use the Common Area in common with Landlord and other tenants of the Building of which the Demised Premises are a part and their respective licensees, invitees, customers, employees, successors and assigns, subject to the provisions of this Lease, and subject to all applicable Piedmont Triad Research Park protective covenants and to those reasonable rules and regulations which may be promulgated by Landlord with respect to such Common Area.

7.3. In accordance with usual and customary services provided in connection with similar leased property, Landlord, at its sole cost and expense, will operate, manage, repair and maintain the Common Area and all improvements thereon in commercially acceptable first class condition and repair suitable for occupants of commercial office space, including making replacements where necessary, and in compliance with all applicable laws and governmental regulations. Landlord will, from time to time, promulgate rules and regulations governing the use of the Common Area. Except as specifically provided otherwise herein (including, without limitation, those Tenant obligations set forth in subparagraphs 3.2, 7.5, 12.1, and 12.3), Landlord will, with respect to the Common Area, pay and be responsible for: (a) supervision, management, inspection, security protection and traffic direction; (b) utilities, including but not limited to, lighting, heating and removing rubbish (excluding Tenant’s garbage and rubbish), dirt and debris; (c) removing snow and ice; (d) window cleaning and replacement, to include the regular washing of all exterior Building windows of the Demised Premises and elsewhere on the Building; (e) maintenance of HVAC, electrical and plumbing systems and elevators; (f) labor, payroll taxes, materials and supplies in connection with such maintenance and operation; (g) all costs and expenses of landscape maintenance and supplies incidental thereto, painting, and cleaning, sealing, replacing and remarking paved and unpaved surfaces, curbs, directional and other signs for access areas and driveways, landscaping, lighting facilities, drainage and other similar items, and all costs for tools, machinery and equipment used in connection with the above; (h) all premiums on workmen’s compensation, casualty, public liability, property damage and other insurance on the Common

Area; and (i) all taxes and other charges levied or assessed against the Common Area, the Land and the Building.

7.4. Subject to the rules and regulations described in subparagraphs 4.2 and 7.2, the Common Area is reserved for the exclusive use of Landlord and the tenants of the Building (including Tenant), their employees and business guests.

7.5. Landlord will provide limited security services during Normal Operating Hours as hereinafter defined. To the extent that Landlord or Tenant, and their agents or employees have acted with reasonable prudence with respect to security, neither party will have any liability to the other for loss or damage suffered by the other as a result of unauthorized entrances by persons into the Building or the Common Area or for any other security violation.

8. ENTRANCE SIGNS AND OTHER SIGNAGE.

Subject to and in accordance with the Protective Covenants of Piedmont Triad Research Park, of which the Land and Building comprise a part, and subject to the prior review and written approval of Landlord (which approval shall not be unreasonably withheld), Tenant will have the right to install, maintain and replace on the Building and within the Demised Premises such signs as Tenant may reasonably desire, at Tenant’s sole expense. Tenant will further comply with any and all applicable requirements imposed by governmental authorities, ordinances, or regulations with respect to such signage and will obtain any necessary permits for such purposes. Tenant shall have the right to install, maintain and replace, subject to the prior review and approval of Landlord, prominent signage in the Building’s main lobby and elevator lobbies.

9. INDEMNIFICATION AND LIABILITY INSURANCE.

9.1. Tenant shall indemnify and save Landlord harmless from and against any and all damages, losses, expenses, costs, or liability, including attorney’s fees, as a result of Tenant’s breach of any covenant, term, or condition of this Lease. Tenant further agrees to defend and save harmless Landlord from and against any and all liability for bodily injury or for damage to property arising out of or in connection with use or occupancy of Tenant, its agents, servants, employees or invitees, of the Demised Premises or any Common Area to which Tenant has access under this Lease, provided that Tenant’s obligation hereunder shall not apply to the extent that any such liability is the result of the negligence or willful misconduct of the Landlord, its agents, servants, employees or invitees.

9.2. Tenant and Landlord, at their own expense, each agree to maintain comprehensive general liability insurance covering the Demised Premises, the Building and the Land with a combined single limit of not less than Two Million Dollars ($2,000,000) per occurrence of bodily injury and property damage. Insurance coverage regarding the presence or use of animals in the Demised Premises must be maintained by Tenant in a form and in amounts as are reasonably satisfactory to Landlord, with a certification of such amounts and coverages to be furnished to Landlord annually.

9.3. Landlord must be named as an additional insured on Tenant's policy, but only with respect to claims against Landlord arising out of Tenant's use or occupancy of Demised Premises. Such insurance as afforded Landlord by Tenant's policy will be primary as respects Landlord, and will not require contribution by any other similar insurance available to Landlord and Tenant agrees to have its policy so endorsed. Tenant's policy shall provide that it may not be canceled or substantially modified without at least thirty (30) days' prior written notice to Landlord. Tenant will provide Landlord a certificate evidencing such insurance coverage within thirty (30) days of execution of this Lease.

10. PROPERTY INSURANCE.

Each party, at its own expense, assumes the responsibility for insuring its own property or at its option, self-insuring its property. Each party with respect to any insurable or insured loss or damage to its own property, waives all right of recovery against and releases the other party, its directors, officers, agents and employees for loss or damage to such property, irrespective of the cause of such loss or damage or negligence of such other party, including (but not limited to) loss of use. In addition, each party assumes the responsibility of notifying any and all insurers of such property of the above waivers and agrees to have such insurers waive their rights of subrogation against the other party.

11. OTHER PAYMENTS.

It is the intention of the parties by their execution of this Lease that Tenant will not be responsible for any taxes, charges, expenses, damages and deductions of any kind or sort whatsoever (other than those expressly provided for in this Lease), and that Landlord will pay all such other sums which, except for the execution and delivery of this Lease, would have been chargeable against the Demised Premises, the Land and the Building. Further, Tenant will not be under any obligation to pay any interest on any mortgage or mortgages which may be a lien against the fee simple title of the Demised Premises or Landlord's estate or interest, or any franchise, or income tax which is or may become payable by Landlord or any other tenant of the Building of which the Demised Premises are a part, or any gift, inheritance, transfer, estate or succession tax by reason of any existing law or any law which hereafter may be enacted.

12. BUILDING OPERATIONS.

12.1. Landlord will provide, at its expense, usual and customary services rendered in connection with similar leased commercial property with respect to building operations as set forth in this paragraph. Tenant will take appropriate and reasonable steps to conserve energy in the conduct of its business operations.

12.1.1 Landlord will furnish Tenant with reasonable heating and air conditioning in its office Premises from 7:00 a.m. until 7:00 pm. Monday through Friday during normal working hours and from 8:00 a.m. to 2:00 p.m. on Saturday ("Normal Operating Hours"). Holidays are excluded, and for purposes of this Lease include New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

12.1.2 Landlord will furnish Tenant with reasonable heating and air conditioning in its laboratory Premises 24 hours per day, 7 days per week, 365 days per year. Subject to the specifications set forth in Exhibit C to that prior lease entered into between the parties dated April 20, 2001, under normal operating conditions, temperatures will be maintained between 70 and 76 degrees Fahrenheit.

12.1.3 Landlord will furnish hot (approximately 130 degrees) and cold water, a sufficient amount of electricity to enable Tenant to carry on its office and laboratory business, and passenger and freight elevator service, pursuant to Tenant's specifications as set forth in Exhibit C to that prior lease entered into between the parties dated April 20,2001.

12.1.4 Landlord will furnish janitorial services in the Demised Premises and Building as described in Exhibit B to this Lease.

12.1.5 Landlord will provide access to, and Tenant will have use of, the freight elevator serving the Building 24 hours per day, 7 days per week, 365 days per year, and the loading dock areas serving the Building during Normal Operating Hours, except on Holidays as defined herein.

12.1.6 Landlord will maintain, repair and replace the roof and structural components of the Building, the heating and air conditioning, plumbing, mechanical, lighting and electrical systems in the Building but specifically excluding any equipment installed by Tenant.

12.2. Landlord will not be liable to Tenant for any inconvenience, loss or expense to which Tenant may be put as a result of the failure of Landlord to provide utility or other services set forth herein when prevented from so doing by acts of God, by the public enemy, strikes, embargoes, breakdowns, repairs which may from time to time be required on Landlord's equipment, lack of fuel, or due to any other unavoidable reasons or circumstances beyond the reasonable control of Landlord. Landlord will exercise reasonable efforts to notify Tenant of and to minimize the interruption of services and will exercise its best efforts to promptly repair any breakdowns and restore any interrupted services. Landlord will endeavor to give Tenant reasonable prior notice of necessary repairs. In no event will Landlord be liable for indirect or consequential damages resulting from any failure to supply such utilities or from any other cause.

12.3. Tenant, with the prior written consent of Landlord (which shall not be unreasonably withheld), may contract for services not provided by Landlord under this Lease. Tenant will pay for such services directly to the party providing the service.

12.4. Landlord has, subject to the protective covenants of Piedmont Triad Research Park and to the consent of the Developer of such Park as defined in such covenants, installed a generator outside the Building at a location reasonably acceptable to Landlord and permitted by such covenants sufficient to provide power to the Demised Premises in the event of a power failure. Such generator shall be devoted solely to the Tenant's use of the Demised Premises and the Common Areas within the Building.

13. USE.

13.1 Tenant will use the Demised Premises solely for research and development pharmaceutical laboratory facilities, the conduct of bio-medical research, and general business offices, and for no other purpose. Tenant will, at its sole cost and expense, comply with and faithfully observe all the requirements of all municipal, state and federal laws or ordinances and the rules and regulations of all governmental authorities now in force or which may hereafter be in force pertaining to Tenant's use of the Demised Premises. Without limiting the foregoing, Tenant will comply with all laws and regulations regarding the care and use of any animals kept by Tenant or its agents within the Demised Premises.

13.2 Landlord will be responsible for the cost of compliance with the Americans with Disabilities Act ("ADA") within the Building or on the Land and will hold Tenant harmless therefrom. Tenant will be responsible for the cost of compliance with the ADA as to any alterations to the Demised Premises made by Tenant pursuant to paragraph 17 of this Lease.

13.3 In the event of any threat of disturbance or actual disturbance or protest concerning the use of laboratory animals by the Tenant, Tenant shall immediately provide Landlord with information regarding such threat or disturbance and cooperate with Landlord to the extent reasonably requested by Landlord in the management of the Building.

14. SUBORDINATION; MORTGAGES; ATTORNMENT.

14.1. This Lease, and the rights of Tenant under this Lease are subject and subordinate to all bona fide mortgages or deeds of trust now or hereafter placed upon the Demised Premises by Landlord, and Tenant agrees to execute such further instrument or instruments as may reasonably be required by a holder of such mortgage or deed of trust to effectuate such subordination.

14.2. Tenant agrees, within ten (10) business days after written request by Landlord, to execute and deliver to Landlord a statement, in writing, certifying that, as of the date of such statement: (i) this Lease is in full force and effect; (ii) the Commencement Date of this Lease; (iii) the dates to which Rent and other charges have been paid in advance; and (iv) that there are no uncured defaults by Landlord, or, alternatively, stating those claimed by Tenant; provided that, in fact, such statements are accurate and ascertainable. Provided, however, that nothing contained in such statements required by such holder will be in derogation of any rights granted to Tenant under this Lease nor expand Tenant's obligations under this Lease and if any such statements would have the effect of accomplishing one or both of the foregoing, either explicitly or implicitly, then Tenant is not obligated to execute the same.

14.3. In the event any proceedings are brought for the foreclosure of, or in the event of the conveyance by deed in lieu of foreclosure of, or in the event of exercise of the power of sale under, any mortgage or deed of trust made by Landlord covering the Demised Premises, Tenant, upon written request, agrees to execute an instrument whereby Tenant agrees to attorn to such successor in interest and recognizes such successor as Landlord under this Lease.

15. SURRENDER.

At the expiration or other termination of this Lease, or any renewal or extension, Tenant will peaceably vacate the Demised Premises and, unless Landlord agrees otherwise, remove all its goods and effects, including, but not limited to, moveable (i.e., not floor to ceiling) partitions, furniture and equipment (other than those fixtures and equipment installed by Landlord pursuant to the provisions of and as detailed in that prior lease agreement between the parties executed April 20, 2001), but excluding landscaping and maintenance and repair work done by Landlord or Tenant. At such expiration or other termination of this Lease, Landlord shall have all rights of re-entry as provided by law including the right to secure the property in its possession by boarding the Premises or changing locks with or without bringing an action in summary ejectment. Tenant shall at the expiration or other termination of this Lease deliver the Demised Premises to Landlord in as good a condition as they were at the time of the delivery of possession to Tenant, ordinary wear and tear excepted.

16. TENANT'S PERSONAL PROPERTY.

During the term of this Lease, Tenant will have the right to remove any and all of its personal property located on the Demised Premises, including, but not limited to, its furniture, equipment, trade fixtures, artwork and decorative matter, machinery and other personal property. Tenant may, with Landlord's prior agreement, leave any such items on the Demised Premises at the termination of this Lease, and such items will become the property of Landlord.

17. ALTERATIONS; REMOVAL OF EQUIPMENT.

Tenant will have the right to make alterations, additions or improvements to the Demised Premises which (a) are non-structural in nature and (b) will not exceed $20,000.00 in cost, without the approval of Landlord. Tenant shall provide plans for Landlord's prior review and approval before Tenant commences any other work, that is, work which is structural in nature or work which is non-structural but the cost of which will exceed $20,000.00. All additions, alterations or improvements will be completed in a workmanlike manner and in compliance with all applicable laws, regulations and ordinances. All alterations, additions and improvements (including carpeting, floor to ceiling partitions and other items that would ordinarily be deemed fixtures if Tenant owned rather than leased the Demised Premises) so made by Tenant will become a part of the realty and will remain and be surrendered with the Demised Premises at the expiration of the Lease Term.

18. DAMAGE OR DESTRUCTION OF DEMISED PREMISES.

18.1. If at any time during the Initial Term of this Lease or any Renewal Term, the Demised Premises or Building of which the Demised Premises are a part is damaged or destroyed so as to make the Demised Premises untenantable, Landlord will have the option of (i) promptly (within ninety (90) days) repairing, rebuilding or restoring the Building or (ii) terminating this Lease. Landlord will elect to restore the Demised Premises or the Building or terminate the Lease upon not less than fifteen (15) days' written notice to Tenant, notice of such election by Landlord to be given to Tenant within ten (10) business days after such casualty. Landlord agrees to perform an elected restoration or rebuilding in full compliance with all applicable laws and regulations and governmental ordinances. In no event will Landlord be responsible for, or be obligated to repair, any property of Tenant which is damaged or destroyed.

18.2. During any such period that damage or destruction is such as to render the Demised Premises unsuitable for the purposes for which Tenant is leasing them, the Rent will abate. In the event that a portion of the Demised Premises can be used for the operation of Tenant's business (as determined by Tenant in the exercise of reasonable judgment), Rent will be paid in proportion to the area and value of the Demised Premises available for use but will abate as to the remainder, such that there will be a fair apportionment of the Rent.

18.3. If the Demised Premises are totally destroyed or so damaged as to render them practically useless during the remainder of the term of this Lease or if the Demised Premises are damaged so as to substantially impair Tenant's use of the Demised Premises and rebuilding cannot reasonably be completed within ninety (90) days after the date of written notification by Tenant to Landlord of the destruction, then either Landlord or Tenant may terminate this Lease as of the date of such damage or destruction upon fifteen (15) days' written notice by the terminating party to the other.

18.4. All injury to the Demised Premises or the Building of which they are a part caused by moving the property of Tenant into, in or out of the Building and all breakage done by Tenant, or the agents, servants, employees and visitors of Tenant, as well as any damage caused by the overflow, or escape of water, steam, gas, electricity, or other substance, due to the negligence or willful misconduct of Tenant, or the agents, servants, employees and visitors of Tenant, will, unless covered by insurance, be repaired by Landlord, at the expense of Tenant. Landlord will invoice Tenant for such repairs and such charges will be payable with the next installment of Rent. If Tenant desires to repair the damage, Tenant may do so after giving Landlord immediate notice and promptly proceeding with such repairs in a first-class, workmanlike manner. If such injury to the Demised Premises is covered by Landlord's insurance, Landlord shall have responsibility for the repairs.

19. LANDLORD ACCESS TO DEMISED PREMISES.

Landlord, in person or by agent, may enter the Demised Premises to inspect, maintain or repair or to show the Building to prospective purchasers or other persons and, during the last six (6) months of the Initial Term or Renewal Term (as applicable) to show the Demised Premises to prospective tenants or purchasers. However, any such inspection or showing will be done only upon reasonable prior written notice to Tenant, and will not interfere with Tenant's business operations. In addition, Landlord may enter the Demised Premises to enforce its rights under this Lease or to take any action required of Landlord by applicable law; such entry by Landlord shall not constitute an eviction of Tenant or a deprivation of any right of Tenant and shall not alter the obligations of Tenant hereunder or cause Landlord to be liable to Tenant for any damages.

20. EMINENT DOMAIN.

20.1. If at any time during the term of this Lease or any renewal, a portion of the Demised Premises or the Building and the Land of which the Demised Premises are a part, as would render Tenant's use unprofitable or impractical, is taken or appropriated by virtue of eminent domain, or other similar proceedings, or condemned for any public or quasi-public use, Tenant will have the right and privilege of terminating this Lease, termination to be effective upon the earlier of the taking of possession by or vesting of title to the Demised Premises in the condemning authority. Tenant will give notice of such termination as soon as practical but no later than ten (10) business days after it receives notice of the first to occur of: (a) the taking of possession by, or (b) vesting of title in the condemning authority. All of the Rent and other charges and payments reserved herein will be permanently abated from the time of such taking or appropriation. In the event of any taking pursuant to this paragraph 20, or a conveyance in lieu thereof, Tenant shall have no right or entitlement to any portion of any award given to Landlord. Tenant shall have the right to pursue its own rights and remedies from the condemning authority, but such right shall not interfere with, abridge the rights of, nor substantially reduce the award payable to Landlord.

20.2. In the event the entire Demised Premises is taken or appropriated by virtue of eminent domain, or other similar proceedings, or is condemned for any public or quasi-public use, then this Lease will terminate on the earlier of: (i) the taking of possession by or (ii) vesting of title in the condemning authority.

20.3. In the event of a partial taking or appropriation of the Demised Premises or the Building and the Land not resulting in a termination of this Lease, Tenant will be entitled to an abatement of rent, immediately upon the taking, in such manner as is just and equitable. In the event such amount cannot be agreed upon between the parties, the amount will be determined by arbitration in accordance with the rules and procedures of the American Arbitration Association.

21. DEFAULT.

21.1. The happening of any one or more of the following listed events, (hereafter referred to singly as "Event of Default" and in the plural as "Events of Default") will constitute a breach of this Lease on the part of Tenant:

21.1.1. The filing by, on behalf of, or against Tenant of any petition or pleading to declare Tenant as a bankrupt, voluntary or involuntary, under any bankruptcy law or act, or for relief under any bankruptcy law or act, which proceeding is not vacated within 60 days after filing.

21.1.2. The commencement in any court or tribunal of any proceeding, voluntary or involuntary, to declare Tenant insolvent or unable to pay its debts, which proceeding is not vacated within 60 days after commencement.

21.1.3. The failure of Tenant to pay when due any rent payable under this Lease and the continued failure to pay the same for ten (10) days or more after written notice of such failure given to Tenant by Landlord.

21.1.4. The failure of Tenant to fully and promptly perform any act required of it in the performance of this Lease or to otherwise comply with any term or provision after thirty (30) days written notice of such failure given to Tenant by Landlord. However, if such failure is of such nature that it cannot reasonably be cured completely within such period, then Tenant will not be in default unless Tenant has not commenced within such thirty (30) day period to cure the failure or has not thereafter proceeded with diligence and in good faith to complete curing such failure.

21.1.5. The appointment by any court or under any law of a receiver, trustee or other custodian of all or substantially all of the property, assets or business of Tenant, which is not vacated within 60 days of such appointment.

21.1.6. The general assignment by Tenant of all or substantially all of its property or assets for the benefit of creditors.

21.1.7. Any direct or indirect assignment of Tenant's interest in this Lease for the benefit of creditors, levy against Tenant's interest in this Lease, levy against the Demised Premises arising out of any legal proceedings against Tenant, or any attachment against the Demised Premises or Tenant's interest in this Lease which is not dissolved prior to the later of entry of judgment against Tenant in the legal proceeding in which the order of attachment was issued or expiration of any appeal thereof.

21.1.8. Any abandonment of the Demised Premises by Tenant.

21.2. Upon the happening of any Event of Default which continues after the expiration of any applicable cure period, Landlord may, at its option, either: (i) terminate this Lease, or (ii) at any time thereafter enter upon and repossess the Demised Premises and expel Tenant therefrom without prejudice to any rights or liabilities that Landlord may be entitled to by law against Tenant. Such default and repossession will not terminate this Lease or release Tenant from its liability hereunder.

21.3. In case of a re-entry and repossession by Landlord of the Demised Premises, Landlord will use reasonable diligence to rent, lease or relet said Demised Premises for the remainder of the Term at the rent provided for herein, if such is commercially reasonable, to any other tenant or tenants who may be satisfactory to Landlord. In carrying out such obligation Landlord will be entitled to rent, lease or relet the Demised Premises to separate, consecutive tenants for such term or terms and for such rent as Landlord may deem advisable; and, upon such repossession and reletting of said Demised Premises, Landlord will apply the rents from the Demised Premises on account of the rent to be paid by Tenant herein from time to time as such rent accrues, and to the reasonable costs incurred, including attorneys' fees, by Landlord in repossessing and reletting the Demised Premises. Further, Tenant covenants and agrees to pay Landlord its costs incurred, including attorneys' fees, in repossessing and reletting the Demised Premises, and to further pay, at the time the rent required to be paid by Tenant herein becomes due, any difference or deficit between the rent herein stipulated to be paid by Tenant and the actual rent received by Landlord from the renting or reletting of the Demised Premises under the terms of this paragraph. If the rent collected from such reletting is more than sufficient to pay the full amount of the rent reserved hereunder, together with such costs incurred by Landlord in repossessing, reletting and renovating the Demised Premises, the surplus will first be applied to discharge any obligation of Tenant to Landlord and then any surplus remaining after such application will be retained by Landlord.

21.4. Landlord will not be in default unless it fails to perform the obligations required of Landlord by this Lease within thirty (30) days after written notice by Tenant to Landlord and the holder of any mortgage or deed of trust, if any, specifying which obligation(s) Landlord has failed to perform ("Landlord Event(s) of Default"). Provided, however, that if the nature of the specified obligation(s) is such that more than thirty (30) days are required for performance, then Landlord will not be in default if it and/or the holder of any mortgage or deed of trust, if any, commences performance within such thirty (30) day period and thereafter diligently prosecutes the same to completion. If Landlord and/or the holder of any mortgage or deed of trust, if any, have not cured or commenced to cure the Landlord Event(s) of Default set forth in said notice within said thirty (30) day period, Tenant may, at its option, cure any such Landlord Event(s) of Default and deduct the reasonable costs and expenses incurred from the next and succeeding Rent payments. Notwithstanding the proviso above, if a Landlord Event of Default significantly diminishes the laboratory operations of Tenant and such Landlord Event of Default has not been cured after more than sixty (60) days after written notice to Landlord, then Tenant may terminate this Lease upon notice to Landlord. Tenant's right to terminate the Lease in this manner upon ten (10) days' notice shall be Tenant's sole remedy for such a Landlord Event of Default.

22. CUMULATIVE RIGHTS.

No right or remedy conferred upon or reserved to Landlord or Tenant is intended to be exclusive of any other right or remedy provided by law or this Lease, but each is cumulative in addition to every other right or remedy given in this Lease or now or hereafter existing at law or in equity or by statute.

23. EFFECT OF WAIVER OR FORBEARANCE.

No waiver by either party of any breach by the other party of any of its obligations, agreements or covenants under this Lease will be a waiver of any subsequent breach or of any obligation, agreement or covenant, nor is any forbearance by Landlord to seek a remedy for any breach by Tenant or any forbearance by Tenant to seek a remedy for any breach by Landlord, a waiver by Landlord or Tenant, as the case may be, of its rights and remedies with respect to such or any subsequent breach.

24. QUIET ENJOYMENT.

Landlord warrants to Tenant that, upon Landlord's completion of closing of the purchase of the Land and acceptance of title to same, Landlord will be seized in fee of the title to the Land, the Building and the Demised Premises, subject to restrictions, encumbrances and easements of record. Landlord further covenants and warrants that so long as Tenant fulfills the conditions and covenants of this Lease, it will have peaceful and quiet possession of the Demised Premises.

25. MECHANIC'S LIEN.

Tenant shall have no authority to bind the Demised Premises or the Landlord's interest in such Demised Premises, Building, or Land as a result of any contractual or other obligation incurred by the Tenant with respect to the Demised Premises, Building or Land including, but not limited to, any obligation to a materialmen's lien claimant. If any mechanic's lien is filed against the Demised Premises, the Building, or the Land, as the result of any act of Tenant or for work done for or claimed to have been done for, or materials furnished to or claimed to have been furnished to Tenant, the lien must be discharged by Tenant within ten (10) days after receiving notice of such lien, at Tenant's expense, by either paying the lien or by filing any bond required by law as security for such payment. In the event Tenant fails to discharge the lien within this period, Landlord will have the option to procure a discharge by filing a bond and Tenant will pay the cost of the bond as additional Rent on the first day that Rent shall be due thereafter. In all events, Tenant will hold Landlord harmless against any and all loss, costs and expenses in connection with any such lien or claim.

26. NOTICES.

Until changed by notice given as provided in this paragraph, all notices called for in this Lease will be effective upon receipt, and will be in writing and sent by personal delivery or registered or certified mail, return receipt requested, postage prepaid, to Landlord at:

Wake Forest University Health Sciences
Attention: Richard H. Dean, M.D.
President
Medical Center Boulevard
Winston-Salem, NC 27157

with a copy to:

J. Reid Morgan
General Counsel, Wake Forest University
P.O. Box 7656, Reynolda Station
Winston-Salem, NC 27109

and to Tenant at:

Targacept, Inc.
Attention: J. Donald deBethizy, President
One Technology Place
200 E. First Street, Suite 300
Winston-Salem, NC 27101

with a copy to:

Targacept, Inc.
Attention: Mauri Hodges, Chief Financial Officer
One Technology Place
200 E. First Street, Suite 300
Winston-Salem, NC 27101

27. SEVERABILITY.

If any clause or provision of this Lease is declared invalid or void by a court of competent jurisdiction, the remaining clauses or provisions will nevertheless remain in full force and effect.

28. BENEFITS/BURDENS; CAPTIONS AND PARAGRAPH NUMBERS.

This Lease will inure to the benefit of and be binding upon Landlord and Tenant and their respective successors and permitted assigns. The captions and paragraph numbers appearing in this Lease are inserted only as a matter of convenience, and in no way define, limit, construe, or describe the scope or intent of such paragraph of this Lease, nor in any way affect this Lease.

29. MODIFICATION.

This Lease contains the entire agreement between the parties and supersedes any prior or contemporaneous negotiations, understandings and agreements written or oral, between the parties as to the Demised Premises, the Building, and the Land. This Lease may not be amended or modified, and no waiver of any provision will be effective, unless set forth in a written instrument authorized and signed by both parties.

30. CONDITION OF THE DEMISED PREMISES.

Tenant acknowledges that it has examined and accepts the Demised Premises. No representations as to the condition or state of repairs of the Demised Premises have been made by Landlord or its agents, and Tenant accepts the Demised Premises in their present condition at the date of execution of this Lease.

31. MAINTENANCE.

Landlord will maintain and keep in good repair the Demised Premises and all of its component parts.

32. TRANSFER BY LANDLORD.

If Landlord conveys, assigns or otherwise transfers its interest in the Demised Premises or this Lease, except as collateral security for a loan, upon such transfer Landlord will be released and relieved from all liability with respect to the performance of all obligations on the part of Landlord to be performed under this Lease from the date of such transfer; provided, however, the assignee or transferee assumes such liabilities. It is intended that the obligations on the part of Landlord to be performed under this Lease will be binding on each holder of Landlord's interest under this Lease only during and in respect of its respective period of ownership of a fee or leasehold interest in the Demised Premises or in this Lease.

33. HOLDOVER.

If Tenant occupies the Demised Premises after the expiration or termination of the then-current Term of this Lease, whether such expiration or termination be by failure of a Renewal Term to take effect hereunder or otherwise, without the express written consent of the Landlord, such occupancy will be deemed a tenancy from month to month at a Rent of one hundred and twenty-five percent (125%) of the Rent being paid for the last month, or at the next Renewal Term's rental rate pursuant to paragraph 2.2 of this Lease, whichever is greater, and upon the other terms and conditions of this Lease applicable to a month to month tenancy.

34. ASSIGNMENT.

Tenant may not assign or sublease the Demised Premises or its rights and obligations under this Lease without the prior written consent of Landlord. Tenant shall not be released from its obligations under this Lease unless Landlord agrees in writing to release Tenant. Notwithstanding the foregoing, Tenant shall have the unqualified right to assign or sublease all or a portion of the Demised Premises to an entity which is an affiliate, subsidiary, or related entity of the Tenant ("Permitted Party") so long as Tenant either retains a controlling interest in the Permitted Party or through voting rights is able to control the management of the Permitted Party. Despite such assignment or subletting Tenant shall remain responsible for all obligations of Tenant under this Lease without regard to such assignment or subleasing. So long as the acquiring person or entity has a tangible net worth greater than that of Tenant's, according to audited financial statements, Tenant shall also have the right to assign its interest in the Lease to a another person or entity who may acquire Tenant or a controlling interest in Tenant.

35. SHORT FORM MEMORANDUM OF LEASE.

This Lease may not be recorded without the prior written consent of the Landlord. Each party hereto agrees that it will, at the request of the other, execute a short form Memorandum of Lease for recording purposes. The cost of preparing and recording the Memorandum will be borne by the party requesting it.

36. ENVIRONMENTAL COMPLIANCE

36.1 *Tenant's Responsibility.* Tenant shall not (either with or without negligence) cause or permit the escape, illegal or improper disposal or release of any biologically active or other hazardous substances or materials from or onto the Premises or the Building. For purposes of this Lease, "hazardous substances" or "hazardous materials" shall mean (i) any substance which contains gasoline, diesel fuel or other petroleum hydrocarbons, (ii) any substance which is flammable, radioactive, corrosive or carcinogenic, (iii) any substance, including without limitation medical and bio-technological waste, the presence of which causes or threatens to cause a nuisance or health hazard affecting human health, the environment, the Premises or the premises adjacent thereto, or (iv) any substance the presence of which requires reporting, investigation or remediation under any hazardous substance law, as the same may hereafter be amended. Tenant shall not allow the storage or use of such hazardous substances or materials or other hazardous, medical, bio-technological or toxic materials in any manner not sanctioned by law or by the highest standards prevailing in the industry for the storage and use of such substances or materials, not allow to be brought into the Building in which the Premises are located any such materials or substances except to use in the ordinary course of Tenant's business, and then only after written notice is given to Landlord of the identity of such substances or materials. Tenant shall dispose of hazardous substances or hazardous materials on the Premises or within the Building only in a manner which complies with all applicable laws or regulations. Tenant covenants and agrees that the Premises will at all times during its use or occupancy thereof be kept and maintained and Tenant's activities conducted so as to comply with all now existing or hereafter enacted or issued statutes, laws, rules, ordinances, orders, permits and regulations of all state, federal, local and other governmental and regulatory authorities, agencies and bodies applicable to the Premises, pertaining to environmental matters or regulating, prohibiting or otherwise having to do with asbestos and all other toxic, radioactive, or hazardous wastes or material including, but not limited to, the Federal Clean Air Act, the Federal Water Pollution Control Act, and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as from time to time amended (all hereafter collectively called "Laws"). Tenant shall execute affidavits, representations and the like, from time to time, at Landlord's request, concerning Tenant's best knowledge and reasonable belief regarding the presence of hazardous substances or materials on the Premises.

36.2 *Tenant's Liability.* Tenant shall hold Landlord free, harmless, and indemnified from any penalty, fine, claim, demand, liability, cost, or charge whatsoever which Landlord shall incur, or which Landlord would otherwise incur, by reason of Tenant's failure to comply with this paragraph including, but not limited to: 1) the cost of bringing the Premises into compliance with all Laws; 2) the reasonable cost of all appropriate tests and examinations of the Premises to confirm that the Premises have been brought into compliance with all Laws; and 3) the reasonable fees and expenses of Landlord's attorneys, engineers, and consultants incurred by Landlord in enforcing and confirming compliance with this paragraph.

36.3 *Property.* For the purposes of this paragraph, the Premises shall include the real estate covered by this Lease; the Building and all other improvements thereon; all personal property used by Tenant in connection with the Premises (including that owned by Tenant); and the soil, groundwater, and surface water of the Premises, if the Premises include any ground area.

36.4 *Inspections by Landlord.* Landlord and its engineers, technicians, and consultants (collectively the "Auditors") may, from time to time as Landlord deems appropriate and upon reasonable advance notice to Tenant, conduct periodic tests and examinations ("Audits") of the Premises to confirm and monitor Tenant's compliance with this paragraph. Landlord will hold in confidence any information learned during such Audits concerning Tenant's operations, except with respect to any required reports to environmental authorities. Such Audits shall be conducted in such a manner as to minimize the interference with Tenant's permitted activities on the Premises; however, in all cases, the Audits shall be of such nature and scope as shall be reasonably required by then existing technology to confirm Tenant's compliance with this paragraph. Tenant shall fully cooperate with Landlord and its Auditors in the conduct of such Audits. The cost of such Audits shall be paid by Landlord unless an Audit shall disclose a material failure of Tenant to comply with this paragraph, in which case, the cost of such Audit, and the cost of all subsequent Audits made during the Lease Term and within thirty (30) days thereafter (not to exceed two (2) such Audits per calendar year), shall be paid for on demand by Tenant.

36.5 *Landlord's Liability.* Provided, however, the foregoing covenants and undertakings of Tenant contained in this paragraph 36 shall not apply to any condition or matter constituting a violation of any Law: 1) which existed prior to the commencement of Tenant's use or occupancy of the Premises; 2) which was not caused, in whole or in part, by Tenant or Tenant's agents, employees, officers, contractors or invitees during the Term, including any exercised Renewal Options, of this Lease; or 3) to the extent such violation is caused by, or results from the acts or neglects of Landlord or Landlord's agents, employees, officers, contractors, guests, or invitees.

36.6 *Tenant's Liability After Termination of Lease.* The covenants contained in this paragraph 36 shall survive the expiration or termination of this Lease, and shall continue for so long as Landlord and its successors and assigns may be subject to any expense, liability, charge, penalty, or obligation against which Tenant has agreed to indemnify Landlord under this paragraph 36.

37. ROOFTOP COMMUNICATIONS EQUIPMENT.

Subject to and in accordance with the protective covenants of Piedmont Triad Research Park, of which the Land and Building comprise a part (and provided that any equipment located on the rooftop by Tenant fully satisfies all of the provisions of such protective covenants regarding rooftop equipment, whether mandatory or precatory), and subject to the requirements of all applicable laws, regulations, ordinances, the rights of other tenants or licensees previously granted by Landlord or its predecessors in interest, Tenant shall have the right to install, operate and maintain at Tenant's sole cost, expense and risk, satellite dishes, antennae and associated communications equipment for Tenant's own use ("Communications Equipment") as Tenant may reasonably desire upon the roof of the Building. The Communications Equipment as permitted by Landlord shall be installed in a manner not to damage materially the roof or structural integrity of the Building.

38. FINANCIAL REPORTING TO LANDLORD.

During the term of this Lease (including the Initial Term and any Renewal Term or holdover period), Tenant shall furnish to Landlord upon Landlord's request on a confidential basis externally-audited annual reports of Tenant's financial condition in the same form as are or would be presented to investors and/or lenders by Landlord.

39. COUNTERPARTS.

This Lease is executed in two or more identical counterparts, each of which is an original, but both of which will constitute one agreement.

IN WITNESS WHEREOF, the Landlord and the Tenant have caused this Lease to be executed, pursuant to authority duly granted, effective as of the day and year first set forth above.

LANDLORD:	TENANT:
Wake Forest University Health Sciences	Targacept, Inc.
By: /s/ Richard H. Dean	By: /s/ J. Donald deBethizy
Richard H. Dean	J. Donald deBethizy
Title: President	Title: President
Date: 8/22/02	Date: 10-21-02

Exhibit A

Demised Premises

All of the third and fourth floors, consisting of 40,432 rentable square feet, of that commercial building at 200 E. First Street, Winston-Salem, North Carolina, known locally as “One Technology Place”, and located on real property described on the attached Exhibit A-l, together with rights of use of and subject to the rights of others in and to the Common Areas of the building. Diagrams of the Demised Premises and Common Areas (such Common Areas designated in blue and in yellow) are as shown on the attached Exhibit A-2.

Exhibit A-l

Land

That lot or parcel of land located in the City of Winston-Salem, Forsyth County, North Carolina, and being further described as:

All of Lot 116 of the Revised Final Plat for NORTH CAROLINA EMERGING TECHNOLOGIES ALLIANCE which is recorded in Plat Book 41, Page 194 and revised at Plat Book 42, Page 46, in the Office of the Register of Deeds of Forsyth County, North Carolina.

Exhibit A-2

One Technology Place
Basement Level Floor Plan

Targacept parking spaces are designated as numbers 1 through 16.

[GRAPHIC OF FLOOR PLAN]

[GRAPHIC OF FLOOR PLAN]

	Usable Area:	21,036 sq. ft.
One Technology Place	Core:	851 sq. ft.
First Level Floor Plan	Rentable Area:	20,185 sq. ft.

[GRAPHIC OF FLOOR PLAN]

	Usable Area:	**21,520 sq. ft.**
One Technology Place	**Core:**	**851 sq. ft.**
Second Level Floor Plan	**Rentable Area:**	**20,669 sq. ft.**

[GRAPHIC OF FLOOR PLAN]

	Usable Area:	21,067 sq. ft.	Shelled space:	6,316 sq. ft.
One Technology Place	Core:	851 sq. ft.	Upfitted area:	13,900 sq. ft.
Third Level Floor Plan	Rentable Area:	20,216 sq. ft.		

[GRAPHIC OF FLOOR PLAN]

	Usable Area:	**21,067 sq. ft.**
One Technology Place	**Core:**	**851 sq. ft.**
Fourth Level Floor Plan	**Rentable Area:**	**20,216 sq.ft.**

Exhibit B

Janitorial Services

I. Lab Areas

A. Daily Specifications

1. Empty wastebaskets, clean obvious spillage using cleaner disinfectant, replace white biohazard liners.
2. Transport trash to proper location for city pickup.
3. Dust all telephones.
4. Clean counter tops using cleaner disinfectant.
5. Spot clean interior glass in all partitions and doors.
6. Remove fingerprints: doors, frames, light switches, kick and push plates, handles, railings.
7. Dust mop all hard surface floors.
8. Mop, using cleaner disinfectant, all hard surface floors.
9. Clean all sinks, mirrors, and paper towel cabinets.
10. Horizontal surfaces (including exam/procedure beds/tables) remove all spillage using cleaner disinfectant.
11. Dust all horizontal and vertical surfaces below hand height including shelves, molding, and ledges.

B. Weekly Specifications

1. Clean and sanitize telephones.
2. Remove dust and cobwebs from ceiling areas.
3. Wash wastebaskets using cleaner disinfectant.
4. Clean exam/procedure beds/tables (including cabinet and/or frame) using cleaner disinfectant.

C. Monthly Specifications

1. Clean interior glass of exterior walls.
2. Dust and clean Venetian blinds.
3. High dust above hand height all horizontal surfaces including shelves, molding, and ledges.
4. Clean all interior partition glass and door glass.

D. Quarterly Specifications

1. Hard surface floors: strip, clean, refinish, and machine polish moving all equipment and furniture.

II. General Areas

A. Daily Specifications

1. Empty wastebaskets and replace liners in all areas- hospital dumpster.
2. Transport trash to proper location for city pickup.
3. Empty and damp clean ashtrays and ash stands.
4. Dust all telephones.
5. Clean/sanitize drinking fountains.
6. Spot clean desktops.
7. Clean counter tops.
8. Clean door glass both sides.
9. Spot clean interior glass in all partitions and doors.
10. Remove fingerprints: doors, frames, light switches, kick and push plates, handles, railings.
11. Clean cigarette urns: replace filler when needed.
12. Sweep interior stairwells and spot clean.
13. Dust all furniture: wipe waiting room chairs with damp cloth.
14. Dust all exposed filing cabinets, bookcases, and shelves.
15. Sweep and mop all of lobby areas.
16. Spot clean wall to hand height.
17. Sweep and spot clean landing area.
18. Sweep clean entrances and exit ways.
19. Change all lights that are burned out.

B. Weekly Specifications

1. General
   a. Clean and sanitize telephones.
   b. Low dust all horizontal surfaces, including shelves, moldings, and ledges.
   c. Remove dust and cobwebs from ceiling areas.
   d. Damp clean wastebaskets and sanitize.
   e. Put water in restroom drains.
   f. Spray buff all tile areas.
2. Furniture
   a. Fabric - vacuum.
   b. Plastic and leather - damp wipe.
   c. Waiting room chairs - wash with sanitizer.

C. Monthly Specifications

1. General
    a. High dust above hand height all horizontal surfaces including shelves, moldings, and ledges.
    b. Clean entire desk using furniture polish.
    c. Wash all wastebaskets and sanitize.
    d. Clean all interior partition glass and door glass.
2. Floors (Carpets)
    a. Carpet cleaning program.

D. Quarterly Specifications

1. Floors (Hard Surfaces)
    a. Strip, clean, refinish and machine polish.

III. Restrooms

A. Daily Specifications

1. Clean, sanitize, and polish all fixtures.
2. Clean and sanitize all flush rings, drain, and overflow outlets.
3. Clean and polish all chrome fittings.
4. Clean and polish all glass and mirrors.
5. Clean and sanitize all toilet seats.
6. Empty all containers, sanitize, and replace liners.
7. Empty and damp clean all ashtrays.
8. Clean metal partitions.
9. Remove spots, stains, splashes, from wall area adjacent to hand basins.
10. Remove fingerprints from doors, doorframes, light switches, kick and push plates, handles, etc.
11. Refill all dispensers to normal limits - soap, tissue, towels, liners, cups, etc.
12. Dust and spot clean all furniture including tables.

B. Monthly Specifications

1. Wash and sanitize metal partitions.
2. Machine scrub all ceramic tile.

Exhibit C

Termination Schedule

If Tenant exercises its Termination Right pursuant to paragraph 2.4 of the Lease, Tenant will pay to Landlord a Termination Fee in accordance with the following schedule:

If termination occurs on or after:	**but before:**	**Tenant will pay Landlord:**
08-01-05	09-01-05	805,293.60
09-01-05	10-01-05	771,739.70
10-01-05	11-01-05	738,185.80
11-01-05	12-01-05	704,631.90
12-01-05	01-01-06	671,078.00
01-01-06	02-01-06	637,524.10
02-01-06	03-01-06	603,970.20
03-01-06	04-01-06	570,416.30
04-01-06	05-01-06	536,862.40
05-01-06	06-01-06	503,308.50
06-01-06	07-01-06	469,754.60
07-01-06	08-01-06	436,200.70
08-01-06	09-01-06	402,646.80
09-01-06	10-01-06	369,092.90
10-01-06	11-01-06	335,539.00
11-01-06	12-01-06	301,985.10
12-01-06	01-01-07	268,431.20
01-01-07	02-01-07	234,877.30
02-01-07	03-01-07	201,323.40
03-01-07	04-01-07	167,769.50
04-01-07	05-01-07	134,215.60
05-01-07	06-01-07	100,661.70
06-01-07	07-01-07	67,107.80
07-01-07	08-01-07	33,553.90

Exhibit 10.2(b)

NORTH CAROLINA

FIRST LEASE AMENDMENT

FORSYTH COUNTY

This First Lease Amendment ("Amendment"), made effective as of the 1st day of January, 2005 (the "Amendment Date"), by and between Wake Forest University Health Sciences, a North Carolina non-profit corporation having its principal office in Winston-Salem, North Carolina, ("Landlord"); and Targacept, Inc., a Delaware corporation, having its principal office in Winston-Salem, North Carolina ("Tenant") amends that Lease entered into between the parties effective August 1, 2002 (the "Lease").

WITNESSETH:

WHEREAS, Landlord and Tenant desire to amend the Lease upon the terms and conditions and for the rents reserved as further set forth herein,

NOW, THEREFORE, Landlord and Tenant hereby agree as follows:

1. Unless otherwise agreed herein, all of the capitalized terms of this Amendment shall have the same meanings ascribed to them in the Lease.

2. That the Lease is amended in the following respects:

   A. By deleting Exhibit A of the Lease and substituting in lieu thereof the attached Exhibit A, which adds an additional 1000 rentable square feet of space from the first floor of the Building to the Demised Premises.

   B. By deleting paragraph 1.2 of the Lease and renumbering paragraph 1.3 as paragraph 1.2.

   C. By deleting paragraph 2.3 of the Lease and substituting in lieu thereof the following:

"2.3 Landlord hereby grants Tenant the following options to lease additional space in the building (each, an "Option to Lease"):

2.3.1 <u>First Floor Option</u>

Landlord hereby grants to Tenant the option to lease up to 12,338 additional rentable square feet of space on the first floor of the building (the "First Floor Option Space"), provided Tenant shall have paid to Landlord on or before January 1, 2005 (the "Amendment Date") the sum of $37,014 ($3.00 per rsf) as a "space hold fee" to secure this right for the period from the Amendment

Date through March 31, 2006 (the "First Floor Option Period"). Tenant will exercise this Option to Lease, if it elects exercise, by giving written notice to Landlord not later than 60 days prior to Tenant's intended occupancy date for such First Floor Option Space (the "First Floor Occupancy Effective Date"). Exercise of this Option to Lease shall effect a lease of the First Floor Option Space from the First Floor Occupancy Effective Date through the balance of the Initial Term and, only if Targacept elects both to exercise the Renewal Option and to continue to lease the First Floor Option Space during the Renewal Term, for the Renewal Term. If the Option to Lease the First Floor Option Space is exercised, (a) the First Floor Option Space shall thereupon become part of the Demised Premises for the Initial Term and, subject to the conditions set forth in the preceding sentence, the Renewal Term and (b) Tenant will pay Rent for such First Floor Option Space during the Initial Term and, subject to the conditions set forth in the preceding sentence, the Renewal Term as set forth in paragraphs 3.1 and 3.2; provided that (i) an amount equal to (A) $2,467.60 (the space hold fee divided by the 15 months in the First Floor Option Period) times (B) the number of calendar months for which the first day occurs after the date on which Targacept exercises the Option to Lease the First Floor Option Space and before March 31, 2006 shall be applied as a credit against the first Rent due for the First Floor Option Space and (ii) the space hold fee is nonrefundable in the event Tenant declines to exercise the Option to Lease the First Floor Option Space.

2.3.2 PTRP Option

Landlord hereby grants to Tenant the option to lease that 4387 rentable square feet of "PTRP Space" on the first floor of the building as designated on the attached Exhibit A-2 (the "PTRP Option Space"), the exercise of such Option to Lease being conditional on Tenant's exercise of the Renewal Option. Tenant will exercise this Option to Lease, if it elects exercise, by giving written notice to Landlord not less than 180 days prior to Tenant's intended occupancy date for such space (the "PTRP Occupancy Effective Date"); provided that in no event shall the PTRP Occupancy Effective Date be prior to July 31, 2007. Unless Landlord otherwise agrees, Tenant may exercise this Option to Lease only with respect to all of the PTRP Option Space. Exercise of this Option to Lease shall effect a lease of the PTRP Option Space from the PTRP Occupancy Effective Date through the balance of the Renewal Term and the PTRP Option Space shall thereupon become part of the Demised Premises. Tenant will pay

Rent for such PTRP Option Space during the Renewal Term as set forth in paragraphs 3.1 and 3.2.

2.3.3 Second Floor Option

Landlord hereby grants to Tenant the option to lease an additional 20,669 rentable square feet of space, being all of the second floor of the Building (the "Second Floor Option Space"), the exercise of such Option to Lease being conditional on Tenant's exercise of the Renewal Option. Tenant will exercise this Option to Lease, if it elects exercise, by giving written notice to Landlord not less than twelve (12) months prior to Tenant's intended occupancy of such space (the "Second Floor Occupancy Effective Date"); provided that in no event shall the Second Floor Occupancy Effective Date be prior to July 31, 2007. Unless Landlord otherwise agrees, Tenant may exercise this Option to Lease only with respect to all of the Second Floor Option Space. Exercise of this Option to Lease shall effect a lease of the Second Floor Option Space from the Second Floor Occupancy Effective Date through the balance of the Renewal Term and the Second Floor Option Space shall thereupon become part of the Demised Premises. Tenant will pay Rent for such Second Floor Option Space during the Renewal Term as set forth in paragraphs 3.1 and 3.2."

D. By deleting clause "b" of the third sentence of paragraph 2.4, and substituting the following in lieu thereof:

"b) upon Tenant's request pursuant to paragraph 6.1 to require Landlord to provide Tenant an allowance for redecorating or for upfitting of the Demised Premises, and continuing for the remainder of the Renewal Term; and"

E. By deleting paragraph 3.1 of the Lease and substituting the following in lieu thereof:

"3.1 Tenant will pay annual rental pursuant to the following schedule ("rsf" indicates "rentable square foot"):

Term	**Effective Date**	**Demised Premises**				
		40,432 rsf 3rd & 4th Floors	**1000 rsf First Floor**	**1st Floor Option Space**	**1st Floor PTRP Space**	**Second Floor Space**
Initial Term	Commencement Date 8-1-02	36.00/rsf	—	—	—	—
	Amendment Date 1-1-05	—	15.00/rsf	—	—	—
	First Floor Occupancy Effective Date	—	—	15.00/rsf*	—	—
Renewal Term	8-1-2007	33.60/rsf	15.00/rsf	15.00/rsf*	—	—
	PTRP Occupancy Effective Date	—	—	—	15.00/rsf*	—
	Second Floor Occupancy Effective Date	—	—	—	—	15.00/rsf*

*if corresponding option is exercised

(herein collectively "Rent"). Rent is payable in equal monthly installments, in advance on the first day of each calendar month of each calendar year during the Initial Term and, if applicable, the Renewal Term, prorated for any partial month. Any increases or decreases in the amount of square footage leased during a month will be adjusted in the subsequent monthly payment. Rent payments shall be payable to "Wake Forest University Health Sciences" and sent to Landlord in care of Controller's Office, Attention: Doug Lischke, Medical Center Boulevard, Winston-Salem, NC, 27157."

F. By deleting the first sentence of paragraph 4.1 of the Lease and substituting the following in lieu thereof:

"Tenant shall have the right, subject to the Landlord's obligations to existing tenants, to the exclusive use (without payment of any additional rent) of a pro rata share of the underground parking available for the Building based on Tenant's rentable square footage; such spaces shall be designated for use by Tenant and are, as of the Commencement Date (and subject to increase upon exercise of any one or more of the Options to Lease set forth in paragraph 2.3), as shown on attached Exhibit A-2."

G. By deleting paragraph 6 of the Lease and substituting the following in lieu thereof:

6. Upfitting/Condition of Demised Premises

6.1 Except as otherwise set forth herein, Tenant accepts the Demised Premises in their present condition, which condition includes certain upfitting and improvements to the third and fourth floors made by Landlord at its cost and expense and to Tenant's specifications prior to the Commencement Date and in accordance with that prior lease agreement between the parties dated April 20, 2001. At any time during the second year of the Renewal Term, Landlord will provide Tenant, upon Tenant's request, an allowance of Ten Dollars ($10.00) per rentable square foot of the third and fourth floors of the Demised Premises for use by Tenant in redecoration of such floors of the Demised Premises.

6.2 On or before the Amendment Date, Landlord shall have installed at its cost and expense a door, ceiling grid with lights, and one electrical outlet in the 1000 rentable square feet of space from the first floor of the Building added to the Demised Premises as of the Amendment Date.

6.3 Upon Tenant's exercise of the Option to Lease the First Floor Option Space, Landlord will at its cost and expense install up to four card readers and repair carpet and patch and paint as necessary.

6.4 Upon Tenant's exercise of the Option to Lease the PTRP Option Space, Landlord will at its cost and expense install two card readers and a door at the hallway off the main lobby.

6.5 Upon Tenant's exercise of the Option to Lease the Second Floor Option Space, Landlord will provide Tenant, upon Tenant's request, an allowance of Ten Dollars ($10.00) per rentable square foot of leased Second Floor Space as an upfit allowance for such Second Floor Space.

3. Except as amended herein, all of the terms and conditions of the Lease shall remain in full force and effect.

IN WITNESS WHEREOF, Landlord and Tenant have caused this Amendment to be executed, pursuant to authority duly granted, effective as of the Amendment Date set forth above.

LANDLORD:	TENANT:
Wake Forest University Health Sciences	Targacept, Inc.
By: /s/ Richard H. Dean, M.D. Richard H. Dean, M.D. President	By: /s/ J. Donald deBethizy J. Donald deBethizy President
Date: January 6, 2005	Date: January 4, 2005

Exhibit A

Demised Premises

The Demised Premises consists of the following:

- As of the Commencement Date, all of the third and fourth floors, consisting of 40,432 rentable square feet, including within the meaning of "Premises" or "Demised Premises" the entire fourth floor of the Building, to be utilized as Tenant's laboratory facilities, encompassing 20,216 rentable square feet, and 20,216 rentable square feet of general office space on the third floor.
- As of the Amendment Date, an additional 1,000 rentable square feet on the first floor of the Building, to be utilized as "Tenant's Storage Space,"

together with rights of use of and subject to the rights of others in and to the Common Areas of the Building. Diagrams of the Demised Premises and Common Areas (such Common Areas designated in blue and in yellow) are as shown on the attached Exhibit A-2.

Exhibit 10.3

LOAN AGREEMENT

This Loan Agreement ("Agreement"), dated as of the 19th day of April, 2002, is made and entered into between TARGACEPT, INC., a Delaware corporation ("Borrower"), and the CITY OF WINSTON-SALEM, a municipal corporation of North Carolina ("Lender").

RECITALS:

WHEREAS, Borrower has requested that Lender make available to Borrower a loan in the principal amount of $500,000 (the "Loan") on the terms and conditions hereinafter set forth; and

WHEREAS, in order to induce Lender to make the Loan to Borrower, Borrower has made certain representations to Lender; and

WHEREAS, Lender, in reliance upon the representations of Borrower, has agreed to make the Loan upon the terms and conditions hereinafter set forth;

NOW, THEREFORE, in consideration of the agreement of Lender to make the Loan, the mutual covenants and agreements hereinafter set forth, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Borrower and Lender hereby agree as follows:

ARTICLE I
LOAN

1.1 Description of Loan. The Loan shall be evidenced by a Note (the "Note") dated as of the date hereof (the "Issue Date") in the amount of Five Hundred Thousand and No/100 Dollars ($500,000). The Loan shall be payable over a term of one hundred and twenty (120) months. The date that one hundred and twenty (120) months from the date hereof is referred to herein as the "Maturity Date." Except as provided in Section 4.2, the Loan shall bear no interest from the Issue Date until the date that is sixty (60) months from the Issue Date (the "Anniversary Date"). Except as provided in Section 4.2, from the Anniversary Date until the Maturity Date, the Loan shall bear interest during each fiscal year based on Borrower's Gross Revenues during Borrower's preceding fiscal year as follows:

Period	Gross Revenues for Preceding Fiscal Year	Applicable Interest Rate Per Annum
Anniversary Date - December 31, 2007	Greater than or equal to $100,000,000	7%
	Less than $100,000,000	5%

January 1, 2008- December 31,2008	Greater than or equal to $100,000,000 Less than $100,000,000	7% 5%
January 1, 2009- December 31,2009	Greater than or equal to $100,000,000 Less than $100,000,000	7% 5%
January 1, 2010- December 31,2010	Greater than or equal to $100,000,000 Less than $100,000,000	7% 5%
January 1, 2011- December 31, 2011	Greater than or equal to $100,000,000 Less than $100,000,000	7% 5%
January 1, 2012- Maturity Date	Greater than or equal to $100,000,000 Less than $100,000,000	7% 5%

For example, the applicable interest rate per annum for the period beginning on the Anniversary Date and ending on December 31, 2007 shall be either 7% if Borrower’s Gross Revenues during the fiscal year ending December 31, 2006 are greater than or equal to $100,000,000, or 5% if Borrower’s Gross Revenues during the fiscal year ending December 31, 2006 are less than $100,000,000. The applicable interest rate per annum for the period beginning on January 1, 2008 and ending on December 31,2008 shall be either 7% if Borrower’s Gross Revenues for the fiscal year ending December 31, 2007 are greater than or equal to $100,000,000, or 5% if Borrower’s Gross Revenues during the fiscal year ending December 31, 2007 are less than $100,000,000. Gross Revenues shall mean total sales of Borrower before any deductions for expenses or costs. The applicable interest rate shall be determined based on an officer’s certificate delivered annually by Borrower in accordance with Section 3.2 and shall be adjusted as of the first day of the year following the fiscal year as to which the officer’s certificate relates; provided, however, that if Borrower fails to provide any officer’s certificate to Lender as required by and within the time limits set forth in Section 3.2, the applicable interest rate from January 1 of such year until an appropriate officer's certificate is provided shall be seven percent (7%).

No payment of principal or interest shall be due until the Anniversary Date. Beginning on the Anniversary Date and continuing on a monthly basis, Borrower shall pay to Lender monthly installments of principal and interest in the amount of Nine Thousand Four Hundred Thirty-Five and 63/100 Dollars ($9,435.63), with all remaining principal and unpaid interest payable on the Maturity Date. Upon an Event of Default, the amount of unpaid principal and interest and all other sums due under this Loan Agreement shall bear interest at the rate of sixteen percent (16%) per annum after default until paid. Interest on the Loan shall be computed on the basis of a 360-day year of twelve 30-day months. The Loan may be prepaid in full or in part at any time without penalty or premium.

ARTICLE II
WARRANTIES

Borrower hereby warrants to Lender as follows:

2.1 Corporate Status. Borrower is a corporation duly organized, validly existing, and in good standing under the laws of the state of Delaware and has the corporate power to own and operate its properties, to carry on its business as now conducted, and to enter into and to perform its obligations under this Agreement and the Note.

2.2 Authorization. Except as disclosed on Schedule 2.2, Borrower has full legal right, power, and authority to enter into and perform its obligations under this Agreement and the Note, without the consent or approval of any other person, firm, governmental agency, or other legal entity. The execution and delivery of this Agreement, the borrowing hereunder, the execution and delivery of the Note, and the performance by Borrower of its obligations hereunder and thereunder are within its corporate powers and have been duly authorized by all necessary corporate action properly taken, have received all necessary governmental approvals, and do not and will not contravene or conflict with any material provision of law, any material applicable judgment, ordinance, regulation, or order of any court or governmental agency, the charter or bylaws of Borrower, or any material agreement binding upon it or its properties.

2.3 Validity and Binding Effect. This Agreement and the Note are the legal, valid, and binding obligations of Borrower, enforceable in accordance with their terms.

2.4 No Consent Required. Except as disclosed on Schedule 2.4, the execution, delivery, and performance of this Agreement and the Note by Borrower do not require the consent or approval of or the giving of notice to any person or entity other than the approval of the Board of Directors of Borrower.

2.5 Solvency. Borrower is solvent as of the date of this Agreement. For purposes of this Section 2.5, "solvent" shall mean Borrower (i) is able to pay its debts as they mature, and (ii) owns assets having present fair saleable value greater than the amount required to pay its debts.

2.6 Survival. The representations and warranties of Borrower contained in this Agreement shall survive until this Agreement terminates in accordance with Article V hereof.

ARTICLE III
COVENANTS AND AGREEMENTS

3.1 Payment of Indebtedness. Borrower shall pay the indebtedness evidenced by the Note according to the terms thereof.

3.2 Financial Reports. Until this Agreement terminates in accordance with Article V hereof, Borrower will furnish to Lender within one hundred twenty (120) days after the close of each fiscal year of Borrower a certificate, executed by the chief financial officer, controller, or treasurer of Borrower, setting forth the true and correct amount of Gross Revenues of Borrower for such fiscal year.

3.3 No Relocation. Until this Agreement terminates in accordance with Articles V hereof, Borrower agrees not to relocate outside of the City of Winston-Salem (i) its principal place of business; (ii) any material portion of its primary operations, including, but not limited to, its research and technology, manufacturing, or administrative divisions, or (iii) any material number of its employees with respect to any division of Borrower.

3.4 Notice of Default. Until this Agreement terminates in accordance with Article V hereof, Borrower shall give written notice to Lender of the occurrence of any Event of Default (as defined below) under this Agreement or the Note of which Borrower becomes aware promptly upon the occurrence thereof.

ARTICLE IV
DEFAULT AND REMEDIES

4.1 Events of Default. The occurrence of any of the following shall constitute an Event of Default hereunder:

(a) Default in the payment of the principal of or interest on the indebtedness evidenced by the Note in accordance with the terms of the Note;

(b) Any material misrepresentation by Borrower as to any matter hereunder;

(c) Failure of Borrower to perform any of its obligations under this Agreement;

(d) Borrower's (i) admission in writing of its inability to pay its debts generally as they become due; (ii) assignment for the benefit of creditors or petition or application to any tribunal for the appointment of a custodian, receiver, or trustee for it or a substantial part of its assets; or (iii) voluntary commencement of any proceeding under any bankruptcy, reorganization, arrangement, readjustment of debt, dissolution, or liquidation law or statute of any jurisdiction, whether now or hereafter in effect, or the involuntary commencement of any such proceeding that is not dismissed within sixty (60) days;

(e) Borrower ceases to do business or sells all or substantially all of its assets or properties; or

(f) Borrower’s liquidation or dissolution;

provided, however, that with respect to any default described above that is capable of being cured, the occurrence of such default shall not constitute an Event of Default hereunder if such default is fully cured and corrected within thirty (30) days (ten (10) days, if such default may be cured by payment of a sum of money) of notice thereof to Borrower.

4.2 Acceleration of Maturity. Upon the occurrence of any Event of Default described in Section 4.1, the indebtedness evidenced by the Note shall be immediately due and payable in full. In addition, if the Event of Default is caused by a breach by Borrower of its covenants contained in Section 3.3, Borrower agrees that the indebtedness immediately due and payable shall include all unpaid principal and interest computed as if the interest payable pursuant to the Note beginning on the Issue Date and continuing over the term of the Note were seven percent (7%).

4.3 Remedies Cumulative; No Waiver. No right, power, or remedy conferred upon or reserved to Lender by this Agreement or the Note is intended to be exclusive of any other right, power, or remedy, but each and every such right, power, and remedy shall be cumulative and concurrent and shall be in addition to any other right, power, and remedy given hereunder or under the Note or now or hereafter existing at law, in equity, or by statute. No delay or omission by Lender to exercise any right, power, or remedy accruing upon the occurrence of any Event of Default shall exhaust or impair any such right, power, or remedy or shall be construed to be a waiver of any such Event of Default or an acquiescence therein, and every right, power, and remedy given by this Agreement and the Note to Lender may be exercised from time to time and as often as may be deemed expedient by Lender.

ARTICLE V
TERMINATION

This Agreement shall remain in full force and effect until the repayment in full of the Note.

ARTICLE VI
MISCELLANEOUS

6.1 Successors and Assigns. The Agreement shall inure to the benefit of the successors and permitted assigns of the parties hereto.

6.2 Assignment. Neither this Agreement nor the Note may be assigned by Borrower without the prior written consent of Lender.

6.3 Time of the Essence. Time is of the essence with respect to each and every covenant, agreement, and obligation of Borrower and Lender hereunder and under the Note.

6.4 Severability. If any provision of this Agreement or the application thereof to any person or circumstance shall be invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provisions to other persons or circumstances shall not be affected thereby and shall be enforced to the greatest extent permitted by law.

6.5 Notices. All notices and other communications hereunder shall be deemed given if given in writing and delivered personally, by courier or by facsimile transmission, or mailed by registered or certified mail (return receipt requested), courier, facsimile, or postage fees prepaid, to the party to receive the same at its address set forth below (or at such other address as may from time to time be designated by such party to the other in accordance with this Section 6.5):

If to Lender:

The City of Winston-Salem
P.O. Box 2511
Winston-Salem, NC 27102
Telephone: 336-727-8040
Attention: Derwick L. Paige

If to Borrower:

Targacept, Inc.
200 East First Street, Suite 300
Winston-Salem, NC 27101
Telephone: 336-480-2186
Facsimile: 336-480-2112
Attention: Alan A. Musso, Vice President and Chief Financial Officer

6.6 Entire Agreement. This Agreement and the Note represent the entire agreement between the parties concerning the subject matter hereof.

6.7 Governing Law. This Agreement shall be construed and enforced under the laws of the State of North Carolina without regard to the conflicts of laws thereunder.

6.8 Counterparts. This Agreement may be executed in multiple originals or counterparts, each of which shall be deemed an original and all or which when taken together shall constitute but one and the same instrument.

6.9 Amendments. No amendment or modification hereof shall be effective except in a writing executed by each of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

BORROWER:

TARGACEPT, INC.

By: /s/ Alan A. Musso
Name: Alan A. Musso
Title: Chief Financial Officer

LENDER:

CITY OF WINSTON-SALEM

By: /s/ Derwick L. Paige
Name: Derwick L. Paige
Title: Development Director

Exhibit 10.4

Amended and Restated Note and Security Agreement

Winston-Salem. North Carolina

Date January 30, 2004 Up to $4,500,000

FOR VALUE RECEIVED, Targacept, Inc., a corporation organized and existing under the laws of the State of Delaware with its principal executive office located at 200 East First Street, Suite 300, Winston-Salem, North Carolina 27102-1465 (hereinafter the “Borrower”), hereby promises to pay to the order of R.J. Reynolds Tobacco Holdings, Inc. (hereinafter the “Lender”) at its office where borrowed, or at such other place as Lender hereafter may direct from time to time in writing, in immediately available funds of lawful money of the United States, the sum of Four Million Five Hundred Thousand Dollars (or the unpaid principal amount of all advances which the Lender actually makes hereunder to the Borrower, whichever is less) together with any unpaid interest hereon from date of advance, in accordance with the terms contained in this Amended and Restated Note and Security Agreement (hereinafter referred to as this “Note”). The principal evidenced by this Note shall be advanced periodically from time to time in accordance with the terms of this paragraph in up to four disbursements (each such disbursement is referred to herein as a “Tranche”). The first Tranche is in the amount of $2,500,000, was advanced to the Borrower on May 1, 2002 and is payable in accordance with the terms set forth herein (the “First Tranche”). The Lender acknowledges that the Borrower is current as of the date of this Note with all payments due with respect to the First Tranche. The remaining principal amount evidenced by this Note may be advanced in up to three Tranches, the aggregate principal amount of which shall not exceed $2,000,000 (referred to herein individually as an “Additional Tranche” and collectively referred to herein as the “Additional Tranches”).

Upon written request of the Borrower, which shall be made in writing and delivered to the Lender on a business day not more than 45 nor fewer than 5 business days prior to the desired date of disbursement the Lender shall, subject to the terms and conditions set forth herein, advance an Additional Tranche to the Borrower provided that: (1) such written request shall set forth the principal amount of the proposed Additional Tranche, the proposed date of disbursement of the Additional Tranche and a description of the equipment, goods and other property purchased or to be purchased with the proceeds of such Additional Tranche; (2) in no event shall the Lender be obligated to advance more than three Additional Tranches or shall the aggregate initial principal amount of the First Tranche and all Additional Tranches exceed $4,500,000; (3) the Borrower’s written request may be made only so long as an Event of Default has not occurred hereunder and must be delivered to the Lender such that the date that such Additional Tranche is disbursed occurs on or before December 31, 2004. The Collateral securing the Tranches shall be evaluated by Lender at the time of each requested disbursement of an Additional Tranche to determine whether the Collateral has sufficient value to secure such Additional Tranche. In the event Lender makes a good faith determination that the Collateral is not of sufficient value to secure such Additional Tranche, Lender shall postpone disbursement of the Additional Tranche until such time that Lender determines in good faith that the Collateral has sufficient value to secure it. Lender shall use its best efforts to make such determinations in a timely manner. On the date that each Additional Tranche is advanced, the Borrower and the Lender shall execute a schedule supplementing Exhibit A to this Note, as the Lender shall reasonably request, to add additional Collateral that is to secure the Tranches, if any, confirm the outstanding principal amount of the outstanding Tranches and to evidence the rate of interest applicable to the Additional Tranche and the repayment dates for the Additional Tranche, and each such supplemental schedule shall thereupon become part of this Note.

Repayment:

☒The First Tranche shall be paid in 48 equal monthly payments of $59,402.75 beginning June 1, 2002 and continuing on the first day of each month thereafter until May 1, 2006 when the entire outstanding principal amount of such First Tranche then outstanding and all accrued but unpaid interest shall be paid in full. Each Additional Tranche shall be repaid in 48 equal monthly payments based on a 48-month amortization schedule beginning on the first day of the first calendar month that begins after the date such Additional Tranche is advanced and continuing on the first day of each month thereafter until the 48^{th} month thereafter when the entire outstanding principal amount of such Additional Tranche then outstanding and all accrued but unpaid interest shall be paid in full.

If advances of the principal amount hereof are to be made by Lender to the Borrower after the date of this Note, Lender, at its sole discretion, is hereby authorized to make such advances under this Note upon telephonic or written communication of a borrowing request from any person representing himself or herself to be the Borrower or, in the event the Borrower is an organization, a duly authorized officer or representative of Borrower.

Interest:
Payable:

☒ in arrears.

☒ At the fixed rate per annum of 6.6% for the First Tranche.

☒ At an interest rate(s) per annum for each Additional Tranche established on the date such Applicable Tranche is advanced that approximates the hypothetical 4-year U.S. Treasury rate (determined as of the day the Applicable Tranche is advanced) plus 3.5%.

In no case shall interest exceed the maximum rate permitted by applicable law.

In addition to any other collateral specified herein, to secure the indebtedness evidenced by this Note, together with any extensions, modifications, or renewals thereof, in whole or in part, as well as all other indebtedness, obligations and liabilities of the Borrower to the Lender, now existing or hereafter incurred or arising, (hereinafter sometimes referred to as the “Obligations”), but excluding any obligations to Lender in its capacity as a holder of equity securities of Borrower, the Borrower does hereby grant to the Lender a security interest in and to, and does hereby assign, pledge, transfer and convey to Lender, the property set forth on Exhibit A hereto, as such Exhibit shall be supplemented from time to time, together with any and all additions and accessions thereto or replacements thereof and any products and/or proceeds of any of the foregoing (the “Collateral”). If, with respect to any Collateral in the form of investment securities, a stock dividend is declared or any stock split-up made or right to subscribe issued, all the certificates for the shares representing such stock dividend or split-up or right to subscribe will be immediately delivered, duly endorsed, to the Lender as additional Collateral.

The Lender shall have, but shall not be limited to, the following rights, each of which may be exercised at any time or from time to time: (i) to transfer this Note and the Collateral, and any transferee shall have all the rights of the Lender hereunder and the Lender shall be thereafter relieved from any liability with respect to any Collateral so transferred; and (ii) to vote any investment securities forming a part of the Collateral.

Borrower will at Lender's request maintain insurance on the Collateral in amounts at least equal to the fair market value of the Collateral and against casualty, public liability and property damage risks and such other risks as Lender may request. Borrower will pay all premiums for insurance when due. Unless and until requested by Lender, Borrower shall not be required to name Lender as additional insured in such policy or to provide Lender a copy of the policy for or certificate evidencing such insurance, but when and if requested by Lender, the Borrower shall as promptly as reasonably practicable: (i) cause all policies of such insurance to specify that Lender is an additional insured as its interests may appear and to provide that such insurance shall not be cancelable by Borrower or the insurer without at least 30 days advance written notice to Lender and that proceeds are payable to Lender regardless of any act or omission of Borrower which would otherwise result in a denial of a claim; and (ii) deliver all policies or certificates thereof (with copies of such policies) to Lender. In the event any or all of such insurance is cancelled, any returned premium thereon may be collected by Lender and applied by Lender to any part of the Obligations, either matured or unmatured. Lender is authorized to receive the proceeds of any insurance loss and at the option of Lender shall apply such proceeds toward either the repair or replacement of the Collateral or the payment of the Obligations secured hereby. Borrower will also pay all taxes and other impositions on the Collateral as well as the cost of repairs or maintenance to the Collateral. The loss, injury or destruction of the Collateral, with or without the fault of Borrower, shall not release the Borrower from any liability hereunder or in any way affect Borrower's liability hereunder.

The occurrence of any one or more of the following conditions or events shall constitute an "Event of Default" hereunder: (i) any failure of Borrower to pay any of the Obligations when due or to observe or perform any agreement, covenant or promise hereunder; (ii) any default of Borrower in the payment or performance of any other liabilities, indebtedness or obligations to Lender or to allow or permit any other liabilities, indebtedness or obligations to Lender to be accelerated; (iii) any failure of Borrower to observe or perform any agreement, covenant or promise contained in any agreement, instrument or certificate executed in connection with the granting of a security interest in property to secure the Obligations; (iv) any warranty, representation or statement made or furnished to the Lender by or on behalf of Borrower in connection with the loan evidenced by this Note proving to have been false in any material respect when made or furnished; (v) any loss, theft, substantial damage, destruction, sale, foreclosure of or encumbrance to any of the Collateral, or the making of any levy, seizure or attachment thereof or thereon or the rendering of any judgment or lien or garnishment or attachment against Borrower; or (vi) the dissolution, liquidation or winding up of Borrower, or the insolvency, or appointment of a receiver of any part of the property of, assignment for the benefit of creditors by, or the commencement of any proceeding under any bankruptcy or insolvency laws, state or federal, by or against, the Borrower.

Upon the occurrence of an Event of Default (and the expiration of any applicable notice and/or grace periods), to the extent permitted by law, the Lender at its option may declare all of the Obligations to be immediately due and payable, all without notice or demand, and shall have in addition to and independent of the right to declare the Obligations to be due and payable and any other rights of the Lender under this Note or any other agreement with Borrower, the remedies of a secured party under the Uniform Commercial Code as in effect in North Carolina (the "Code"), including, without limitation thereto, the right to take possession of the Collateral, or the proceeds thereof and to sell or otherwise dispose thereof, and for this purpose, to sign in the name of Borrower any transfer, conveyance or instrument necessary or appropriate in order for the Lender to sell or dispose of any of the Collateral, and the Lender may, so far as the Borrower can give authority therefor, enter upon the premises on which the Collateral or any part thereof may be situated and remove the same therefrom, without being liable in any way to Borrower on account of entering any premises. The Lender may require the Borrower to assemble the Collateral and make the Collateral available to the Lender at a place to be designated by the Lender which is reasonably convenient to both parties. Unless the Collateral is perishable or threatens to decline speedily in value or is of a type customarily sold on a recognized market, the Lender shall give the Borrower written notice of the time and place of any public sale thereof or of the time after which any private sale or other intended disposition thereof is to be made. The requirement of sending reasonable notice shall be met if such notice is mailed, postage prepaid, or otherwise given, to the Borrower at the last address shown on the Lender's records at least ten (10) days before such disposition. Lender shall comply with all applicable state or federal law requirements in connection with a disposition of the Collateral.

The rights of the Lender specified herein shall be in addition to, and not in limitation of, the Lender's rights under the Code, or any other statute or rules of law conferring rights similar to those conferred by the Code, and under the provisions of any other instrument or agreement executed by the Borrower to the Lender. All prior agreements to the extent inconsistent with the terms of this Note shall be construed in accordance with the provisions hereof. Any rights or remedies of the Lender may be exercised or taken in any order or sequence whatsoever, at the sole option of the Lender. This agreement shall bind and inure to the benefit of the heirs, legatees, executors, administrators and assigns of Lender and Borrower.

The security agreement set forth herein and the security interest in the Collateral created hereby shall terminate only when all of the Obligations have been paid in full. No waiver by the Lender of any default shall operate as a waiver of any other default or of the same default on a future occasion. All rights of the Lender hereunder shall inure to the benefit of its successors and assigns, and all obligations of the Borrower shall bind the heirs, legal representatives, successors and assigns of the Borrower. Borrower and each endorser, surety or guarantor of this Note, whether bound by this or by separate instrument or agreement, shall be jointly and severally liable for the indebtedness evidenced by this Note and hereby severally (i) waive presentment for payment, demand, protest, notice of nonpayment or dishonor and of protest and any and all other notices and demands whatsoever; to the fullest extent permitted by applicable law; and (ii) consent that at any time, or from time to time, payment of any sum payable under this Note may be extended without notice whether for a definite or indefinite time. The Borrower shall pay to Lender on demand all expenses, including reasonable attorneys' fees and expenses, incurred by Lender in any way arising from or relating to the enforcement or attempted enforcement of the Note and any related guaranty, collateral document or other document and the collection or attempted collection, whether by litigation or otherwise, of this Note. Time is of the essence.

This Note evidences the indebtedness heretofore evidenced by, and amends and restates in its entirety, the Note and Security Agreement dated as of May 1, 2002 made by the Borrower in favor of the Lender. This Note is not in payment or satisfaction of the Note and Security Agreement dated as of May 1, 2002 nor is this Note in any way intended to constitute a novation of the Note and Security Agreement dated as of May 1, 2002.

This Note, and the rights and obligations of the parties hereunder, shall be governed and construed in accordance with the laws of the State of North Carolina, except to the extent that the Code provides for the application of other law with respect to the Collateral.

[Signature Page to Follow]

IN WITNESS WHEREOF, the Borrower and the Lender have executed this Note under seal the day and year set forth above.

	Borrower:
Attest:	TARGACEPT, INC.
/s/ Alan A. Musso	By: /s/ J. Donald deBethizy
Title: VP & CFO	Title: President & CEO
[Corporate Seal]	
	Lender:
Attest:	R.J. REYNOLDS TOBACCO HOLDINGS, INC.
/s/ Daniel Fawley	By: /s/ Lynn L. Lane
Title: VP & Assistant Treasurer	Title: SVP & Treasurer
[Corporate Seal]	

Exhibit A

Appendix A

Loan Collateral Summary:

2000 Post Spinout	$ 132,056.26	
2001 Additions	$ 995,243.21	
2002 Add-CIP	$ 1,290,937.55	*includes some estimates*
2002 Additions	$ 99,546.68	
	$ 2,517,783.70	

2000 Post Spinout

9/30/2000 Laptop	$	3,670.92
30-Sep Laptop	$	4,176.30
30-Sep Laptop	$	3,980.21
31-Oct Shredder	$	4,125.62
20-Oct S/ware - Office Suite	$	2,441.45
20-Oct 15 Dell pc's	$	25,440.97
20-Oct T-1	$	3,879.28
20-Oct 26 MIS office 2000	$	14,310.87
20-Oct NT Software	$	3,964.22
20-Oct CISCO Switch, Tape Backup	$	28,489.09
21-Nov Balance	$	2,292.73
21-Nov Freezer	$	1,805.81
21-Nov Balance	$	1,144.85
22-Nov Epxon XGA	$	5,099.34
13-Nov FAS software	$	2,135.85
30-NovX10Giaga	$	3,819.05
30-Nov PCI-Gigenet	$	3,394.25
1-Dec IBM Thinkpad	$	835.00
6-Dec 5 Dell monitors	$	2,332.00
6-Dec 15 Dell workstations	$	14,718.45
	$	132,056.26

2001 Additions

DATE	VENDOR	DESCRIPTION	QUANTITY	TOTAL
		DRUG DISCOVERY		
1/5/2001	Fisher	ROTVAPOR 24/40 R114A JCK/BTH	1	4,013.48
3/14/2001	Gilson	215 LIQUID HANDLER	1	31,355.18
3/24/2001	Phenomenex	RP 80A SYNERGY MAX	1	1,337.25
		Sales Tax		80.23
3/27/2001	Fisher	R 200A ROT EVAP	1	3,695.72
3/27/2001	Fisher	CATALYTIC PARR APPARATUS 115V 60HZ	1	2,777.33
3/15/2001	Genevac	EVAPORATOR SYSTEM	1	31,650.00
4/30/2001	Micromass	MASS SPEC UPGRADE/SYSTEM	1	25,948.80
4/30/2001	Gilson	Compact Slave Pump/Cells	1	19,246.46
5/31/2001	Isco	Separation System	1	18,993.08
6/18/2001	VWR Scientific	Lg. Capacity Mixer	1	1,800.20
8/7/2001	Fisher	Ref/Freezer115V	1	1,350.11
9/30/2001	Fisher	Sonic Dismember Digital MDL 500	1	4,235.41
11/30/2001	Waters	Mass Spec	1	149,542.55
12/31/2001	Waters	2695 w/col htr/degas/sealwash	1	27,724.46
				323,750.26
		BIOLOGICAL SCIENCES		
1/16/2001	Brandel	HARVESTER (TTP-48 PROBE); #1FL	1	9,942.60
		VACUUM PUMP W/ MIST PUMP	1	
		Sales Tax	1	596.55
2/21/2001	Millipore	MILLI Q ACADEMIC 120V/60HZ	2	7,029.26
		Q-GARD 2	2	
		QUANTUM EX	2	
		PRESS REGULATOR W/GAUGE	2	
2/13/2001	Beckman Coulter	GRIPPER TOOL SYS FOR BIOMEK 2000	1	10,054.32
		96-FILTRATION SYSTEM	1	
3/14/2001	Brandel	1 BIT 48K PROBE	1	1,450.00
3/27/2001	PerkinElmer	1450 TRILUX 23 NET 16 PLATE	1	81,166.69
		Sales Tax		4,869.99
5/10/2001	Brandel	Supfrafusion 2500	1	34,324.74
6/30/2001	Carmet	Beckman J2-s1M	1	6,200.00
		Beckman JA20	1	1,700.00
6/30/2001	VWR Scientific	Generator PTA107S	1	1,128.11
7/31/2001	Inotech	Pressure Plate Inserts	var	2,970.00
8/24/2001	Inotech	3300 Harvester Pump	1	1,365.00
				162,797.26

2001 Additions

				—
				486,547.52
3/27/2001	Apple Rock	Trade Show Display Board (Deposit)	1	865.80
4/30/2001	Apple Rock	Trade Show Display Board (Bal)	1	1,140.89
7/27/2001	ARM	Contract Tickler System	1	4,529.00
9/30/2001	Best SW	FAS Suite/Cradle	1	4,095.78
10/25/2001	Hodges	FAS Upgrade to Network	1	3,042.16
				13,673.63
1/11/2001	GraphPAd	PRISM FOR WINDOWS	3	1,113.75
	Silicon	REMFGD 195MHZ 1P OCTANE SI		
12/15/2001	Graphics	128MB/4G	2	10,286.34
		DESTN KIT PERIPHERALS 115V	4	
		ADVANCED WKST EVIRONMENT 6.5	2	
		REMFGD 21" G1 DISPLAY OCTANE	2	
		KEYBOARD KIT US 02 AND OCTANE	2	
		DELL GX100 600MHZ CELERON		
2/19/2001	NetUnlimited	PROCESSOR W/128MB RAM	5	8,364.70
		DELL PRECISION 330 1.3 GHZ		
		PROCESSOR W/256MB RAM	1	
2/5/2001	NetUnlimited	LASERJET 2100TN INTERNAL NIC	1	1,187.20
		LASERJET 2100TN TONER CARTIDGE	1	
		HEWLETT PACKARD LASERJET 2100TN		
2/8/2001	NetUnlimited	INTERNAL NIC	2	2,194.20
3/27/2001	NetUnlimited	Dell 420 Workstation	1	3,457.00
3/27/2001	NetUnlimited	Sony VAIO/HP Scanjet	1	3,346.71
5/10/2001	Silicon	PCI CARD CAGE	2	3,180.00
5/31/2001	NetUnlimited	Dell Pwer App Web 120 PIII	1	3,198.02
		Dell Optiplex GX 110 PIII	4	4,405.36
6/18/2001	NetUnlimited	6 deLL Optiplex GX110 Computers	6	6,604.04
		4 Dell P78017" Color Monitor	4	1,394.96
7/27/2001	G.Dunbar	Laptop	1	3,669.97
10/24/2001	D. Lambe	Laptop	1	3.417.78
	NuGenesis	Software-Unify & Vision Software Licenses,		
12/31/2001	Tech.	Archive Software License		125,443.60
12/31/2001	IBM	X Series 330 P111 1U Server	3	21,518.00
				202,781.63
		PENTAD HARDWARE		
4/30/2001	RCH Products	Zappa Computer	1	265,906.50
6/18/2001	NetUnlimited	Zappa Wiring		713.56
9/30/2001	RCH Products	Octane R12k, Octane R10k, Software Care		11,694.18
				278,314.24
		PENTAD SOFTWARE		
04/30/001	Harcourt			13,526.19
	Serena			400.00
				13,926.19
				995,243.21

2002 CIP

Cold Room	$	48,234.00	
Animal Housing System	$	50,967.50	
Furniture & Fixtures	$	773,697.13	
Artwork	$	20,849.55	
Signs	$	14,226.00	
Leasehold Improvements	$	78,404.58	
IT Switches/Communications	$	106,679.96	
Stability Chambers	$	39,112.17	
Estimates:			
Cage Wash System	$	35,766.66	Final bills not received
AV Equipment	$	115,000.00	Final bills not received
Additional Furniture Pieces	$	8,000.00	Final bills not received
	$	1,290,937.55	

2002 Additions

		MEDICINAL CHEMISTRY		
3/20/2002	Fisher	Mettler Toledo Analytical Balance Model AB204-	1	2,276.23
2/28/2002	Insight	HP Laserjet 1200	3	1,137.00
		Total Med Chem		**3,413.23**
		P3		
1/31/2002	Fisher	Cold Trap Condenser Assembly	1	25,973.48
2/5/2002	Aetrohm- Pea	Metrohm-Peak Personal IC System	1	18,186.22
		Total P3		**44,159.70**
		BIOLOGICAL SCIENCES		
3/20/2002	Brandel	BR-36 Auto Dispensing System; 2X1B	1	3,850.00
3/20/2002	Brandel	18 Channel Perfusion Block, Tray, Reagent	1	6,650.00
3/20/2002	VWR	Balance Basic 1510G CAPX10MG	2	3,147.63
		Total Biological Sciences		**13,647.63**
		Total Drug Discovery & Biological Sciences		**57,807.33**
		Administrative		
1/31/2002	Dell	Latitude C810,1.13Ghz, Pentium III	1	3,135.37
3/31/2002	Dell	Laptop		3,153.49
		Total Administrative		**6,288.86**
		IT		
1/31/2002	NuGenesis	Instrument Archive Server	1	23,787.50
2/27/2002	Insight	Netshelter VX Base Enclosure	1	1,569.00
2/27/2002	Dell	PC’s	3	3,527.27
		Total IT		**28,883.77**
		Clinical Research & Development		
2/27/2002	Dell	Laptop		3,153.49
		Total Clinical Research & Development		**3,153.49**
		Total New Additions		**99,546.68**

Amended and Restated Note and Security Agreement of
Targacept, Inc. in favor of R.J. Reynolds Tobacco Holdings, Inc. dated January 30,2004

Form of Supplemental Schedule to Exhibit A

Additional Collateral:

Attach spreadsheet including, without limitation:

1. Number of Additional Tranche
2. Date of Additional Tranche
3. Interest Rate Applicable to Additional Tranche
4. First Payment of Additional Tranche Due
5. Last Payment of Additional Tranche Due
6. Amount of Each Monthly Payment in respect of Additional Tranche
7. Aggregate Amount of Each Monthly Payment in respect of all Tranches
8. Aggregate Principal Amount Outstanding on all Tranches

Exhibit 10.5(a)

2000 EQUITY INCENTIVE PLAN

OF

TARGACEPT, INC.

Adopted as of:
August 22nd, 2000

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

1. *Purpose*

The purpose of the 2000 Equity Incentive Plan of Targacept, Inc. (the "Plan") is to encourage and enable selected employees, directors, independent contractors, consultants and advisors of Targacept, Inc. (the "Corporation") and related corporations to acquire or to increase their holdings of common stock of the Corporation, $0.001 par value per share (the "Common Stock"), and other proprietary interests in the Corporation in order to promote a closer identification of their interests with those of the Corporation and its stockholders, thereby further stimulating their efforts to enhance the efficiency, soundness, profitability, growth and stockholder value of the Corporation. This purpose will be carried out through the granting of benefits (collectively referred to herein as "Awards") to selected participants, including the granting of incentive stock options ("Incentive Options") intended to qualify under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"), nonqualified stock options ("Nonqualified Options"), stock appreciation rights ("SARs"), stock awards in the form of bonus stock ("Bonus Stock") and restricted stock awards ("Restricted Stock Awards"), and performance awards in the form of performance shares ("Performance Shares") and performance units ("Performance Units"). Incentive Options and Nonqualified Options shall be referred to herein collectively as "Options." Bonus Stock and Restricted Stock Awards shall be referred to herein collectively as "Stock Awards." Performance Shares and Performance Units shall be referred to herein collectively as "Performance Awards."

2. *Administration of the Plan*

(a) The Plan shall be administered by the Board of Directors of the Corporation (the "Board") unless the Board, in its sole discretion, delegates all or part of its administrative authority with respect to the Plan to a committee of the Board (the "Committee"). For purposes herein, the Board, and, upon its delegation of the administrative responsibilities for the Plan to the Committee, the Committee, shall be referred to as the "Administrator." In the event that the Corporation shall become subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the Committee shall be comprised solely of two or more "non-employee directors," as said term is defined in Rule 16b-3 under the Exchange Act, unless the Board determines that such committee composition is not necessary or advisable. Further, in the event that the Corporation becomes subject to the requirements of Section 162(m) of the Code, the Committee shall, unless the Board determines otherwise, be comprised solely of two or more "outside directors," as such term is defined under Section 162(m) or the regulations thereunder, or otherwise in accordance with Section 162(m) and such regulations.

(b) Any action of the Administrator with respect to the Plan may be taken by a written instrument signed by all of the members of the Board or Committee, as appropriate, and any such action so taken by written consent shall be as fully effective as if it had been taken by a majority of the members at a meeting duly held and called. Subject to the provisions of the Plan, the Administrator shall have full and sole authority in its discretion to take any action with respect to the Plan including, without limitation, the authority (i) to determine all matters relating to Awards, including selection of individuals to be granted Awards, the types of Awards, the number of shares of the Common Stock, if any, subject to an Award, and all terms, conditions, restrictions and limitations of an Award and shares of Common Stock subject to an Award; (ii) to prescribe the form or forms of the agreements (as defined in Section 11) evidencing any Awards granted under the Plan; (iii) to establish, amend and rescind rules and regulations for the administration of the Plan; and (iv) to construe and interpret the Plan and agreements evidencing Awards granted under the Plan, to establish and interpret rules and regulations for administering the Plan and to make all other determinations deemed necessary or advisable for administering the Plan. The Administrator shall also have authority, in its sole discretion, to accelerate the date that any Award which was not otherwise exercisable or vested shall become exercisable or vested in whole or in part without any obligation to accelerate such date with respect to any other Award granted to any recipient. In addition, the Administrator shall have the authority and discretion to establish terms and conditions of Awards as the Administrator determines to be necessary or appropriate to conform to the applicable requirements or practices of jurisdictions outside of the United States. All determinations of the Administrator with respect to the Plan will be final and binding on the Corporation and all persons having or claiming an interest in any Award granted under the Plan. No member of the Board or Committee, as applicable, shall be liable while acting as Administrator for any action or determination made in good faith with respect to the Plan or any Award or agreement.

(c) Notwithstanding the other provisions of Section 2, the Administrator may delegate to the Chief Executive Officer or President of the Corporation the authority to grant Awards, and to make any or all of the determinations reserved for the Administrator in the Plan and summarized in Section 2(b) with respect to such Awards, to eligible individuals; provided, however, that, to the extent required by Section 16 of the Exchange Act or Section 162(m) of the Code, the individual, at the time of said grant or other determination, (i) is not deemed to be an officer or director of the Corporation within the meaning of Section 16 of the Exchange Act; and (ii) is not deemed to be a covered employee (as defined in Section 21 (a)). To the extent that the Administrator has delegated authority to grant Awards pursuant to this Section 2(c) to the Chief Executive Officer or President, references to the Administrator shall include references to such person, subject, however, to the requirements of the Plan, Rule 16b-3 and other applicable law.

3. *Effective Date*

The effective date of the Plan shall be August 22, 2000 (the “Effective Date”). Awards may be granted under the Plan on and after the Effective Date, but no Awards will be granted after August 21, 2010.

4. *Shares of Stock Subject to the Plan; Award Limitations*

(a) Subject to adjustment as provided in Section 4(c), the maximum number of shares of Common Stock that may be issued pursuant to Awards shall not exceed 2,011,259 shares. To the extent required pursuant to Section 162(m) of the Code, during any 12-month period, (i) no Participant may receive shares of Common Stock pursuant to the grant of awards under the Plan for more than 600,000 shares of Common Stock, and (ii) no Participant may receive awards under the Plan payable in cash having an aggregate dollar value in excess of $600,000, subject to adjustment as provided in Section 4(c) herein. Shares issued and delivered under the Plan shall be authorized but unissued shares of the Corporation, treasury shares, or shares purchased on the open market or by private purchase.

(b) The Corporation hereby reserves sufficient authorized shares of Common Stock to meet the grant of Awards hereunder. Any shares subject to an Award that is subsequently forfeited, expires or is terminated may again be the subject of an Award granted under the Plan. To the extent that any shares of Common Stock subject to an Award are not delivered to a Participant (or his beneficiary) because the Award is forfeited, canceled, settled in cash, or used to satisfy applicable tax withholding obligations, such shares shall not be deemed to have been issued for purposes of determining the maximum number of shares of Common Stock available for issuance under the Plan. If the purchase price of an Award granted under the Plan is satisfied by tendering or withholding shares of Common Stock, only the number of shares issued net of the shares of Common Stock tendered or withheld shall be deemed issued for purposes of determining the maximum number of shares of Common Stock available for issuance under the Plan.

(c) If there is any change in the shares of Common Stock because of a reorganization, recapitalization, merger, consolidation, stock dividend, stock split, reverse stock split, subdivision, combination, reclassification or other change in the capital stock structure of the Corporation or a related corporation affecting the Common Stock, the number of shares of Common Stock reserved for issuance under the Plan shall be correspondingly adjusted, and the Administrator shall make such adjustments to Awards or to any provisions of this Plan as the Administrator deems equitable to prevent dilution or enlargement of Awards.

5. *Eligibility*

An Award may be granted only to an individual who satisfies the following eligibility requirements on the date the Award is granted:

(a) The individual is either (i) an employee of the Corporation or a related corporation, (ii) a director of the Corporation or a related corporation, or (iii) an independent contractor, consultant or advisor (collectively, “independent contractors”) providing bona fide services to the Corporation or a related corporation not in connection with the offer and sale of securities in a capital-raising transaction. For this purpose, an individual shall be considered to be an “employee” only if there exists between the individual and the Corporation or a related corporation the legal and bona fide relationship of employer and employee.

(b) With respect to the grant of Incentive Options, the individual is an employee who does not own, immediately before the time that the Incentive Option is granted, stock possessing more than ten percent of the total combined voting power of all classes of stock of the Corporation. Notwithstanding the foregoing, an individual who owns more than ten percent of the total combined voting power of the Corporation may be granted an Incentive Option if the option price (as determined pursuant to Section 6(b), is at least 110% of the fair market value of the Common Stock (as defined in Section 6(b)(ii)), and the option period (as defined in Section 6(c)(i)) does not exceed five years. For this purpose, an individual will be deemed to own stock which is attributable to him under Section 424(d) of the Code.

(c) The individual, being otherwise eligible under this Section 5, is selected by the Administrator as an individual to whom an Award shall be granted (a “Participant”).

6. *Options*

(a) *Grant of Options*: Subject to the limitations of the Plan, the Administrator may in its sole and absolute discretion grant Options to such eligible individuals in such numbers, upon such terms and at such times as the Administrator shall determine. Both Incentive Options and Nonqualified Options may be granted under the Plan; provided, however, that Incentive Options may only be granted to employees of the Corporation or a related corporation. To the extent that an Option is designated as an Incentive Option but does not qualify as such under Section 422 of the Code, the Option (or portion thereof) shall be treated as a Nonqualified Option.

(b) *Option Price*: The price per share at which an Option may be exercised (the "option price") shall be established by the Administrator at the time the Option is granted and shall be set forth in the terms of the agreement evidencing the grant of the Option; provided that, (i) in no event shall the option price be less than the par value per share of the Common Stock; and (ii) in the case of an Incentive Option, the option price shall be no less than 100% of the fair market value per share of the Common Stock on the date the Option is granted. In addition, the following rules shall apply:

(i) An Incentive Option shall be considered to be granted on the date that the Administrator acts to grant the Option, or on any later date specified by the Administrator as the effective date of the Option. A Nonqualified Option shall be considered to be granted on the date the Administrator acts to grant the Option or any other date specified by the Administrator as the date of grant of the Option.

(ii) For the purposes of the Plan, the "fair market value" per share of the Common Stock shall be determined in good faith by the Administrator and, except as may otherwise be determined by the Administrator, fair market value shall be determined in accordance with the following provisions: (A) if the shares of Common Stock are listed for trading on the New York Stock Exchange or the American Stock Exchange, the fair market value shall be the closing sales price of the shares on the New York Stock Exchange or the American Stock Exchange (as applicable) on the date immediately preceding the date the Option is granted, or, if there is no transaction on such date, then on the trading date nearest preceding the date the Option is granted for which closing price information is available, and, provided further, if the shares are quoted on the Nasdaq National Market or the NASDAQ SmallCap Market of the Nasdaq Stock Market, the fair market value shall be the closing sales price for such stock (or the average of closing bid and asked prices, if no sales were reported) as quoted on such system on the date immediately preceding the date the Option is granted for which such information is available; or (B) if the shares of Common Stock are not listed or reported in any of the foregoing, then the fair market value shall be determined by the Administrator in accordance with the applicable provisions of Section 20.2031-2 of the Federal Estate Tax Regulations, or in any other manner consistent with the Code and accompanying regulations.

(iii) In no event shall there first become exercisable by an employee in any one calendar year Incentive Options granted by the Corporation or any related corporation with respect to shares having an aggregate fair market value (determined at the time an Incentive Option is granted) greater than $100,000; provided that, if such limit is exceeded, then the first $100,000 of shares to become exercisable in such calendar year will be Incentive Options and the Options (or portion thereof) for shares with a value in excess of $100,000 that first became exercisable in that calendar year will be Nonqualified Options. In the event the Code or the regulations promulgated thereunder are amended after the effective date of this Plan to provide for a different limit on the fair market value of shares permitted to be subject to Incentive Options, then such different limit shall be automatically incorporated herein and will apply to any Incentive Option granted after the date of such amendment.

(c) *Option Period and Limitations on the Right to Exercise Options*

(i) The term of an Option (the "option period") shall be determined by the Administrator at the time the Option is granted. With respect to Incentive Options, such period shall not extend more than ten years from the date on which the Option is granted (unless otherwise limited by Section 5(b)). Any Option or portion thereof not exercised before expiration of the option period shall terminate. The period or periods during which an Option may be exercised and other terms and conditions to exercise shall be determined by the Administrator.

(ii) An Option may be exercised by giving written notice to the Corporation at such place as the Administrator or its designee shall direct. Such notice shall specify the number of shares to be purchased pursuant to an Option and the aggregate purchase price to be paid therefor, and shall be accompanied by the payment of such purchase price. Unless an individual option agreement provides otherwise, such payment may be in the form of cash or check, and, where expressly approved by the Administrator, payment may also be made:

(A) By delivery (by either actual delivery or attestation) of shares of Common Stock (valued at the date of exercise at their fair market value by the Administrator by applying the provisions of Section 6(b)(ii)) that have been owned by the Participant for more than six (6) months and are otherwise acceptable to the Administrator;

(B) By withholding shares of Common Stock (valued at the date of exercise at their fair market value by the Administrator by applying the provisions of Section 6(b)(ii)) otherwise issuable upon exercise of the Option;

(C) With respect only to purchases upon exercise of an Option after a public market for the Common Stock exists, by delivery of written notice of exercise to the Corporation and delivery to a broker of written notice of exercise and irrevocable instructions to promptly deliver to the Corporation the amount of sale or loan proceeds to pay the option price; or

(D) By any combination of the foregoing.

For the purposes herein, a "public market" for the Common Stock shall be deemed to exist (i) upon consummation of a firm commitment underwritten public offering of the Common Stock pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "Securities Act"), or (ii) if the Administrator otherwise determines that there is an established public market for the Common Stock.

(iii) Unless an individual agreement provides otherwise, no Option granted to a Participant who was an employee at the time of grant shall be exercised unless the Participant is, at the time of exercise, an employee as described in Section 5(a), and has been an employee continuously since the date the Option was granted, subject to the following:

(A) An Option shall not be affected by any change in the terms, conditions or status of the Participant's employment, provided that the Participant continues to be an employee of the Corporation or a related corporation.

(B) The employment relationship of a Participant shall be treated as continuing intact for any period that the Participant is on military or sick leave or other bona fide leave of absence, provided that the period of such leave does not exceed ninety days, or, if longer, as long as the Participant's right to re-employment is guaranteed either by statute or by contract. The employment relationship of a Participant shall also be treated as continuing intact while the Participant is not in active service because of disability. For purposes of the Plan, "disability" shall have the meaning ascribed to the term in any stockholders agreement, employment agreement, consulting agreement or other similar agreement, if any, to which the Participant is a party, or if no such agreement applies, "disability" shall mean the inability of the Participant to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death, or which has lasted or can be expected to last for a continuous period of not less than 12 months. The Administrator shall determine whether a Participant is disabled within the meaning of this paragraph, and, if applicable, the date of a Participant's termination of employment of service for any reason (the "termination date").

(C) Unless an individual agreement provides otherwise, if the employment of a Participant is terminated because of disability within the meaning of subparagraph (B), or if the Participant dies while he is an employee or dies within ninety (90) days after the termination of his employment because of disability, the Option may be exercised only to the extent exercisable on the date of the Participant's termination date, except that the Administrator may in its discretion accelerate the date for exercising all or any part of the Option which was not otherwise exercisable on the termination date. The Option must be exercised, if at all, prior to the first to occur of the following, whichever shall be applicable: (X) the close of the period of one year next succeeding the termination date or such other time period as may be specified in the applicable agreement; or (Y) the close of the option period. In the event of the Participant's death, such Option shall be exercisable by such person or persons as shall have acquired the right to exercise the Option by will or by the laws of intestate succession.

(D) Unless an individual agreement provides otherwise, if the employment of the Participant is terminated for any reason other than disability (as defined in subparagraph (B)), death or for "cause," his Option may be exercised to the extent exercisable on the Participant's termination date, except that the Administrator may in its discretion accelerate the date for exercising all or any part of the Option which was not otherwise exercisable on the date of such termination of employment. The Option must be exercised, if at all, prior to the first to occur of the following, whichever shall be applicable: (X) the close of the period of ninety (90) days next succeeding the termination date or such other time period as may be specified in the applicable agreement; or (Y) the close of the option period. If the Participant dies following such termination of employment and prior to the earlier of the dates specified in (X) or (Y) of this subparagraph (D), the Participant shall be treated as having died while employed under subparagraph (C) immediately preceding (treating for this purpose the Participant's date of termination of employment as the termination date). In the event of the Participant's death, such Option shall be exercisable by such person or persons as shall have acquired the right to exercise the Option by will or by the laws of intestate succession.

(E) Unless an individual agreement provides otherwise, if the employment of the Participant is terminated for “cause,” his Option shall lapse and no longer be exercisable as of the effective time of his termination of employment, as determined by the Administrator. For purposes of the Plan, (X) the Participant’s termination shall be for “cause” if such termination results from the Participant’s termination for “cause” under his employment, consulting or other agreement with the Corporation or a related corporation, if any; or (Y) if the Participant has not entered into any such employment, consulting or other agreement, then the Participant’s termination shall be for “cause” if termination results due to the Participant’s (i) dishonesty or conviction of a crime; (ii) failure to perform his duties for the Corporation or a related corporation to the satisfaction of the Corporation; or (iii) engaging in conduct that could be materially damaging to the Corporation without a reasonable good faith belief that such conduct was in the best interest of the Corporation. The determination of “cause” shall be made by the Administrator and its determination shall be final and conclusive.

(F) Notwithstanding the foregoing, the Administrator shall have authority, in its discretion, to extend the period during which an Option may be exercised or modify the other terms and conditions of exercise, or both; provided that, in the event that any such extension or modification shall cause an Incentive Option to be designated as a Nonqualified Option, no such extension or modification shall be made without the written consent of the Participant.

(iv) Unless an individual agreement provides otherwise, an Option granted to a Participant who was a non-employee director of an independent contractor of the Corporation or a related corporation at the time of grant (and who does not thereafter become an employee, in which case he shall be subject to the provisions of Section 6(c)(iii)) may be exercised only to the extent exercisable on the date of the Participant’s termination of service to the Corporation or a related corporation (unless the termination was for cause), and must be exercised, if at all, prior to the first to occur of the following, as applicable: (X) the close of the period of ninety (90) days next succeeding the termination date or such other time period as may be specified in the applicable agreement; or (Y) the close of the option period. If the services of such a Participant are terminated for cause (as defined in Section 6(c)(iii)(E)), his Option shall lapse and no longer be exercisable as of the effective time of his termination of services, as determined by the Administrator. Notwithstanding the foregoing, the Administrator may in its discretion accelerate the date for exercising all or any part of an Option which was not otherwise exercisable on the termination date, extend the period during which an Option may be exercised, modify the other terms and conditions of exercise, or any combination of the foregoing.

(v) A Participant or his legal representatives, legatees or distributees shall not be deemed to be the holder of any shares subject to an Option and shall not have any rights as a stockholder unless and until certificates for such shares are delivered to him or them under the Plan.

(vi) A certificate or certificates for shares of Common Stock acquired upon exercise of an Option shall be issued in the name of the Participant (or his beneficiary) and distributed to the Participant (or his beneficiary) as soon as practicable following receipt of notice of exercise and payment of the purchase price.

(d) *Nontransferability of Options*

(i) Incentive Options shall not be transferable (including by sale, assignment, pledge or hypothecation) other than by will or the laws of intestate succession. Nonqualified Options shall not be transferable (including by sale, assignment, pledge or hypothecation) other than by will or the laws of intestate succession, except as may be permitted by the Administrator in its sole discretion in a manner consistent with the registration provisions of the Securities Act. Except as may be permitted by the preceding sentence, an Option shall be exercisable during the Participant's lifetime only by him or by his guardian or legal representative. The designation of a beneficiary does not constitute a transfer.

(ii) If a Participant is subject to Section 16 of the Exchange Act, shares of Common Stock acquired upon exercise of an Option may not, without the consent of the Administrator, be disposed of by the Participant until the expiration of six months after the date the Option was granted.

7. *Stock Appreciation Rights*

(a) *Grant of SARs*: Subject to the limitations of the Plan, the Administrator may in its sole and absolute discretion grant SARs to such eligible individuals, in such numbers, upon such terms and at such times as the Administrator shall determine. SARs may be granted to an optionee of an Option (hereinafter called a "Related Option") with respect to all or a portion of the shares of Common Stock subject to the Related Option (a "Tandem SAR") or may be granted separately to an eligible key employee (a "Freestanding SAR"). Subject to the limitations of the Plan, SARs shall be exercisable in whole or in part upon such terms and conditions as are provided in the agreement relating to the grant of the SAR.

(b) *Tandem SARs*: A Tandem SAR may be granted either concurrently with the grant of the Related Option or (if the Related Option is a Nonqualified Option) at any time thereafter prior to the complete exercise, termination, expiration or cancellation of such Related Option. Tandem SARs shall be exercisable only at the time and to the extent that the Related Option is exercisable (and may be subject to such additional limitations on exercisability as the Administrator may provide in the agreement), and in no event after the complete termination or full exercise of the Related Option. For purposes of determining the number of shares of Common Stock that remain subject to such Related Option and for purposes of determining the number of shares of Common Stock in respect of which other Awards may be granted, upon the exercise of Tandem SARs, the Related Option shall be considered to have been surrendered to the extent of the number of shares of Common Stock with respect to which such Tandem SARs are exercised. Upon the exercise or termination of the Related Option, the Tandem SARs with respect thereto shall be canceled automatically to the extent of the number of shares of Common Stock with respect to which the Related Option was so exercised or terminated. Subject to the limitations of the Plan, upon the exercise of a Tandem SAR, the Participant shall be entitled to receive from the Corporation, for each share of Common Stock with respect to which the Tandem SAR is being exercised, consideration equal in value to the excess of the fair market value of a share of Common Stock on the date of exercise over the Related Option price per share; provided, that the Administrator may, in any agreement granting Tandem SARs, establish a maximum value payable for such SARs.

(c) *Freestanding SARs*: Unless an individual agreement provides otherwise, the base price of a Freestanding SAR shall be not less than 100% of the fair market value of the Common Stock (as determined in accordance with Section 6(b)(ii)) on the date of grant of the Freestanding SAR. Subject to the limitations of the Plan, upon the exercise of a Freestanding SAR, the Participant shall be entitled to receive from the Corporation, for each share of Common Stock with respect to which the Freestanding SAR is being exercised, consideration equal in value to the excess of the fair market value of a share of Common Stock on the date of exercise over the base price per share of such Freestanding SAR; provided, that the Administrator may, in any agreement granting Freestanding SARs, establish a maximum value payable for such SARs.

(d) *Exercise of SARs*:

(i) Subject to the terms of the Plan, SARs shall be exercisable in whole or in part upon such terms and conditions as are provided in the agreement relating to the grant of the SAR. The period during which an SAR may be exercisable shall not exceed ten years from the date of grant or, in the case of Tandem SARs, such shorter option period as may apply to the Related Option. Any SAR or portion thereof not exercised before expiration of the period stated in the agreement relating to the grant of the SAR shall terminate.

(ii) SARs may be exercised by giving written notice to the Corporation at such place as the Administrator shall direct. The date of exercise of the SAR shall mean the date on which the Corporation shall have received notice from the Participant of the exercise of such SAR.

(iii) No SAR may be exercised unless the Participant is, at the time of exercise, an eligible Participant, as described in Section 5, and has been a Participant continuously since the date the SAR was granted, subject to the provisions of Sections 6(c)(iii) and (iv).

(e) *Consideration*: The consideration to be received upon the exercise of the SAR by the Participant shall be paid in cash, shares of Common Stock (valued at fair market value on the date of exercise of such SAR in accordance with Section 6(b)(ii)) or a combination of cash and shares of Common Stock, as elected by the Administrator, subject to the terms of the Plan and the applicable agreement. The Corporation's obligation arising upon the exercise of the SAR may be paid currently or on a deferred basis with such interest or earnings equivalent (if any) as the Administrator may determine. A certificate or certificates for shares of Common Stock acquired upon exercise of an SAR for shares shall be issued in the name of the Participant (or his beneficiary) and distributed to the Participant (or his beneficiary) as soon as practicable following receipt of notice of exercise. No fractional shares of Common Stock will be issuable upon exercise of the SAR and, unless otherwise provided in the applicable agreement, the Participant will receive cash in lieu of fractional shares.

(f) *Limitations*: The applicable SAR agreement shall contain such terms, conditions and limitations consistent with the Plan as may be specified by the Administrator. Unless otherwise so provided in the applicable agreement or the Plan, any such terms, conditions or limitations relating to a Tandem SAR shall not restrict the exercisability of the Related Option.

(g) *Nontransferability*:

(i) SARs shall not be transferable (including by sale, assignment, pledge or hypothecation) other than by will or the laws of intestate succession (except to the extent, if any, that a Related Option is a Nonqualified Option and is transferable pursuant to Section 6(d)). The designation of a beneficiary does not constitute a transfer. SARs may be exercised during the Participant's lifetime only by him or by his guardian or legal representative.

(ii) If the Participant is subject to Section 16 of the Exchange Act, shares of Common Stock acquired upon exercise of an SAR may not, without the consent of the Administrator, be disposed of by the Participant until the expiration of six months after the date the SAR was granted.

8. *Stock Awards*

(a) *Grant and Vesting of Stock Awards*: Subject to the terms of the Plan, the Administrator may in its sole and absolute discretion grant Stock Awards to such eligible individuals, for such numbers of shares, upon such terms and at such times as the Administrator shall determine. Stock Awards shall be payable in shares of Common Stock. The Administrator may grant Stock Awards in the form of shares of Bonus Stock that vest immediately upon grant and that are not subject to any forfeiture conditions. The Administrator also may grant Stock Awards in the form of Restricted Stock Awards that are subject to certain conditions, which conditions must be met in order for the Stock Award to vest and be earned (in whole or in part) and no longer subject to forfeiture. Such conditions may include but are not limited to continued service for a certain period of time, attainment of performance objectives, retirement, displacement, disability, death, or a combination of these factors. Performance objectives may vary from Participant to Participant and between groups of Participants and shall be based on such corporate, business unit and/or individual performance factors and criteria as the Administrator in its sole discretion may deem appropriate, which factors may include but are not limited to cash flow, return on equity, return on assets, total return to stockholders, earnings per share, clinical development milestones, operations expense efficiency milestones or any combination of the foregoing. The Administrator also shall determine the nature, length and starting date, if any, during which a Stock Award may vest (the "restriction period"). The Administrator shall have sole authority to determine whether and to what degree Stock Awards have vested and been earned and to establish and interpret the terms and conditions of Stock Awards and the provisions herein. The Administrator shall also have authority, in its sole discretion, to accelerate the date that any Award which was not otherwise vested shall become vested in whole or in part without any obligation to accelerate such date with respect to any other Award granted to any recipient.

(b) *Forfeiture of Stock Awards*: Unless an individual agreement provides otherwise, if the employment or service of a Participant shall terminate for any reason and all or part of a Stock Award has not vested pursuant to the terms of the Plan and related agreement, such Award, to the extent not then vested, shall be forfeited immediately upon such termination and the Participant shall have no further rights with respect thereto.

(c) *Dividend and Voting Rights; Share Certificates:* Unless an individual agreement provides otherwise, (i) a Participant shall have no dividend rights, voting rights, or other rights as a stockholder with respect to shares subject to a Stock Award that has not yet vested and been earned; (ii) a certificate or certificates for shares of Common Stock subject to a Stock Award shall be issued in the name of the Participant (or his beneficiary) and distributed to the Participant (or his beneficiary) as soon as practicable after the shares subject to the Award shall be earned and vested; and (iii) no certificate shall be issued hereunder in the name of the Participant (or his beneficiary) except to the extent the shares represented thereby have been earned and vested. Notwithstanding the foregoing, if the individual agreement provides that the shares subject to a Stock Award shall be issued prior to the vesting of the Award, the Corporation shall have the right to retain custody of the certificates evidencing the shares subject to the Stock Award and to require the Participant to deliver to the Corporation a stock power, endorsed in blank, with respect to such Award.

(d) *Nontransferability*:

(i) Stock Awards that have not vested and been earned shall not be transferable (including by sale, assignment, pledge or hypothecation) other than by will or the laws of intestate succession. The recipient of a Stock Award shall not sell, transfer, assign, pledge or otherwise encumber shares subject to the Award until the restriction period has expired and until all conditions to vesting have been met. The transfer of shares subject to a Stock Award following vesting of the Award may be subject to such restrictions on transfer as may be imposed pursuant to Section 17 or pursuant to other restrictions established by the Corporation.

(ii) If a recipient of a Stock Award is subject to Section 16 of the Exchange Act, shares of Common Stock subject to such Award may not, without the consent of the Administrator, be sold or otherwise disposed of within six months following the date of grant of such Award.

9. *Performance Awards*

(a) *Grant and Earning of Performance Awards*: Subject to the terms of the Plan, Performance Awards in the form of either Performance Shares or Performance Units, or a combination thereof, may be granted to Participants upon such terms and at such times as shall be determined by the Administrator. An award of Performance Shares is a grant of a right to receive shares of Common Stock or the cash value thereof (or a combination thereof) which is contingent upon the achievement of performance or other objectives during a specified period. An award of Performance Units is a grant of a right to receive a designated dollar value amount of Common Stock which is contingent upon the achievement of performance or other objectives during a specified period. Subject to Section 4(a), above, the Administrator shall have complete discretion in determining the number of Performance Units or Performance Shares granted to each Participant. The Administrator shall determine the nature, length and starting date of the period during which a Performance Award may be earned (the “performance period”), and shall determine the conditions which must be met in order for a Performance Award to be granted or to vest or be earned (in whole or in part), which conditions may include but are not limited to specified performance objectives, completion of the performance period, or a combination of such conditions. The Administrator shall determine the performance objectives to be used in valuing Performance Awards and shall determine the extent, if any, to which such Awards have been earned. Performance objectives may vary from Participant to Participant and between groups of Participants and shall be based oh such corporate, business unit and/or individual performance factors and criteria as the Administrator in its sole discretion may deem appropriate, which factors may include but are not limited to cash flow, return on equity, return on assets, total return to stockholders, earnings per share, clinical development milestones, operations expense efficiency milestones or any combination of the foregoing. The

Administrator shall have sole authority to determine whether and to what degree Performance Awards have been earned and are payable and to interpret the terms and conditions of Performance Awards and the provisions herein. The Administrator also shall determine the form and terms of payment of Performance Awards. The Administrator, in its sole and absolute discretion, may accelerate the date that any Performance Award granted to a Participant shall be deemed to be earned in whole or in part, without any obligation to accelerate such date with respect to other Awards.

(b) *Form of Payment*: Payment of the amount to which a Participant shall be entitled upon earning a Performance Award shall be made in cash, shares of Common Stock, or a combination of cash and shares of Common Stock, as determined by the Administrator in its sole discretion. Payment may be made in a lump sum or installments on such terms as may be established by the Administrator.

(c) *Forfeiture of Performance Awards*: Unless an individual agreement provides otherwise, if the employment or service of a Participant shall terminate for any reason and the Participant has not earned all or part of a Performance Award pursuant to the terms of the Plan and related agreement, such Award, to the extent not then earned, shall be forfeited immediately upon such termination and the Participant shall have no further rights with respect thereto.

(d) *Dividend and Voting Rights; Share Certificates*: Unless an individual agreement provides otherwise, (i) a Participant shall have no dividend rights, voting rights, or other rights as a stockholder with respect to shares, if any, subject to a Performance Award that has not yet been earned; (ii) a certificate or certificates for shares of Common Stock, if any, subject to a Performance Award shall be issued in the name of the Participant (or his beneficiary) and distributed to the Participant (or his beneficiary) as soon as practicable after the Award has been earned; and (iii) no certificate shall be issued hereunder in the name of the Participant (or his beneficiary) except to the extent that the Award has been earned.

(e) *Nontransferability*:

(i) Performance Awards which have not been earned shall not be transferable (including by sale, assignment, pledge or hypothecation) other than by will or the laws of intestate succession. The recipient of a Performance Award shall not sell, transfer, assign, pledge or otherwise encumber any shares subject to the Award until the performance period has expired and until the conditions to earning the Award have been met. The transfer of shares subject to a Performance Award following vesting of the Award may be subject to such restrictions on transfer as may be imposed pursuant to Section 17 or pursuant to other restrictions established by the Corporation.

(ii) If a recipient of a Performance Award is subject to Section 16 of the Exchange Act, shares of Common Stock, if any, subject to such Award may not, without the consent of the Administrator, be sold or otherwise disposed of within six months following the date of grant of such Award.

10. *Withholding*

Prior to the delivery of any certificate for shares or any other benefit conferred under the Plan, the Corporation shall require any recipient of an Award to pay to the Corporation in cash the amount of any local, state or federal withholding tax or other amount required by any governmental authority to be withheld and paid over by the Corporation to such authority for the account of such recipient. Notwithstanding the foregoing, the Administrator may, in its sole discretion, permit the recipient to satisfy such obligation in whole or in part, and any other local, state or federal income tax obligations relating to such an Award, by electing (the “election”) to have the Corporation withhold shares of Common Stock from the shares to which the recipient is entitled. The number of shares to be withheld shall have a fair market value as of the date that the amount of tax to be withheld is determined as nearly equal as possible to (but not exceeding) the amount of such obligations being satisfied. Each election must be made in writing to the Administrator in accordance with election procedures established by the Administrator.

11. ***Agreement***

The grant of any Award under the Plan shall be evidenced by the execution of an agreement (the “agreement”) between the Corporation and the Participant. Such agreement shall state terms, conditions and restrictions applicable to the Award and any may state such other terms, conditions and restrictions, including but not limited to terms, conditions and restrictions applicable to shares subject to an Award, as may be established by the Administrator.

12. ***Code Section 162(m) Performance-Based Compensation Compliance***

To the extent that Section 162(m) of the Code is applicable, the Administrator shall have discretion to determine the extent, if any, that Awards conferred under the Plan to covered employees, as such term is defined in Section 21(a), are intended to comply with the qualified performance-based compensation exception to employer compensation deductions set forth in Section 162(m) of the Code.

13. ***Section 16(b) Compliance***

To the extent that any Participants in the Plan are subject to Section 16(b) of the Exchange Act, it is the general intention of the Corporation that transactions under the Plan shall comply with Rule 16b-3 under the Exchange Act and the Plan shall be construed in favor of the Plan transactions meeting the requirements of Rule 16b-3 or any successor rules thereto. If any Plan provision is later found not to be in compliance with Section 16 of the Exchange Act, the provisions shall be deemed null and void. Notwithstanding anything in the Plan to the contrary, the Administrator, in its sole and absolute discretion, may bifurcate the Plan so as to restrict, limit or condition the use of any provision of the Plan to participants who are officers or directors subject to Section 16 of the Exchange Act without so restricting, limiting or conditioning the Plan with respect to other participants.

14. ***No Right or Obligation of Continued Employment or Service***

Nothing contained in the Plan shall confer upon a Participant the right to continue in the employment or service of the Corporation or a related corporation as an employee, director or independent contractor or interfere in any way with the right of the Corporation or a related corporation to terminate the Participant's employment or service at any time. Except as otherwise provided in the Plan or a related agreement, (i) all rights of a Participant with respect to that portion of his Award which has not yet been exercised, vested or earned shall terminate upon termination of employment or service of the Participant with the Corporation or a related corporation, and (ii) Awards granted under the Plan to a Participant shall not be affected by any change in the duties or position of the Participant, as long as such individual remains an employee of or in service to the Corporation or a related corporation.

15. ***Unfunded Plan; Not a Retirement Plan***

(a) Neither a Participant nor any other person shall, by reason of the Plan, acquire any right in or title to any assets, funds or property of the Corporation or any related corporation including, without limitation, any specific funds, assets or other property which the Corporation or any related corporation, in their discretion, may set aside in anticipation of a liability under the Plan. A participant shall have only a contractual right to the Common Stock or amounts, if any, distributable or payable under the Plan, unsecured by any assets of the Corporation or any related corporation. Nothing contained in the Plan shall constitute a guarantee that the assets of such corporations shall be sufficient to pay any benefits to any person.

(b) In no event shall any amounts accrued, distributable or payable under the Plan be treated as compensation for the purpose of determining the amount of contributions or benefits to which any person shall be entitled under any retirement plan sponsored by the Corporation or a related corporation that is intended to be a qualified plan within the meaning of Section 401 (a) of the Code.

16. ***Amendment and Termination of the Plan and Awards***

The Plan and any Award granted pursuant to the Plan may be amended or terminated at any time by the Board of Directors of the Corporation; provided, that (i) amendment or termination of an Award shall not, without the consent of the recipient of an Award, adversely affect the rights of the recipient with respect to an outstanding Award; and (ii) approval of an amendment to the Plan by the stockholders of the Corporation shall only be required in the event stockholder approval of any such amendment is required by applicable law, rule or regulation.

17. ***Restrictions on Shares; Corporation's Right of Repurchase***

(a) The Administrator may impose such restrictions on Awards and any shares representing Awards hereunder as it may deem advisable, including without limitation restrictions under the Securities Act, under the requirements of any stock exchange or similar organization and under any blue sky or state securities laws applicable to such shares. Notwithstanding any other Plan provision to the contrary, the Corporation shall not be obligated to issue or deliver shares of Common Stock under the Plan or make any other distribution of benefits under the Plan, or take any other action, unless such delivery, distribution or action is in compliance with all applicable laws, rules and regulations (including but not limited to the requirements of the Securities Act). The Corporation will be under no obligation to register shares of Common Stock with the Securities and Exchange Commission or to effect compliance with the exemption, registration, qualification or listing requirements of any state securities laws, stock exchange or similar organization, and the Corporation will have no liability for any inability or failure to do so. The Corporation may cause a restrictive legend to be placed on any certificate issued pursuant to an Award hereunder in such form as may be prescribed from time to time by applicable laws and regulations or as may be advised by legal counsel.

(b) As a condition to the issuance and delivery of Common Stock hereunder, or the grant of any benefit pursuant to the terms of the Plan, and unless an individual agreement provides otherwise, the Corporation may require a Participant or other person to become a party to a stockholders agreement (including but not limited to that certain Stockholders Agreement dated as of August 22, 2000, by and among Targacept, Inc. and its stockholders, as it may be amended), buy-sell agreement, redemption agreement, repurchase agreement or other agreement between the Corporation and stockholders of the Corporation or among stockholders of the Corporation or such other agreements imposing such restrictions as may be required by the Corporation.

18. ***Significant Transactions***

Notwithstanding any other provision of the Plan to the contrary, and unless an individual agreement provides otherwise, in the event of a Significant Transaction (as defined in Section 18(d)):

(a) All Options and SARs outstanding as of the date of such Significant Transaction of shall become fully exercisable, whether or not then otherwise exercisable;

(b) Any restrictions including but not limited to the restriction period or performance period applicable to any Stock Award or Performance Award shall be deemed to have expired, and such Awards shall become fully vested, earned and payable to the fullest extent of the original grant of the applicable Award; and

(c) Notwithstanding the foregoing, in the event of a merger, share exchange, sale or disposal of substantially all of the assets of the Corporation, reorganization or other business combination affecting the Corporation or a related corporation, the Administrator may, in its sole and absolute discretion, determine that any or all Awards granted pursuant to the Plan shall not vest, be earned or become exercisable on an accelerated basis, if the Corporation or the surviving or acquiring corporation, as the case may be, shall have taken such action, including but not limited to the assumption of Awards granted under the Plan or the grant of substitute awards (in either case, with substantially similar or equivalent terms as Awards granted under the Plan), as in the opinion of the Administrator is equitable or appropriate to protect the rights and interests of participants under the Plan. For the purposes herein, if the Committee is acting as the Administrator, the Committee authorized to make the determinations provided for in this Section 18(c) shall be appointed by the Board of Directors, two-thirds of the members of which shall have been directors of the Corporation prior to the sale, merger, share exchange, reorganization or other business combinations affecting the Corporation or a related corporation.

(d) For the purposes herein, a “Significant Transaction” shall be deemed to have occurred upon the occurrence of any of the following:

(i) The closing of a firm commitment underwritten public offering of the Corporation’s Common Stock pursuant to an effective registration statement under the Securities Act;

(ii) The date any entity or person that (A) does not beneficially own Common Stock as of the effective date of the Plan and does not have any affiliate that beneficially owns Common Stock as of the effective date of the Plan shall have become the beneficial owner of, or shall have obtained voting control over, fifty percent (50%) or more of the outstanding Common Stock of the Corporation or (B) beneficially owns Common Stock as of the effective date of the Plan or has one or more affiliates that beneficially own Common Stock as of the effective date of the Plan, together with its affiliates, shall have become the beneficial owner of, or shall have obtained voting control over, sixty-seven percent (67%) or more of the outstanding Common Stock of the Corporation; or

(iii) The date the stockholders of the Corporation approve a definitive agreement (X) to merge or consolidate the Corporation with or into another corporation, in which the Corporation is not the continuing or surviving corporation or pursuant to which any shares of Common Stock of the Corporation would be converted into cash, securities or other property of another corporation, other than a merger or consolidation of the Corporation in which holders of Common Stock immediately prior to the merger or consolidation have the same proportionate ownership of Common Stock of the surviving corporation immediately after the merger as immediately before, or (Y) to sell or otherwise dispose of all or substantially all the assets of the Corporation.

(For purposes herein, the term “person” shall mean any individual, corporation, partnership, group, association or other person, as such term is defined in Section 13(d)(3) or Section 14(d)(2) of the Exchange Act, other than the Corporation, a subsidiary of the Corporation or any employee benefit plan(s) sponsored or maintained by the Corporation or any subsidiary thereof, the term “affiliate” shall have the meaning given the term in Rule 12b-2 under the Exchange Act and the term “beneficial owner” shall have the meaning given the term in Rule 13d-3 under the Exchange Act.)

19. ***Applicable Law***

The Plan shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the conflict of laws provisions of any state.

20. ***Stockholder Approval***

The Plan is subject to approval by the stockholders of the Corporation, which approval must occur, if at all, within twelve (12) months of the effective date of the Plan. Awards granted prior to such stockholder approval shall be conditioned upon and shall be effective only upon approval of the Plan by such stockholders on or before such date.

21. ***Certain Definitions***

For purposes of the Plan, the following terms shall have the meaning indicated unless otherwise provided herein:

(a) "Covered employee" shall have the meaning given the term in Section 162(m) of the Code or the regulations thereunder.

(b) "Parent" or "parent corporation" shall mean any corporation (other than the Corporation) in an unbroken chain of corporations ending with the Corporation if each corporation other than the Corporation owns stock possessing 50% or more of the total combined voting power of all classes of stock in another corporation in the chain.

(c) "Predecessor" or "predecessor corporation" means a corporation which was a party to a transaction described in Section 424(a) of the Code (or which would be so described if a substitution or assumption under that Section had occurred) with the Corporation, or a corporation which is a parent or subsidiary of the Corporation, or a predecessor of any such corporation.

(d) "Related corporation" means any parent, subsidiary or predecessor of the Corporation.

(e) "Subsidiary" or "subsidiary corporation" means any corporation (other than the Corporation) in an unbroken chain of corporations beginning with the Corporation if each corporation other than the last corporation in the unbroken chain owns stock possessing 50% or more of the total combined voting power of all classes of stock in another corporation in the chain.

IN WITNESS WHEREOF, this 2000 Equity Incentive Plan of Targacept, Inc., is, by the authority of the Board of Directors of the Corporation, executed in behalf of the Corporation, effective the 22nd day of August, 2000.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
J. Donald deBethizy, President

ATTEST:

/s/ August Borschke
Secretary

[Corporate Seal]

Exhibit A

2001 Declaration of Amendment to
2000 Equity Incentive Plan of Targacept, Inc.

THIS DECLARATION OF AMENDMENT is executed this 18th day of December, 2001, by TARGACEPT, INC., a Delaware corporation (the "Company"), to the 2000 Equity Incentive Plan of Targacept, Inc. (the "Plan").

R E C I T A L S:

WHEREAS, pursuant to Section 16 of the Plan, the Company's Board of Directors and stockholders have approved the amendments to the Plan set forth below.

NOW, THEREFORE, IT IS DECLARED, that, effective as of the date hereof:

1. Section 4(a) of the Plan is amended by deleting "2,011,259" therefrom and replacing it with "2,661,259."

2. Section 5 of the Plan is amended by deleting it in its entirety and replacing it with the following.

"5. Eligibility

An Award may be granted only to a person who satisfies the following eligibility requirements on the date the Award is granted:

(a) The person is either (i) an employee of the Corporation or a related entity, (ii) a director of the Corporation or a related entity, or (iii) an independent contractor, consultant or advisor (collectively, "independent contractors") providing bona fide services to the Corporation or a related entity not in connection with the offer and sale of securities in a capital raising transaction. For this purpose, an individual shall be considered to be an "employee" only if there exists between the individual and the Corporation or a related entity the legal and bona fide relationship of employer and employee.

(b) With respect to the grant of Incentive Options, the person is an individual employee who does not own, immediately before the time that the Incentive Option is granted, stock possessing more than ten percent of the total combined voting power of all classes of stock of the Corporation. Notwithstanding the foregoing, an individual who owns more than ten percent of the total combined voting power of the Corporation may be granted an Incentive Option if the option price (as determined pursuant to Section 6(b), is at least 110% of the fair market value of the Common Stock (as defined in Section 6(b)(ii)), and the option period (as defined in Section 6(c)(i)) does not exceed five years. For this purpose, an individual will be deemed to own stock that is attributable to him under Section 424(d) of the Code.

(c) The person, being otherwise eligible under this Section 5, is selected by the Administrator as a person to whom or to which an Award shall be granted (a “Participant”).”

3. Each reference in the Plan to “individual” or “individuals,” when used to refer to a Participant(s) or a potential Participant(s) in the Plan (other than references contained in Section 5, which are addressed above), shall be deemed to a reference to “person” or “persons.”

4. Except as set forth herein, the Plan shall remain in full force and effect.

IN WITNESS WHEREOF, this Declaration of Amendment is executed on behalf of Targacept, Inc. as of the day and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
J. Donald deBethizy
President and Chief Executive Officer

May 2002 Declaration of Amendment to
2000 Equity Incentive Plan of Targacept, Inc.

THIS MAY 2002 DECLARATION OF AMENDMENT is executed this 24th day of February 2003, effective as of May 15, 2002, by TARGACEPT, INC., a Delaware corporation (the "Company"), to the 2000 Equity Incentive Plan of Targacept, Inc., as amended (the "Plan").

RECITALS:

WHEREAS, pursuant to Section 16 of the Plan, the Company's Board of Directors has approved the amendment to the Plan set forth below.

NOW, THEREFORE, IT IS DECLARED, that, effective as of the date hereof:

5. The first sentence of Section 8(d)(i) of the Plan is hereby amended to read:

   "Stock awards that have not vested and been earned shall not be transferable (including by sale, assignment, pledge or hypothecation) other than by will or the laws of intestate succession, except as may be permitted by the Administrator in its sole discretion in a manner consistent with the registration provisions of the Securities Act."

6. Except as set forth herein, the Plan shall remain in full force and effect.

IN WITNESS WHEREOF, this Declaration of Amendment is executed on behalf of Targacept, Inc. as of the day and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
J. Donald deBethizy
President and Chief Executive Officer

2002 Declaration of Amendment to
2000 Equity Incentive Plan of Targacept, Inc.

THIS 2002 DECLARATION OF AMENDMENT is executed this 26th day of November 2002, by TARGACEPT, INC., a Delaware corporation (the “Company”), to the 2000 Equity Incentive Plan of Targacept, Inc., as amended (the “Plan”).

RECITALS:

WHEREAS, pursuant to Section 16 of the Plan, the Company’s Board of Directors and stockholders have approved the amendments to the Plan set forth below.

NOW, THEREFORE, IT IS DECLARED, that, effective as of the date hereof:

1. Section 4(a) of the Plan is amended by deleting “2,661,259” therefrom and replacing it with “5,661,259.”
2. Except as set forth herein, the Plan shall remain in full force and effect.

IN WITNESS WHEREOF, this Declaration of Amendment is executed on behalf of Targacept, Inc. as of the day and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
J. Donald deBethizy
President and Chief Executive Officer

EXHIBIT A

2003 Declaration of Amendment to
2000 Equity Incentive Plan of Targacept, Inc.

THIS 2003 DECLARATION OF AMENDMENT is executed this 20th day of August 2003, by TARGACEPT, INC., a Delaware corporation (the "Company"), to the 2000 Equity Incentive Plan of Targacept, Inc., as amended (the "Plan").

RECITALS:

WHEREAS, pursuant to Section 16 of the Plan, the Company's Board of Directors have approved the amendments to the Plan set forth below.

NOW, THEREFORE, IT IS DECLARED, that:

1. Section 4(a) of the Plan is amended, subject to approval of the Company's stockholders, by deleting "5,661,259" therefrom and replacing it with "9,216,657."

2. Section 18(d)(i) of the Plan is amended to read as provided below by incorporating therein the underlined language indicated below:

   "The closing of a firm commitment underwritten public offering of the Corporation's Common Stock pursuant to an effective registration statement under the Securities Act (except that the foregoing shall not constitute a "Significant Transaction" with respect to Awards granted on and after August 20,2003);"

3. Except as expressly modified herein, all of the terms of the Plan shall continue in full force and effect.

IN WITNESS WHEREOF, this Declaration of Amendment is executed on behalf of Targacept, Inc. as of the day and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
J. Donald deBethizy
President and Chief Executive Officer

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
(Employees)

THIS AGREEMENT (the “Agreement”), made the ________ day of ____________, between Targacept, Inc., a Delaware corporation (the “Corporation”), and ____________, an employee of the Corporation or a related corporation (the “Participant”);

R E C I T A L S :

In furtherance of the purposes of the 2000 Equity Incentive Plan of Targacept, Inc., as it may be hereafter amended (the “Plan”), and in consideration of the services of the Participant and such other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Corporation and the Participant hereby agree as follows:

1. Incorporation of Plan. The rights and duties of the Corporation and the Participant under this Agreement shall in all respects be subject to and governed by the provisions of the Plan, a copy of which is delivered herewith or has been previously provided to the Participant and the terms of which are incorporated herein by reference. In the event of any conflict between the provisions in the Agreement and those of the Plan, the provisions of the Plan shall govern. Unless otherwise defined herein, capitalized terms in this Agreement shall have the same definitions as set forth in the Plan.

2. Grant of Option; Term of Option. The Corporation hereby grants to the Participant pursuant to the Plan, as a matter of separate inducement and agreement in connection with his or her employment or service to the Corporation, and not in lieu of any salary or other compensation for his or her services, the right and Option (the “Option”) to purchase all or any part of an aggregate of ________________ (__________) shares (the “shares”) of the common stock (the “Common Stock”) of the Corporation, at a purchase price (the “option price”) of ________________ ($__________) per share. The Option to purchase all of the shares shall be designated as an Incentive Option. To the extent that the Option is designated as an Incentive Option and such Option does not qualify as an Incentive Option, the Option (or portion thereof) shall be treated as a Nonqualified Option. Except as otherwise provided in the Plan, the Option will expire if not exercised in full before ____________.

3. Exercise of Option. The Option shall become exercisable on the date or dates and subject to such conditions set forth in the Plan, this Agreement and Schedule A, which is attached hereto and expressly made a part of this Agreement. To the extent that the Option is exercisable but is not exercised, the Option shall accumulate and be exercisable by the Participant in whole or in part at any time prior to expiration of the Option, subject to the terms

of the Plan and this Agreement. Upon the exercise of an Option in whole or in part, payment of the option price in accordance with the provisions of the Plan and this Agreement and satisfaction of such other conditions as may be established by the Administrator, the Corporation shall as soon thereafter as practicable deliver to the Participant a certificate or certificates for the shares purchased. Payment of the option price may be made: (i) in cash or by check; (ii) by delivery (by either actual delivery or attestation) of shares of Common Stock owned by the Participant at the time of exercise for a period of at least six months and otherwise acceptable to the Administrator; (iii) in the event that a public market for the Common Stock exists (as defined in the Plan), by delivery of written notice of exercise to the Corporation and delivery to a broker of written notice of exercise and irrevocable instructions to promptly deliver to the Corporation the amount of sale or loan proceeds to pay the option price; (iv) by such other methods as may be permitted by the Administrator in its sole discretion in accordance with Section 6(c)(ii) of the Plan; or (v) by a combination of the foregoing methods. Shares delivered in payment of the option price shall be valued at their fair market value on the date of exercise, as determined by the Administrator by applying the provisions of the Plan.

4. No Right of Continued Employment or Service. Nothing contained in this Agreement or the Plan shall confer upon the Participant any right to continue in the employment or service of the Corporation or a related corporation or interfere with the right of the Corporation or a related corporation to terminate the Participant’s employment or service at any time. Except as otherwise expressly provided in the Plan, all rights of the Participant under the Plan with respect to the Option shall terminate upon termination of the employment or service of the Participant with the Corporation or a related corporation.

5. Nontransferability of Option. To the extent that this Option is designated as an Incentive Option, the Option shall not be transferable other than by will or the laws of intestate succession. To the extent that this Option is designated as a Nonqualified Option, the Option shall not be transferable other than by will or the laws of intestate succession, except as may be permitted by the Administrator of the Plan in its sole discretion in a manner consistent with the registration provisions of the Securities Act of 1933, as amended (the “Securities Act”). Except as may be permitted by the preceding sentence, this Option shall be exercisable during the Participant’s lifetime only by the Participant.

6. Superseding Agreement; Binding Effect. This Agreement supersedes any statements, representations or agreements of the Corporation with respect to the grant of the Option or any related rights, and the Participant hereby waives any rights or claims related to any such statements, representations or agreements. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective executors, administrators, next-of-kin, successors and assigns.

7. Representations and Warranties of Participant. The Participant represents and warrants to the Corporation that:

(a) Agrees to Terms of the Plan and Agreement. The Participant has received a copy of the Plan, has read and understands the terms of the Plan and this Agreement, and agrees to be bound by their terms and conditions. The Participant acknowledges that there may be adverse tax consequences upon acquisition or disposition of the shares subject to the Option, and that the Participant should consult a tax advisor prior to such exercise or disposition.

(b) Purchase for Own Account for Investment. Any shares of Common Stock acquired pursuant to the Option shall be acquired for the Participant's own account for investment purposes only and not with a view to, or for sale in connection with, a distribution of the shares within the meaning of the Securities Act. The Participant has no present intention of selling or otherwise disposing of all or any portion of the shares subject to the Option.

(c) Access to Information. The Participant has had access to all information regarding the Corporation and its present and prospective business, assets, liabilities and financial condition that the Participant reasonably considers important in making a decision to acquire the shares subject to the Option, and the Participant has had ample opportunity to ask questions of the Corporation's representatives concerning such matters and this investment.

(d) Understanding of Risks. The Participant is fully aware of: (i) the speculative nature of the investment in the shares of Common Stock; (ii) the financial hazards involved in investment of the Common Stock; (iii) the lack of liquidity of the shares subject to the Option and the restrictions on transferability of such shares; (iv) the qualifications and backgrounds of the management of the Corporation; and (v) the tax consequences of investment in the shares of Common Stock. The Participant is capable of evaluating the merits and risks of this investment, has the ability to protect his or her own interests in this transaction and is financially capable of bearing a total loss from this investment.

(e) No General Solicitation. At no time was the Participant presented with or solicited by any publicly issued or circulated newspaper, mail, radio, television or other form of general advertising or solicitation in connection with the offer, sale or purchase of the shares subject to the Option.

(f) Compliance with Securities Laws. The shares subject to the Option have not been registered with the Securities and Exchange Commission ("SEC") under the Securities Act and, notwithstanding any other provision of this Agreement or the Plan to the contrary, the right to acquire any shares subject to this Option is expressly conditioned upon compliance with the Securities Act and all applicable state securities laws. The Participant agrees to cooperate with the Corporation to ensure compliance with such laws.

(g) No Transfer Unless Registered or Exempt. The Participant understands that he or she may not transfer any shares subject to the Option unless such shares are registered under the Securities Act and qualified under applicable state securities laws or unless, in the opinion of counsel to the Corporation, exemptions from such registration and qualification requirements are available. The Participant understands that only the Corporation may file a registration statement with the SEC and that the Corporation is under no obligation to do so with respect to the shares subject to the Option. The Participant has also been advised that exemptions from registration and qualification may not be available or may not permit the Participant to transfer all or any of the shares subject to the Option in the amounts or at the times proposed by him. The Participant also agrees in connection with any registration of the Corporation's securities that, upon the request of the Corporation or the underwriters managing any public offering of the Corporation's securities, the Participant will not sell or otherwise dispose of any shares without the prior written consent of the Corporation or such underwriters, as the case may be, for such period of time (not to exceed 180 days) after the effective date of such registration requested by such managing underwriters and subject to all restrictions as the Corporation or the underwriters may specify.

8. Other Restrictions on Option and Shares.

(a) As a condition to the issuance and delivery of shares subject to the Option, or the grant of any benefit pursuant to the terms of the Plan, the Corporation may require the Participant or other person to become a party to a stockholders agreement, buy-sell agreement, redemption agreement, repurchase agreement or other agreement between the Corporation and stockholders of the Corporation or among stockholders of the Corporation or such other agreements imposing such restrictions as may be required by the Corporation. *Without in any way limiting the effect of the foregoing, the Participant hereby expressly acknowledges and agrees that the Corporation shall require, prior to the issuance of any shares pursuant to this Agreement, that the Participant become a party to that certain 2nd Amended and Restated Stockholders Agreement dated as of November 26, 2002, by and among Targacept, Inc. and the stockholders thereof, as it may be amended*.

(b) The Corporation may impose such restrictions on the Option and any shares issuable pursuant to the exercise of the Option as it may deem advisable, including without limitation restrictions under the federal securities laws, or the requirements of any stock exchange or similar organization or any blue sky or state securities laws applicable to such shares. Notwithstanding any other provision in the Plan or the Agreement to the contrary, the Corporation shall not be obligated to issue, deliver or transfer shares of Common Stock, to make any other distribution of benefits, or to take any other action, unless such delivery, distribution or action is in compliance with all applicable laws, rules and regulations (including but not limited to the requirements of the Securities Act). The Corporation will be under no obligation to register the shares of Common Stock with the SEC or to effect compliance with the exemption, registration, qualification or listing requirements of any state securities laws, stock exchange or similar organization, and the Corporation will have no liability for any inability or failure to do so. The Corporation may cause a restrictive legend to be placed on any certificate issued pursuant to the exercise of the Option in such form as may be prescribed from time to time by applicable laws and regulations or as may be advised by legal counsel.

9. Governing Law. Except as otherwise provided in the Plan or herein, this Agreement shall be construed and enforced according to the laws of the State of Delaware, without regard to the principles of conflict of laws.

10. Amendment and Termination; Waiver. Subject to the terms of the Plan, this Agreement may be modified or amended only by the written agreement of the parties hereto. The waiver by the Corporation of a breach of any provision of the Agreement by the Participant shall not operate or be construed as a waiver of any subsequent breach by the Participant.

11. No Rights as a Stockholder. The Participant and his or her legal representatives, legatees or distributees shall not be deemed to be the holder of any shares subject to the Option and shall not have any rights of a stockholder unless and until certificates for such shares have been issued and delivered to him, her or them.

12. Withholding. The Participant acknowledges that the Corporation shall require the Participant to pay the Corporation the amount of any federal, state, local or other tax or other amount required by any governmental authority to be withheld and paid over by the Corporation to such authority for the account of the Participant, and the Participant agrees, as a condition to the grant of the Option and delivery of the shares, to satisfy such obligations.

13. Administration. The authority to construe and interpret this Agreement and the Plan, and to administer all aspects of the Plan, shall be vested in the Administrator (as such term is defined in the Plan), and the Administrator shall have all powers with respect to this Agreement as are provided in the Plan. Any interpretation of the Agreement by the Administrator and any decision made by it with respect to the Agreement is final and binding.

14. Notices. Except as may be otherwise provided by the Plan, any written notices provided for in this Agreement or the Plan shall be in writing and shall be deemed sufficiently given if either hand delivered or if sent by fax or overnight courier, or by postage paid first class mail. Notices sent by mail shall be deemed received three business days after mailed but in no event later than the date of actual receipt. Notices shall be directed, if to the Participant, at the Participant's address indicated by the Corporation's records, or if to the Corporation, at the Corporation's principal office.

15. Severability. The provisions of this Agreement are severable and if any one or more provisions may be determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

IN WITNESS WHEREOF, this Agreement has been executed in behalf of the Corporation and by the Participant effective as of the day and year first above written.

TARGACEPT, INC.

By: ____________________
Name: ____________________
Title: ____________________

Attest:

____
Secretary

[Corporate Seal]

PARTICIPANT

____

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
(Employees)

SCHEDULE A

Date Option granted: ____________________
Date Option expires: ____________________
Number of shares subject to Option: ____________ shares
Option price (per share): $__________
Class of Option: Incentive.

Date Installment First Exercisable	Number of Shares in Installment

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
(Non-Employee Directors)

THIS AGREEMENT (the “Agreement”), made the ______ day of__________________ ______ between Targacept, Inc., a Delaware corporation (the “Corporation”), and ________________, a director of the Corporation or a related corporation (the “Participant”);

R E C I T A L S :

In furtherance of the purposes of the 2000 Equity Incentive Plan of Targacept, Inc., as it may be hereafter amended (the “Plan”), and in consideration of the services of the Participant and such other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Corporation and the Participant hereby agree as follows:

1. Incorporation of Plan. The rights and duties of the Corporation and the Participant under this Agreement shall in all respects be subject to and governed by the provisions of the Plan, a copy of which is delivered herewith or has been previously provided to the Participant and the terms of which are incorporated herein by reference. In the event of any conflict between the provisions in the Agreement and those of the Plan, the provisions of the Plan shall govern. Unless otherwise defined herein, capitalized terms in this Agreement shall have the same definitions as set forth in the Plan.

2. Grant of Option; Term of Option. The Corporation hereby grants to the Participant pursuant to the Plan, as a matter of separate inducement and agreement in connection with his service to the Corporation, and not in lieu of any salary or other compensation for his services, the right and Option (the “Option”) to purchase all or any part of an aggregate of ______________________ (______) shares (the “shares”) of the common stock (the “Common Stock”) of the Corporation, at a purchase price (the “option price”) of Zero Dollars and 01/100 ($0.01) per share. The Option shall be designated as a Nonqualified Option. Except as otherwise provided in the Plan, the Option will expire if not exercised in full before __________________, ______.

3. Exercise of Option. The Option shall become exercisable on the date or dates and subject to such conditions set forth in the Plan, this Agreement and Schedule A, which is attached hereto and expressly made a part of this Agreement. To the extent that the Option is exercisable but is not exercised, the Option shall accumulate and be exercisable by the Participant in whole or in part at any time prior to expiration of the Option, subject to the terms of the Plan and this Agreement. Upon the exercise of an Option in whole or in part, payment of the option price in accordance with the provisions of the Plan and this Agreement, and satisfaction of such other conditions as may be established by the Administrator, the Corporation shall as soon thereafter as practicable deliver to the Participant a certificate or certificates for the shares purchased. Payment of the option price may be made: (i) in cash or by check; (ii) by delivery (by either actual delivery or attestation) of shares of Common Stock owned by the Participant at the time of exercise for a period of at least six months and otherwise acceptable to the Administrator; (iii) in the event that a public market for the Common Stock exists (as defined in the Plan), by delivery of written notice of exercise to the Corporation and delivery to a broker of written notice of exercise and irrevocable instructions to promptly deliver to

the Corporation the amount of sale or loan proceeds to pay the option price; (iv) by such other methods as may be permitted by the Administrator in its sole discretion in accordance with Section 6(c)(ii) of the Plan; or (v) by a combination of the foregoing methods. Shares delivered in payment of the option price shall be valued at their fair market value on the date of exercise, as determined by the Administrator by applying the provisions of the Plan.

4. No Right of Continued Service. Nothing contained in this Agreement or the Plan shall confer upon the Participant any right to continue in the service of the Corporation or a related corporation or interfere with the right of the Corporation or a related corporation to terminate the Participant's service at any time. Except as otherwise expressly provided in the Plan or Schedule A, all rights of the Participant under the Plan with respect to the Option shall terminate upon termination of the services of the Participant with the Corporation or a related corporation.

5. Nontransferability of Option. This Option shall not be transferable other than by will or the laws of intestate succession, except as may be permitted by the Administrator of the Plan in its sole discretion in a manner consistent with the registration provisions of the Securities Act of 1933, as amended (the "Securities Act"). Except as may be permitted by the preceding sentence, this Option shall be exercisable during the Participant's lifetime only by the Participant.

6. Superseding Agreement; Binding Effect. This Agreement supersedes any statements, representations or agreements of the Corporation with respect to the grant of the Option or any related rights, and the Participant hereby waives any rights or claims related to any such statements, representations or agreements. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective executors, administrators, next-of-kin, successors and assigns.

7. Representations and Warranties of Participant. The Participant represents and warrants to the Corporation that:

(a) Agrees to Terms of the Plan and Agreement. The Participant has received a copy of the Plan, has read and understands the terms of the Plan and this Agreement, and agrees to be bound by their terms and conditions. The Participant acknowledges that there may be adverse tax consequences upon acquisition or disposition of the shares subject to the Option, and that the Participant should consult a tax advisor prior to such exercise or disposition.

(b) Purchase for Own Account for Investment. Any shares of Common Stock acquired pursuant to the Option shall be acquired for the Participant's own account for investment purposes only and not with a view to, or for sale in connection with, a distribution of the shares within the meaning of the Securities Act. The Participant has no present intention of selling or otherwise disposing of all or any portion of the shares subject to the Option.

(c) Access to Information. The Participant has had access to all information regarding the Corporation and its present and prospective business, assets, liabilities and financial condition that the Participant reasonably considers important in making a decision to acquire the shares subject to the Option, and the Participant has had ample opportunity to ask questions of the Corporation's representatives concerning such matters and this investment.

(d) Understanding of Risks. The Participant is fully aware of: (i) the speculative nature of the investment in the shares of Common Stock; (ii) the financial hazards involved in investment of the Common Stock; (iii) the lack of liquidity of the shares subject to the Option and the restrictions on transferability of such shares; (iv) the qualifications and backgrounds of the management of the Corporation; and (v) the tax consequences of investment in the shares of Common Stock. The Participant is capable of evaluating the merits and risks of this investment, has the ability to protect his own interests in this transaction and is financially capable of bearing a total loss from this investment.

(e) No General Solicitation. At no time was the Participant presented with or solicited by any publicly issued or circulated newspaper, mail, radio, television or other form of general advertising or solicitation in connection with the offer, sale or purchase of the shares subject to the Option.

(f) Compliance with Securities Laws. The shares subject to the Option have not been registered with the Securities and Exchange Commission ("SEC") under the Securities Act and, notwithstanding any other provision of this Agreement or the Plan to the contrary, the right to acquire any shares subject to this Option is expressly conditioned upon compliance with the Securities Act and all applicable state securities laws. The Participant agrees to cooperate with the Corporation to ensure compliance with such laws.

(g) No Transfer Unless Registered or Exempt. The Participant understands that he may not transfer any shares subject to the Option unless such shares are registered under the Securities Act and qualified under applicable state securities laws or unless, in the opinion of counsel to the Corporation, exemptions from such registration and qualification requirements are available. The Participant understands that only the Corporation may file a registration statement with the SEC and that the Corporation is under no obligation to do so with respect to the shares subject to the Option. The Participant has also been advised that exemptions from registration and qualification may not be available or may not permit the Participant to transfer all or any of the shares subject to the Option in the amounts or at the times proposed by him. The Participant also agrees in connection with any registration of the Corporation's securities that, upon the request of the Corporation or the underwriters managing any public offering of the Corporation's securities, the Participant will not sell or otherwise dispose of any shares without the prior written consent of the Corporation or such underwriters, as the case may be, for such period of time (not to exceed 180 days) after the effective date of such registration requested by such managing underwriters and subject to all restrictions as the Corporation or the underwriters may specify.

8. Other Restrictions on Option and Shares.

(a) As a condition to the issuance and delivery of shares subject to the Option, or the grant of any benefit pursuant to the terms of the Plan, the Corporation may require the Participant or other person to become a party to a stockholders agreement, buy-sell agreement, redemption agreement, repurchase agreement or other agreement between the Corporation and stockholders of the Corporation or among stockholders of the Corporation or such other agreements imposing such restrictions as may be required by the Corporation. *Without in any way limiting the effect of the foregoing, the Participant hereby expressly acknowledges and agrees that the Corporation shall require, prior to the issuance of any shares pursuant to this Agreement, that the Participant become a party to that certain Second Amended and Restated Stockholders Agreement dated as of November 26, 2002, by and among Targacept, Inc. and the stockholders thereof, as amended*.

(b) The Corporation may impose such restrictions on the Option and any shares issuable pursuant to the exercise of the Option as it may deem advisable, including without limitation restrictions under the federal securities laws, or the requirements of any stock exchange or similar organization or any blue sky or state securities laws applicable to such shares. Notwithstanding any other provision in the Plan or the Agreement to the contrary, the Corporation shall not be obligated to issue, deliver or transfer shares of Common Stock, to make any other distribution of benefits, or to take any other action, unless such delivery, distribution or action is in compliance with all applicable laws, rules and regulations (including but not limited to the requirements of the Securities Act). The Corporation will be under no obligation to register the shares of Common Stock with the SEC or to effect compliance with the exemption, registration, qualification or listing requirements of any state securities laws, stock exchange or similar organization, and the Corporation will have no liability for any inability or failure to do so. The Corporation may cause a restrictive legend to be placed on any certificate issued pursuant to the exercise of the Option in such form as may be prescribed from time to time by applicable laws and regulations or as may be advised by legal counsel.

9. Governing Law. Except as otherwise provided in the Plan or herein, this Agreement shall be construed and enforced according to the laws of the State of Delaware, without regard to the principles of conflict of laws.

10. Amendment and Termination; Waiver. Subject to the terms of the Plan, this Agreement may be modified or amended only by the written agreement of the parties hereto. The waiver by the Corporation of a breach of any provision of the Agreement by the Participant shall not operate or be construed as a waiver of any subsequent breach by the Participant.

11. No Rights as a Stockholder. The Participant and his legal representatives, legatees or distributees shall not be deemed to be the holder of any shares subject to the Option and shall not have any rights of a stockholder unless and until certificates for such shares have been issued and delivered to him or them.

12. Withholding. The Participant acknowledges that the Corporation shall require the Participant to pay the Corporation the amount of any federal, state, local or other tax or other amount required by any governmental authority to be withheld and paid over by the Corporation to such authority for the account of the Participant, and the Participant agrees, as a condition to the grant of the Option and delivery of the shares, to satisfy such withholding obligations.

13. Administration. The authority to construe and interpret this Agreement and the Plan, and to administer all aspects of the Plan, shall be vested in the Administrator (as such term is defined in the Plan), and the Administrator shall have all powers with respect to this Agreement as are provided in the Plan. Any interpretation of the Agreement by the Administrator and any decision made by it with respect to the Agreement is final and binding.

14. Notices. Except as may be otherwise provided by the Plan, any written notices provided for in this Agreement or the Plan shall be in writing and shall be deemed sufficiently given if either hand delivered or if sent by fax or overnight courier, or by postage paid first class mail. Notices sent by mail shall be deemed received three business days after mailed but in no event later than the date of actual receipt. Notices shall be directed, if to the Participant, at the Participant's address indicated by the Corporation's records, or if to the Corporation, at the Corporation's principal office.

15. Severability. The provisions of this Agreement are severable and if any one or more provisions may be determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

IN WITNESS WHEREOF, this Agreement has been executed in behalf of the Corporation and by the Participant effective as of the day and year first above written.

TARGACEPT, INC.

By: ______________________________

Attest:

____

[Corporate Seal]

PARTICIPANT

____

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
(Non-Employee Directors)

SCHEDULE A

Date Option granted: ____________________, ________.
Date Option expires: ____________________, ________.
Number of shares subject to Option: ______________ shares.
Option price (per share): $0.01.
Type of Option: Nonqualified Stock Option

Date Installment First Exercisable	Percentage of Option Which Is Exercisable
______________________	100%

Other Conditions to Exercise:

____

Exhibit 10.5(d)

2000 EQUITY INCENTIVE PLAN
OF TARGACEPT, INC.

Restricted Stock Award Agreement
(Service-Based Award)

Name of Participant: ________________________________

Grant Date: ________________________________

Number of Shares: ________________________________

Vesting Begins: ________________________________

THIS AGREEMENT (together with Schedule A attached hereto, this "Agreement"), made the ______ day of ______________________ ____ (as defined below, the "Grant Date"), between Targacept, Inc., a Delaware corporation (the "Corporation"), and ___________, an employee of, or a director or other individual in service to, the Corporation or a related corporation (the "Participant");

R E C I T A L S :

In furtherance of the purposes of the 2000 Equity Incentive Plan of Targacept, Inc., as amended and as may be hereafter amended (the "Plan"), and in consideration of ______________________ Dollars ($______) paid to the Corporation and such other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Corporation and the Participant hereby agree as follows:

1. Incorporation of Plan. The rights and duties of the Corporation and the Participant under this Agreement shall in all respects be subject to and governed by the provisions of the Plan, the terms of which are incorporated herein by reference. In the event of any conflict between the provisions in the Agreement and those of the Plan, the provisions of the Plan shall govern. Unless otherwise defined herein, capitalized terms in this Agreement shall have the same definitions as set forth with the Plan.

2. Terms of Award. The following terms used in this Agreement shall have the meanings set forth in this Section 2:

(a) The "Participant" is ____________________.

(b) The "Grant Date" is ____________________.

(c) The "Restriction Period" is the period beginning on the Grant Date and ending on ____________________

(d) The number of shares of Restricted Stock subject to the restricted award granted under this Agreement shall be ___________ shares (the "Shares").

3. Grant of Restricted Award. Subject to the terms of this Agreement and the Plan, the Corporation hereby grants the Participant an award (the "Award") for that number of Shares of Restricted Stock as is set forth in Section 2.

4. Certificates; Dividends and Voting Rights. A certificate evidencing the Shares shall be issued by the Corporation in the Participant's name, or at the option of the Corporation, in the name of a nominee of the Corporation, pursuant to which the Participant shall have voting rights and shall be entitled to receive all dividends unless and until the Shares are forfeited pursuant to the provisions of this Agreement. The certificate shall bear a legend evidencing the nature of the Shares, and the Corporation may cause the certificate to be delivered upon issuance to the Secretary of the Corporation or to such other depository as may be designated by the Corporation as a depository for safekeeping until the forfeiture occurs or the Award is vested and earned pursuant to the terms of the Plan and this Award. Upon request of the Administrator, the Participant shall deliver to the Corporation a stock power, endorsed in blank, relating to the Shares. Upon the vesting of the Award, the Corporation shall cause a new certificate or certificates to be issued without legend in the name of the Participant for the Shares.

5. Vesting of Award.

(a) Subject to the terms of the Plan and the Agreement, the Award shall be deemed earned and vested upon such date or dates, and subject to such conditions, as are described on Schedule A. Without limiting the effect of the foregoing, the Shares subject to the Award may vest in installments over a period of time, if so provided in Schedule A.

(b) Notwithstanding any other provision of Section 5 herein, the Administrator has sole authority to determine whether and to what degree the Award has vested and been earned and to interpret the terms and conditions of this Agreement and the Plan.

6. Forfeiture of Award. Except as may be otherwise provided in the Plan, in the event that (i) the employment or service of the Participant is terminated or (ii) the Participant fails to attend (either in person or by conference telephone) at least 75% of the regular meetings of the Board of Directors in the one-year period ending ___________, and the Participant has not yet earned all or part of the Award pursuant to Section 5 and Schedule A herein, then the Award, to the extent not earned as of the Participant's termination date, shall be forfeited immediately upon such termination, and the Participant shall have no further rights with respect to the Award or the Shares underlying that portion of the Award that has not yet been earned and vested. The Participant expressly acknowledges and agrees that the termination of his employment or service for any reason other than death or disability shall result in forfeiture of the Award and the Shares to the extent the Award has not been earned and vested as of the date of his termination of service or employment.

7. No Right of Continued Employment or Service. Nothing contained in this Agreement or the Plan shall confer upon the Participant any right to continue in the employment or service of the Corporation or a related corporation or to interfere in any way with the right of the Corporation or a related corporation to terminate the Participant's employment or service at any time. Except as otherwise expressly provided in the Plan or Section 6 or any other provision of this Agreement, all rights of the Participant with respect to the Award shall terminate upon termination of the employment or service of the Participant with the Corporation or a related corporation.

8. Nontransferability of Award. The Award shall not be transferable other than by will or the laws of intestate succession. The designation of a beneficiary does not constitute a transfer. The Participant shall not sell, transfer, assign, pledge or otherwise encumber ("transfer") the Shares

subject to the Award unless and until all conditions to vesting have been met and such Shares have been issued and any such proposed transfer is permitted pursuant to the Plan and this Agreement.

9. Representations and Warranties of Participant. The Participant represents and warrants to the Corporation that:

(a) Agrees to Terms of the Plan and Agreement. The Participant has received a copy of the Plan, has read and understands the terms of the Plan and this Agreement, and agrees to be bound by their terms and conditions. The Participant acknowledges that there may be adverse tax consequences upon acquisition or disposition of the shares subject to the Award, and that the Participant should consult a tax advisor prior to such acquisition or disposition.

(b) Purchase for Own Account for Investment. Any Shares of Common Stock acquired pursuant to the Award shall be acquired for the Participant's own account for investment purposes only and not with a view to, or for sale in connection with, a distribution of the Shares within the meaning of the Securities Act of 1933, as amended (the "Securities Act"). The Participant has no present intention of selling or otherwise disposing of all or any portion of the Shares subject to the Award.

(c) Access to Information. The Participant has had access to all information regarding the Corporation and its present and prospective business, assets, liabilities and financial condition that the Participant reasonably considers important in making a decision to acquire the Shares subject to the Award, and the Participant has had ample opportunity to ask questions of, and to receive answers from, the Corporation's representatives concerning such matters and this investment.

(d) Understanding of Risks. The Participant is fully aware of: (i) the highly speculative nature of the investment in the shares of Common Stock; (ii) the financial hazards involved in investment in the Common Stock; (iii) the lack of liquidity of the Shares subject to the Award and the restrictions on transferability of such Shares; (iv) the qualifications and backgrounds of the management of the Corporation; and (v) the tax consequences of investment in the shares of Common Stock. The Participant is capable of evaluating the merits and risks of this investment, has the ability to protect his own interests in this transaction and is financially capable of bearing a total loss from this investment.

(e) No General Solicitation. At no time was the Participant presented with or solicited by any publicly issued or circulated newspaper, mail, radio, television or other form of general advertising or solicitation in connection with the offer, sale or purchase of the Shares subject to the Award.

(f) Compliance with Securities Laws. The Shares subject to the Award have not been registered with the Securities and Exchange Commission ("SEC") under the Securities Act and, notwithstanding any other provision of this Agreement or the Plan to the contrary, the right to acquire any shares subject to this Award is expressly conditioned upon compliance with the Securities Act and all applicable state securities laws. The Participant agrees to cooperate with the Corporation to ensure compliance with such laws.

(g) No Transfer Unless Registered or Exempt. None of the Corporation's securities is presently publicly traded, and the Corporation has made no representation, covenant or agreement as to whether there will be a public market for any of its securities. The Participant understands that he may not transfer any Shares subject to the Award unless such Shares are registered under the Securities Act and qualified under applicable state securities laws or unless, in the opinion of counsel to the Corporation, exemptions from such registration and qualification requirements are available. The Participant understands that only the Corporation may file a registration statement with the SEC and that the Corporation is under no obligation to do so with respect to the Shares subject to the Award. The Participant has also been advised that exemptions from registration and qualification may not be available or may not permit the Participant to transfer all or any of the Shares subject to the Award in the amounts or at the times proposed by him. The Participant also agrees in connection with any registration of the Corporation's securities that, upon the request of the Corporation or the underwriters managing any public offering of the Corporation's securities, the Participant will not sell or otherwise dispose of any shares without the prior written consent of the Corporation or such underwriters, as the case may be, for such period of time (not to exceed 180 days) after the effective date of such registration requested by such managing underwriters and subject to all restrictions as the Corporation or the underwriters may specify.

(h) Income Tax Consequences. The Corporation has made no warranties or representations to the Participant with respect to the income tax consequences of the transactions contemplated by this Agreement, and the Participant is in no manner relying on the Corporation or its representatives for an assessment of such tax consequences.

10. Other Restrictions on Award and Shares.

(a) As a condition to the issuance and delivery of shares subject to the Award, or the grant of any benefit pursuant to the terms of the Plan, the Corporation may require the Participant or other person to become a party to a stockholders agreement, buy-sell agreement, redemption agreement, repurchase agreement or other agreement between the Corporation and stockholders of the Corporation or among stockholders of the Corporation or such other agreements imposing such restrictions as may be required by the Corporation. *Without in any way limiting the effect of the foregoing, the Participant hereby expressly acknowledges and agrees that the Corporation shall require, prior to the issuance of any shares pursuant to this Agreement, that the Participant become a party to that certain Second Amended and Restated Stockholders Agreement dated as of November 26, 2002, by and among Targacept, Inc. and the stockholders thereof, as amended*.

(b) The Corporation may impose such restrictions on the Award and any Shares issuable pursuant to the Award as it may deem advisable, including without limitation restrictions under the federal securities laws, or the requirements of any stock exchange or similar organization or any blue sky or state securities laws applicable to such Shares. Notwithstanding any other provision in the Plan or the Agreement to the contrary, the Corporation shall not be obligated to issue, deliver or transfer shares of Common Stock, to make any other distribution of benefits, or to take any other action, unless such delivery, distribution or action is in compliance with all applicable laws, rules and regulations (including but not limited to the requirements of the Securities Act). The Corporation will be under no obligation to register the shares of Common Stock with the SEC or to effect compliance with the exemption, registration, qualification or listing requirements of any state securities laws, stock exchange or similar organization, and the Corporation will have no liability for any inability or failure to do so. The Corporation may cause a restrictive legend to be placed on any certificate issued pursuant to the Award in such form as may be prescribed from time to time by applicable laws and regulations or as may be advised by legal counsel.

11. Withholding. The Participant acknowledges that the Corporation shall require the Participant to pay the Corporation the amount of any federal, state, local or other tax or other amount required by any governmental authority to be withheld and paid over by the Corporation to such authority for the account of the Participant, and the Participant agrees, as a condition to the grant of the Award and delivery of the shares, to satisfy such obligations.

12. Administration. The authority to construe and interpret this Agreement and the Plan, and to administer all aspects of the Plan, shall be vested in the Administrator (as such term is defined in the Plan), and the Administrator shall have all powers with respect to this Agreement as are provided in the Plan. Any interpretation of the Agreement by the Administrator and any decision made by it with respect to the Agreement is final and binding.

13. Superseding Agreement; Binding Effect. This Agreement supersedes any statements, representations or agreements of the Corporation with respect to the grant of the Award or any related rights, and the Participant hereby waives any rights or claims related to any such statements, representations or agreements. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective executors, administrators, next-of-kin, successors and assigns.

14. Governing Law. Except as otherwise provided in the Plan or herein, this Agreement shall be construed and enforced according to the laws of the State of Delaware, without regard to the principles of conflict of laws.

15. Amendment and Termination; Waiver. Subject to the terms of the Plan, this Agreement may be modified or amended only by the written agreement of the parties hereto. The waiver by the Corporation of a breach of any provision of the Agreement by the Participant shall not operate or be construed as a waiver of any subsequent breach by the Participant.

16. No Rights as Stockholder. Except as may be provided in Section 4 herein, the Participant and his legal representative, legatees or distributees shall not be deemed to be the holder of any shares subject to the Award and shall not have any rights of a stockholder unless and until certificates for such shares have been issued and delivered to him or them.

17. Notices. Except as may be otherwise provided by the Plan, any written notices provided for in this Agreement or the Plan shall be in writing and shall be deemed sufficiently given if either hand delivered or if sent by fax or overnight courier, or by postage paid first class mail. Notices sent by mail shall be deemed received three business days after mailed but in no event later than the date of actual receipt. Notices shall be directed, if to the Participant, at the Participant's address indicated by the Corporation's records, or if to the Corporation, at the Corporation's principal office.

18. Severability. The provisions of this Agreement are severable and if any one or more provisions may be determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

IN WITNESS WHEREOF, this Agreement has been executed in behalf of the Corporation and by the Participant on the day and year first above written.

TARGACEPT, INC.

By: ______________________

Name: ______________________

Title: ______________________

Attest:

____

Secretary

[Corporate Seal]

PARTICIPANT

____

____

2000 EQUITY INCENTIVE PLAN
OF TARGACEPT, INC.

Restricted Stock Award Agreement
(Service-Based Award)

SCHEDULE A

Grant Date: ___________.

Number of Shares Subject to Award: ___________ shares.

Restriction Period: The Shares subject to the Award shall vest and be earned in installments, as provided below, subject to Section 6 and such other terms and conditions as may be imposed by the Plan and this Agreement:

Date of Vesting	Percentage of Shares Vested
____________________	100.00%

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT ("Agreement") is made as of August 22, 2000 by and between TARGACEPT, INC., a Delaware corporation ("Employer"), and Dr. J. Donald deBethizy, an individual resident of North Carolina ("Employee");

RECITALS:

WHEREAS, Employer considers the availability of Employee's services to be important to the management and conduct of Employer's business and desires to secure the continued availability of Employee's services; and

WHEREAS, Employee is willing to make his services available to Employer on the terms and subject to the conditions set forth herein;

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. Employment. For the Term (as defined in Section 2), Employee shall be employed as Chief Executive Officer and President. Employee will be located at the Employer's principal executive offices in Winston-Salem, North Carolina. Employee hereby accepts and agrees to such employment, subject to the general supervision of the Board of Directors of Employer (the "Board"). Employee shall perform such duties and shall have such powers, authority and responsibilities as are customary for one holding the position of President and Chief Executive Officer of a business similar to Employer and shall additionally render such other services and duties as may be reasonably assigned to him from time to time by the Board.

2. Term of Employment. This Agreement shall commence as of September 15, 2000 (the "Effective Date") and continue until terminated as provided in Section 6 or Section 7 (such period, the "Term"). Any termination of this Agreement shall not affect the parties' continuing obligations under Section 5, which shall survive any such termination.

3. Compensation.

(a) For all services rendered by Employee to Employer under this Agreement, Employer shall pay to Employee, during the Term, a base annual salary of not less than $225,000, payable in arrears in accordance with the customary payroll practices of Employer. During the Term, Employee's annual base salary shall be reviewed and subject to increase in accordance with Employer's standard policies and procedures. Without limiting the generality of the foregoing, Employee's base annual salary shall be increased annually to the extent necessary to stay in line with the median base salary of employees of a similar level in comparable companies as described in the then current Radford Biotechnology Compensation Report.

(b) Employee shall be eligible to earn an annual bonus during the Term of up to 35% of Employee's annual base salary, or such higher amount as determined by the Board of Directors (or a compensation committee thereof). The eligibility for the target bonus shall be based upon the achievement of performance objectives mutually agreed upon by Employee and Employer and shall be payable within thirty (30) days of the end of each fiscal year.

(c) All amounts payable hereunder shall be subject to such deductions and withholdings as shall be required by law, if any.

(d) Employee shall be issued 135,373 shares of founder's stock, which stock shall vest in accordance with the Stock Restriction Agreement attached hereto as Exhibit A.

(e) Employee shall be granted an incentive stock option to purchase 406,120 shares of Employer's common stock under the terms of Employer's 2000 Equity Incentive Plan and pursuant to a form of option agreement attached hereto as Exhibit B (the "Option Agreement"). The incentive option shall have a term of ten years and an exercise price of $0.47 per share and shall vest ratably over the twelve (12) quarters commencing twelve (12) months from the Effective Date. Any terms contained in this Agreement regarding the exercisability or vesting of such options, including without limitation this Section 3(e) and Section 7, shall be reflected in the terms of the Option Agreement. Employee shall also be eligible to receive additional awards thereunder in the discretion of the Board (or a compensation committee thereof).

(f) Employee shall also be entitled to holidays, sick leave and other time off and to participate in those life, health or other insurance plans and other employee pension and welfare benefit programs, plans, practices and benefits generally made available from time to time to all employees of Employer; provided that nothing herein shall obligate Employer to continue any of such benefits for Employee if discontinued for other employees. Without limiting the foregoing, Employee shall be entitled to paid vacation during each fiscal year of the term of twenty (20) days.

4. Reimbursement of Expenses. Employer shall pay or reimburse Employee for all reasonable travel and other expenses incurred by Employee in performing his obligations under this Agreement and also, to the extent consistent with Employer's policy, for any dues and costs of appropriate professional organization and continuing professional education, in each case subject to such reasonable documentation and substantiation as Employer shall require.

5. Covenants of Employee.

(a) Covenant Not to Compete. Employee covenants that during the "Noncompetition Period" (as defined in Section 5(g)) and within the "Noncompetition Area" (as defined in Section 5(h)), he shall not, directly or indirectly, as principal, agent, officer, director, shareholder, member, employee, consultant or trustee, or through the agency of any person, firm, corporation, partnership, limited liability company, association or other entity (collectively, "Entity"), engage in the "Business" (as defined in Section 5(i)). Without limiting the generality of the foregoing, Employee agrees that during the Noncompetition Period and within the

Noncompetition Area, he shall not be (i) the owner of the outstanding capital stock or other equity interests of any Entity (other than Employer or its affiliates) that, directly or indirectly, engages in the Business; or (ii) an officer, director, partner, manager, member, consultant or employee of any Entity that, directly or indirectly, engages in the Business; provided, that this Section 5(a) shall not prevent Employee from (A) being an employee of any area or division of any Entity to the extent that such area or division does not, directly or indirectly, engage in the Business or (B) beneficially owning less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market.

(b) Nondisclosure Covenant. The parties acknowledge that Employer and its affiliates are enterprises whose success is attributable largely to the ownership, use and development of certain valuable confidential and proprietary information (the "Proprietary Information"), and that Employee's employment with Employer will involve access to and work with such information. Employee acknowledges that his relationship with Employer is a confidential relationship, and agrees that (i) he shall keep and maintain the Proprietary Information in strictest confidence, and (ii) he shall not, either directly or indirectly, use any Proprietary Information for his own benefit, or divulge, disclose or communicate any Proprietary Information in any manner whatsoever to any person or Entity other than to employees or agents of Employer having a need to know such Proprietary Information to perform their responsibilities on behalf of Employer, and to other persons or Entities in the normal course of Employer's business. This nondisclosure obligation shall apply to all Proprietary Information, whether or not Employee participated in the development thereof. Upon termination of his employment with Employer for any reason, Employee will return to Employer all Proprietary Information in any medium and all other documents, data, materials or property of Employer (including any copies thereof) in his possession. For purposes of this Agreement, the term "Proprietary Information" shall include any and all proprietary information related to the business of Employer and its affiliates and stockholders, or to any of their products, services, sales or operations, which is not generally known to the public, specifically including (but without limitation): trade secrets, processes, formulae, compounds and properties thereof, data, files, research results, computer programs and related source codes and object codes, improvements, inventions, techniques, marketing plans, strategies, forecasts, copyrightable material, suppliers, methods and manner of operations; information relating to the identity, needs and location of all past, present and prospective customers; and information with respect to the internal affairs of Employer and its affiliates. Such Proprietary Information may or may not contain legends or other written notice that it is of a confidential or proprietary nature. The parties stipulate that, as between them, the above-described matters are important and confidential and gravely affect the successful conduct of the business of Employer and its affiliates and that any breach of the terms of this Section 5(b) shall be a material breach of this Agreement.

(c) Nonsolicitation Covenant. Employee covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, call upon any of the customers or clients of Employer (or potential customers or clients whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during his employment with Employer) for the purpose of soliciting or providing any product or service similar to that provided by Employer, nor will he, in any way, directly or indirectly, on behalf of himself or any Entity solicit, divert or take away, or attempt to solicit, divert, or take away any of the customers, clients, business or patrons of Employer (or potential customers or clients whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during his employment with Employer). Employee further covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, solicit, induce or encourage any person to leave the employ of Employer.

(d) Inventions. All inventions, designs, formulae, processes, discoveries, drawings, improvements and developments made by Employee, either solely or in collaboration with others, during his employment with Employer, whether or not during working hours, and relating to any methods, apparatus, products, compounds, services or deliverables which are made, furnished, sold, leased, used or developed by Employer or its affiliates or which pertain to the Business (the "Developments") shall become and remain the sole property of Employer. Employee shall disclose promptly in writing to Employer all such Developments. Employee acknowledges and agrees that all Developments shall be deemed "works made for hire" within the meaning of the United States Copyright Act, as amended. If, for any reason, such Developments are not deemed works made for hire, Employee hereby assigns to Employer all of his right, title and interest (including, but not limited to, copyright and all rights of inventorship) in and to such Developments. At the request and expense of Employer, whether during or after employment with Employer, Employee shall make, execute and deliver all application papers, assignments or instruments, and perform or cause to be performed such other lawful acts as Employer may deem necessary or desirable in making or prosecuting applications, domestic or foreign, for patents (including reissues, continuations and extensions thereof) and copyrights related to such Developments or in vesting in Employer full legal title to such Developments. Employee shall assist and cooperate with Employer or its representatives in any controversy or legal proceeding relating to such Developments, or to any patents, copyrights or trade secrets with respect thereto. If for any reason Employee refuses or is unable to assist Employer in obtaining or enforcing its rights with respect to such Developments, he hereby irrevocably designates and appoints Employer and its duly authorized agents as his agents and attorneys-in-fact to execute and file any documents and to do all other lawful acts necessary to protect Employer's rights in the Developments. Employee expressly acknowledges that the special foregoing power of attorney is coupled with an interest and is therefore irrevocable and shall survive (i) his death or incompetency, (ii) the termination of his employment with Employer and (iii) the termination of this Agreement.

(e) Independent Covenants. Each of the covenants on the part of Employee contained in Sections 5(a), (b), (c) and (d) of this Agreement shall be construed as an agreement independent of each other such covenant. The existence of any claim or cause of action of Employee against Employer, whether predicated on this Agreement or otherwise, shall not constitute a defense to the enforcement by Employer of any such covenant.

(f) Reasonableness; Injunction. Employee acknowledges that his covenants contained in Section 5 of this Agreement are reasonably necessary for the protection of Employer and its affiliates and their businesses, and that such covenants are reasonably limited with respect to the activities prohibited, the duration thereof, the geographic area thereof, the scope thereof and the effect thereof on Employee and the general public. Employee further acknowledges that violation of the covenants would immeasurably and irreparably damage Employer and its affiliates, and by reason thereof Employee agrees that for violation or threatened violation of any of the provisions of this Agreement, Employer shall, in addition to any other rights and remedies available to it, at law or otherwise, be entitled to an injunction to be issued by any court of competent jurisdiction enjoining and restraining Employee from committing any violation or threatened violation of this Agreement. Employee consents to the issuance of such injunction. Furthermore, Employer shall, in addition to any other rights or remedies available to it, at law or otherwise, be entitled to reimbursement of court costs, attorneys' fees and other expenses incurred as a result of a breach of this Agreement. Employee agrees to reimburse Employer for such expenses promptly following a final determination that he has breached this Agreement.

(g) Noncompetition Period. "Noncompetition Period" shall mean the period commencing on the Effective Date and continuing until one year following termination of this Agreement.

(h) Noncompetition Area. The "Noncompetition Area" shall consist of the entire world.

(i) Business. For the purposes of this Agreement, the "Business" shall mean the business of developing, manufacturing, marketing or selling therapeutic products that use synthetic nicotinic cholinergic compounds.

6. Disability. Upon the "disability" of Employee, this Agreement may be terminated by action of the Board upon 30 days prior written notice (the "Disability Notice"), such termination to become effective only if such disability continues. If, prior to the effective time of the Disability Notice, Employee shall recover from such disability and return to the full-time active discharge of his duties, then the Disability Notice shall be of no further force and effect and Employee's employment shall continue as if the same had been uninterrupted. If Employee shall not so recover from his disability and return to his duties, then his services shall terminate at the effective time of the Disability Notice with the same force and effect as if that date had been the end of the Term originally provided for hereunder. Such termination shall not prejudice any benefits payable to Employee that are fully vested as of the date of such termination. Prior to the effective time of the Disability Notice, Employee shall continue to earn all compensation to which Employee would have been entitled as if he had not been disabled, such compensation to be paid at the time, in the amounts, and in the manner provided in Section 3(a). A "disability" of Employee shall be deemed to exist at all times that Employee is considered by the insurance Employer which has issued any policy of disability insurance owned by Employer or for which premiums are paid by Employer (the "Employer Policy") to be totally disabled under the terms of such policy. In the event there is no Employer Policy, "disability" shall mean the inability, by reason of physical or mental incapacity, impairment or infirmity, of Employee to perform, upon request, his regular duties required herein for six consecutive months, and the determination of the existence or nonexistence of disability shall be made by a medical doctor who is licensed to practice medicine in the State of North Carolina mutually acceptable to the Board and to Employee (or, if Employee is incapacitated, his spouse).

7. Termination.

(a) If Employee shall die during the Term, this Agreement and the employment relationship hereunder will automatically terminate on the date of death, which date shall be the last day of the Term; provided that such termination shall not prejudice any benefits payable to Employee or Employee's beneficiaries that are fully vested as of the date of death.

(b) Employer may terminate Employee's employment under this Agreement at any time with or without Just Cause. Any termination without Just Cause shall be effective only on thirty (30) days prior written notice to Employee. Any termination with Just Cause shall be effective immediately or at such other time set by the Board. "Just Cause" shall mean (i) Employee's willful and material breach of this Agreement and his continued failure to cure such breach to the reasonable satisfaction of the Board within thirty (30) days following written notice of such breach to Employee from the Board; (ii) Employee's conviction of, or entry of a plea of guilty or nolo contendere to a felony or a misdemeanor involving moral turpitude, (iii) Employee's willful commission of an act of fraud, breach of trust, or dishonesty including, without limitation, embezzlement, that results in material damage or harm to the business, financial condition or assets of Employer; or (iv) Employee's intentional damage or destruction of substantial property of Employer. Just Cause shall be determined by the Board in its reasonable discretion and the particulars of any determination shall be provided to Employee in writing. At any time within ninety (90) days of receipt by Employee in writing of such determination, Employee may object to such determination in writing and submit the determination to arbitration in accordance with Section 9(j). If such determination is overturned in arbitration, Employee will be treated as having been terminated without Just Cause and shall be entitled to the benefits of Section 7(d).

(c) Employee may voluntarily terminate his employment with Employer on thirty (30) days prior written notice to Employer.

(d) Upon any termination pursuant to this Section 7, Employee shall be entitled to receive a lump sum equal to any base salary, target bonus and other compensation earned and due but not yet paid through the effective date of termination. In addition, if this Agreement and Employee's employment hereunder is terminated by (i) Employer (or its successor) other than for Just Cause, or (ii) Employee for Good Reason, Employee shall be entitled to the following:

(A) severance, payable monthly, equal to Employee's then current base salary for twelve (12) months following such termination or, if shorter, until such time as Employee secures other employment (the "Severance Period").

(B) twelve (12) months acceleration of unvested stock options to purchase capital stock or restricted stock of the Employer held by Employee;

(C) the health care (including medical and dental) and life insurance benefits coverage provided to Employee at his date of termination shall be continued at the same level and in the same manner as if his employment had not terminated (subject to the customary changes in such coverages if Employee reaches age 65 or similar events), for the Severance Period, followed by COBRA election rights. Any additional coverages Employee had at termination, including dependent coverage, will also be continued for such period on the same terms. Any costs Employee was paying for such coverages at the time of termination shall continue to be paid by Employee. If the terms of any benefit plan referred to in this section do not permit continued participation by Employee, then Employer will arrange for other coverage providing substantially similar benefits at the same contribution level of Employee, and

(D) outplacement counseling services selected by Employee, up to a maximum of $10,000.

(e) If Employer (or its successor) terminates Employee's employment for Just Cause, Employee shall forfeit any unexercised vested stock options at the date of termination. If Employee terminates his employment or if Employer (or its successor) terminates Employee's employment without Just Cause, Employee shall have ninety (90) days from the date of termination to exercise any vested options.

(f) For purposes hereof, "Good Reason" shall mean the occurrence of any of the following events without Employee's express written consent:

(A) the breach by Employer (or any successor entity) of any material provision of this Agreement;

(B) any purported termination of the employment of Employee by Employer (or any successor entity) which is not effected in accordance with this Agreement;.

(C) any failure of the Employer (or any successor entity) to pay Employee and amounts of base salary or bonus compensation that have become due and payable to Employee within thirty (30) days after Employee has given Employer (or any successor entity) notice of demand therefor.

Notwithstanding the foregoing, Employee expressly acknowledges and agrees that the hiring by Employer of a new Chief Executive Officer shall not constitute Good Reason so long as Employee retains the office of President, Chief Operating Officer or comparable executive management title of Employer.

(g) Except as otherwise provided in this Section 7, upon termination of this Agreement for any reason, Employee shall not be entitled to any form of severance benefits, including benefits otherwise payable under any of Employer's regular severance plans or policies, or any other payment whatsoever. Employee agrees that the payments and benefits provided hereunder, subject to the terms and conditions hereof shall be in full satisfaction of any rights which he might otherwise have or claim by operation of law, by implied contract or otherwise, except for rights which he may have under any employee benefit plan of Employer.

8. Best Efforts of Employee. Employee agrees that he will at all times faithfully, industriously and to the best of his ability, experience and talents perform all the duties that may be required of him pursuant to the express and implicit terms hereof, to the reasonable satisfaction of Employer, commensurate with his position. Such duties shall be rendered at such place as Employer designates and employee acknowledges that he may be required to travel as shall reasonably be required to promote the business of Employer. To the extent reasonably required by the duties assigned to him, Employee shall devote substantially all his time, attention, knowledge and skills to the business and interest of Employer and shall be entitled to all the benefits, profits and other issue arising from or incident to all work, service and advice of Employee. During the Term, Employee shall not be interested, directly or indirectly, in any manner as partner, manager, officer, director, shareholder, member, adviser, consultant, employee or in any other capacity in any other business; provided, that nothing herein contained shall be deemed to prevent or limit the right of Employee to beneficially own less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market as long as such passive investment does not interfere with or conflict with the performance of services to be rendered hereunder. Notwithstanding the foregoing, Employer expressly acknowledges and agrees that, if requested by RJRT, Employee may, at any time within six (6) months after the date hereof, testify, give depositions and spend reasonable time preparing for same in those cases involving RJRT set forth below:

Jones vs. R. J. Reynolds Tobacco Co., et al., Circuit Court, Hillsborough County, Tampa, FL
Davis vs. Philip Morris, Inc., et al., Supreme Court, Kings County, Brooklyn, NY
Little vs. R. J. Reynolds Tobacco Co., et al., U.S. District Court, Charleston, SC
Blankenship vs. Philip Morris, Inc., et al., Circuit Court, Ohio County, Wheeling, WV
Falise vs. Philip Morris, Inc., et al., U.S. District Court, Eastern District, Brooklyn, NY
Blue Cross and Blue Shield of New Jersey vs. Philip Morris, Inc., et al., U.S. District Court, Eastern District, Brooklyn, NY
Seaborn vs. R. J. Reynolds Tobacco Co., et al., Circuit Court, Barbour County, Clayton, AL
Thomas vs. Philip Morris, Inc., et al., Circuit Court, Jefferson County, Fayette, MS

9. Miscellaneous.

(a) This Agreement shall be governed by and construed in accordance with the laws of the State of North Carolina without regard to conflicts of law principles thereof.

(b) This Agreement constitutes the entire Agreement between Employee and Employer with respect to the subject matter hereof, and supersedes in their entirety any and all prior oral or written agreements, understandings or arrangements between Employee and Employer or any of its affiliates relating to the terms of Employee’s employment by Employer, and all such agreements, understandings and arrangements are hereby terminated and are of no force and effect. Employee hereby expressly disclaims any rights under any such agreements, understandings and arrangements. This Agreement may not be amended or terminated except by an agreement in writing signed by both parties.

(c) This Agreement may be executed in two or more counterparts, each of which shall be deemed and original and all of which, taken together, shall constitute one and the same instrument.

(d) Any notice or other communication required or permitted under this Agreement shall be effective only if it is in writing and delivered in person or by nationally recognized overnight courier service or deposited in the mails, postage prepaid, return receipt requested, addressed as follows:

To Employer:

Targacept, Inc.
Bowman Gray Technical Center
950 Reynolds Boulevard
Winston-Salem, North Carolina 27105
Attn: President

To Employee:

Dr. J. Donald deBethizy
2519 Woodbine Road
Winston-Salem, NC 27104

Notices given in person or by overnight courier service shall be deemed given when delivered in person or the day after delivery to the courier addressed to the address required by this Section 9(d), and notices given by mail shall be deemed given three days after deposit in the mails. Any party hereto may designate by written notice to the other party in accordance herewith any other address to which notices addressed to him shall be sent.

(e) The provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity or enforceability of the other provisions hereof. It is understood and agreed that no failure or delay by Employer or Employee in exercising any right, power or privilege under this Agreement shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

(f) This Agreement may not be assigned by Employee without the written consent of Employer. This Agreement shall be binding on any successors or assigns of either party hereto.

(g) For purposes of this Agreement, employment of Employee by any affiliate of Employer shall be deemed to be employment by Employer hereunder, and a transfer of employment of Employee from one such affiliate to another shall not be deemed to be a termination of employment of Employee by Employer or a cessation of the Term, it being the intention of the parties hereto that employment of Employee by any affiliate of Employer shall be treated as employment by Employer and that the provisions of this Agreement shall continue to be fully applicable following any such transfer.

(h) The respective rights and obligations of the parties hereunder shall survive any termination of the Term or Employee's employment with Employer to the extent necessary to preserve such rights and obligations for their stated durations.

(i) In the event that it shall become necessary for either party to retain the services of an attorney to enforce any terms under this Agreement, the prevailing party, in addition to all other rights and remedies hereunder or as provided by law, shall be entitled to reasonable attorneys' fees and costs of suit. Employer shall reimburse Employee for the reasonable fees and expenses of counsel to Employee for the original negotiation of this Agreement.

(j) Any controversy or claim arising out of or relating to this Agreement shall be settled by arbitration in accordance with Commercial Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitration panel, which shall consist of three members, may be entered in any court having jurisdiction. Any arbitration shall be held in Winston-Salem, North Carolina, unless otherwise agreed in writing by the parties. One arbitrator shall be selected by Employee, one arbitrator shall be selected by Employer, and the third arbitrator shall be selected by the two arbitrators selected by Employee and Employer.

[THE NEXT PAGE IS THE SIGNATURE PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
Name: J. Donald deBethizy
Title: President

EMPLOYEE:

/s/ J. Donald deBethizy
Dr. J. Donald deBethizy

<u>EXHIBIT A</u>

OPTION AGREEMENT

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
(Employees)

THIS AGREEMENT (the “Agreement”), made the 22nd day of August, 2000, between Targacept, Inc., a Delaware corporation (the “Corporation”), and J. Donald deBethizy, an employee of the Corporation or a related corporation (the “Participant”), effective as of September 15, 2000;

R E C I T A L S:

In furtherance of the purposes of the 2000 Equity Incentive Plan of Targacept, Inc., as it may be hereafter amended (the “Plan”), and in consideration of the services of the Participant and such other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Corporation and the Participant hereby agree as follows:

1. Incorporation of Plan. The rights and duties of the Corporation and the Participant under this Agreement shall in all respects be subject to and governed by the provisions of the Plan, a copy of which is delivered herewith or has been previously provided to the Participant and the terms of which are incorporated herein by reference. In the event of any conflict between the provisions in. the Agreement and those of the Plan, the provisions of the Plan shall govern. Unless otherwise defined herein, capitalized terms in this Agreement shall have the same definitions as set forth in the Plan.

2. Grant of Option; Term of Option. The Corporation hereby grants to the Participant pursuant to the Plan, as a matter of separate inducement and agreement in connection with his employment or service to the Corporation, and not in lieu of any salary or other compensation for his services, the right and Option (the “Option”) to purchase all or any part of an aggregate of four hundred six thousand one hundred twenty (406,120) shares (the “shares”) of the common stock (the “Common Stock”) of the Corporation, at a purchase price (the “option price”) of forty-seven cents ($0.47) per share. The Option to purchase four hundred six thousand one hundred twenty (406,120) of the shares shall be designated as an Incentive Option. To the extent that the Option is designated as an Incentive Option and such Option does not qualify as an Incentive Option, the Option (or portion thereof) shall be treated as a Nonqualified Option. Except as otherwise provided in the Plan, the Option will expire if not exercised in full before September 15, 2010.

3. Exercise of Option. The Option shall become exercisable on the date or dates and subject to such conditions set forth on Schedule A attached hereto; provided, that, as permitted by the Plan, the terms of Section 18(c) of the Plan shall not apply to the Option. To the extent that the Option is exercisable but is not exercised, the Option shall accumulate and be exercisable by the Participant in whole or in part at any time prior to expiration of the Option,

subject to the terms of the Plan and this Agreement. Upon the exercise of an Option in whole or in part and payment of the option price in accordance with the provisions of the Plan and this Agreement, the Corporation shall as soon thereafter as practicable deliver to the Participant a certificate or certificates for the shares purchased. Payment of the option price may be made: (i) in cash or by check; (ii) by delivery (by either actual delivery or attestation) of shares of Common Stock owned by the Participant at the time of exercise for a period of at least six months and otherwise acceptable to the Administrator; (iii) by withholding shares of Common Stock otherwise issuable upon exercise of the Option; (iv) in the event that a public market for the Common Stock exists (as defined in the Plan), by delivery of written notice of exercise to the Corporation and delivery to a broker of written notice of exercise and irrevocable instructions to promptly deliver to the Corporation the amount of sale or loan proceeds to pay the option price; (v) by such other methods as may be permitted by the Administrator in accordance with Section 6(c)(ii) of the Plan; or (vi) by a combination of the foregoing methods. Shares delivered or withheld in payment of the option price shall be valued at their fair market value on the date of exercise, as determined by the Administrator by applying the provisions of the Plan.

4. No Right of Continued Employment or Service. Nothing contained in this Agreement or the Plan shall confer upon the Participant any right to continue in the employment or service of the Corporation or a related corporation or interfere with the right of the Corporation or a related corporation to terminate the Participant’s employment or service at any time. Except as otherwise expressly provided in the Plan, all rights of the Participant under the Plan with respect to the unexercised portion of his Option shall terminate upon termination of the employment or service of the Participant with the Corporation or a related corporation.

5. Nontransferability of Option. The Option shall not be transferable other than by will or the laws of intestate succession. Except as may be permitted by the preceding sentence, this Option shall be exercisable during the Participant’s lifetime only by the Participant.

6. Superseding Agreement; Binding Effect. This Agreement supersedes any statements, representations or agreements of the Corporation with respect to the grant of the Option or any related rights, and the Participant hereby waives any rights or claims related to any such statements, representations or agreements. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective executors, administrators, next-of-kin, successors and assigns.

7. Representations and Warranties of Participant. The Participant represents and warrants to the Corporation that:

(a) Agrees to Terms of the Plan and Agreement. The Participant has received a copy of the Plan, has read and understands the terms of the Plan and this Agreement, and agrees to be bound by their terms and conditions. The Participant acknowledges that there may be adverse tax consequences upon acquisition or disposition of the shares subject to the Option, and that Participant should consult a tax advisor prior to such exercise or disposition.

(b) Purchase for Own Account for Investment. Any shares of Common Stock acquired pursuant to the Option shall be acquired for Participant's own account for investment purposes only and not with a view to, or for sale in connection with, a distribution of the shares within the meaning of the Securities Act of 1933, as amended (the "Securities Act"). The Participant has no present intention of selling or otherwise disposing of all or any portion of the shares subject to the Option.

(c) Access to Information. The Participant has had access to all information regarding the Corporation and its present and prospective business, assets, liabilities and financial condition that the Participant reasonably considers important in making a decision to acquire the shares subject to the Option, and the Participant has had ample opportunity to ask questions of the Corporation's representatives concerning such matters and this investment.

(d) Understanding of Risks. The Participant is fully aware of: (i) the speculative nature of the investment in the shares of Common Stock; (ii) the financial hazards involved in investment of the Common Stock; (iii) the lack of liquidity of the shares subject to the Option and the restrictions on transferability of such shares; (iv) the qualifications and backgrounds of the management of the Corporation; and (v) the tax consequences of investment in the shares of Common Stock. The Participant is capable of evaluating the merits and risks of this investment, has the ability to protect his own interests in this transaction and is financially capable of bearing a total loss of this investment.

(e) No General Solicitation. At no time was the Participant presented with or solicited by any publicly issued or circulated newspaper, mail, radio, television or other form of general advertising or solicitation in connection with the offer, sale and purchase of the shares subject to the Option.

(f) Compliance with Securities Laws. The shares subject to the Option have not been registered with the Securities and Exchange Commission ("SEC") under the Securities Act and, notwithstanding any other provision of this Agreement or the Plan to the contrary, the right to acquire any shares subject to this Option is expressly conditioned upon compliance with the Securities Act and all applicable state securities laws. The Participant agrees to cooperate with the Corporation to ensure compliance with such laws.

(g) No Transfer Unless Registered or Exempt. The Participant understands that he may not transfer any shares subject to the Option unless such shares are registered under the Securities Act or qualified under applicable state securities laws or unless, in the opinion of counsel to the Corporation, exemptions from such registration and qualification requirements are available. The Participant understands that only the Corporation may file a registration statement with the SEC and that the Corporation is under no obligation to do so with respect to the shares subject to the Option. The Participant has also been advised that

exemptions from registration and qualification may not be available or may not permit the Participant to transfer all or any of the shares subject to the Option in the amounts or at the times proposed by him. The Participant also agrees in connection with any registration of the Corporation's securities that, upon the request of the Corporation or the underwriters managing any public offering of the Corporation's securities, the Participant will not sell or otherwise dispose of any shares without the prior written consent of the Corporation or such underwriters, as the case may be, for such period of time (not to exceed 180 days) after the effective date of such registration requested by such managing underwriters and subject to all restrictions as the Corporation or the underwriters may specify.

8. <u>Other Restrictions on Option and Shares</u>.

(a) As a condition to the issuance and delivery of shares subject to the Option, or the grant of any benefit pursuant to the terms of the Plan, the Corporation may, with the consent of the Participant, require the Participant or other person to become a party to a stockholders' agreement, buy-sell agreement, redemption agreement, repurchase agreement or other agreement between the Corporation and stockholders of the Corporation or among stockholders of the Corporation or such other agreements imposing such restrictions as may be required by the Corporation. *<u>Notwithstanding the foregoing, the Participant hereby expressly acknowledges and agrees that the Corporation shall require, prior to the issuance of any shares pursuant to this Agreement, that the Participant become a party to that certain Stockholders Agreement dated as of August 22, 2000, by and among Targacept, Inc. and the stockholders thereof, as it may be amended from time to time, and the Participant hereby agrees to execute such agreement</u>.*

(b) The Corporation may impose such restrictions on the Option and any shares issuable pursuant to the exercise of the Option as it may deem advisable, including without limitation restrictions under the federal securities laws, the requirements of any stock exchange or similar organization and any blue sky or state securities laws applicable to such shares. Notwithstanding any other provision in the Plan or the Agreement to the contrary, the Corporation shall not be obligated to issue, deliver or transfer shares of Common Stock, to make any other distribution of benefits, or to take any other action, unless such delivery, distribution or action is in compliance with all applicable laws, rules and regulations (including but not limited to the requirements of the Securities Act). The Corporation will be under no obligation to register the shares of Common Stock with the SEC or to effect compliance with the exemption, registration, qualification or listing requirements of any state securities laws, stock exchange or similar organization, and the Corporation will have no liability for any inability or failure to do so. The Corporation may cause a restrictive legend to be placed on any certificate issued pursuant to the exercise of the Option in such form as may be prescribed from time to time by applicable laws and regulations or as may be advised by legal counsel.

9. Governing Law. Except as otherwise provided in the Plan or herein, this Agreement shall be construed and enforced according to the laws of the State of Delaware, without regard to the conflict of laws provisions of any state.

10. Amendment and Termination; Waiver. Subject to the terms of the Plan, this Agreement may be modified or amended only by the written agreement of the parties hereto. The waiver by the Corporation of a breach of any provision of the Agreement by the Participant shall not operate or be construed as a waiver of any subsequent breach by the Participant.

11. No Rights as a Stockholder. The Participant or his legal representatives, legatees or distributees shall not be deemed to be the holder of any shares subject to the Option and shall not have any rights of a stockholder with respect to such shares unless and until certificates therefor have been issued and delivered to him or them.

12. Withholding. The Participant acknowledges that the Corporation shall require the Participant to pay the Corporation the amount of any federal, state, local or other tax or other amount required by any governmental authority to be withheld and paid over by the Corporation to such authority for the account of the Participant, and the Participant agrees, as a condition to the grant of the Option, to satisfy such obligations.

13. Administration. The authority to construe and interpret this Agreement and the Plan, and to administer all aspects of the Plan, shall be vested in the Administrator (as such term is defined in the Plan), and the Administrator shall have all powers with respect to this Agreement as are provided in the Plan. Any interpretation of the Agreement by the Administrator and any decision made by it with respect to the Agreement is final and binding.

14. Notices. Except as may be otherwise provided by the Plan, any written notices provided for in this Agreement or the Plan shall be in writing and shall be deemed sufficiently given if either hand delivered or if sent by fax or overnight courier, or by postage paid first class mail. Notices sent by mail shall be deemed received three business days after mailed but in no event later than the date of actual receipt. Notices shall be directed, if to the Participant, at the Participant's address indicated by the Corporation's records, or if to the Corporation, at the Corporation's principal office.

15. Severability. The provisions of this Agreement are severable and if any one or more provisions may be determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, this Agreement has been executed in behalf of the Corporation and by the Participant effective as of the day and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
Name: J. Donald deBethizy
Title: President

Attest:

/s/ August Borschke
Secretary

[Corporate Seal]

PARTICIPANT

/s/ J. Donald deBethizy
J. Donald deBethizy

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
(Employees)

SCHEDULE A

Date Option granted: September 15, 2000.
Date Option expires: September 15, 2010.
Number of shares subject to Option: 406,120 shares.
Option price (per share): $0.47.
Class of Option: Incentive.

Date Installment First Exercisable*	Number of Shares In Installment
December 15, 2001	33,844
March 15, 2002	33,843
June 15, 2002	33,843
September 15, 2002	33,844
December 15,2002	33,843
March 15, 2003	33,843
June 15, 2003	33,844
September 15, 2003	33,843
December 15, 2003	33,843
March 15, 2004	33,844
June 15, 2004	33,843
September 15, 2004	33,843

* So long as the Employment Agreement dated August 22, 2000 between the Participant and the Corporation, as may be amended (the “Employment Agreement), remains effective, if the Participant’s employment by the Corporation is terminated by (i) the Corporation (or its successor) without “Just Cause” or (ii) the Participant for “Good Reason” (all such terms as defined in the Employment Agreement), each date set forth on this Schedule A shall be deemed accelerated by twelve (12) months (e.g., “June 15, 2002” shall become “June 15, 2001, “September 15, 2002” shall become “September 15, 2001,” etc.).

EXHIBIT B

STOCK RESTRICTION AGREEMENT

STOCK RESTRICTION AGREEMENT

THIS STOCK RESTRICTION AGREEMENT (“Agreement”), is made and entered into as of the 22nd day of August, 2000, by and between TARGACEPT, INC., a Delaware corporation (the “Company”), and Dr. J. Donald deBethizy (the “Stockholder”), an individual resident of North Carolina.

WITNESSETH:

WHEREAS, in order to induce the investors named in the Company’s Series B Convertible Preferred Stock Purchase Agreement of even date herewith to consummate the purchase of up to 6,537,634 shares of the Company’s Series B Convertible Preferred Stock, $0.001 par value per share (“Series B Preferred”), the Stockholder has agreed to subject 135,373 shares of the Company’s common stock, $0.001 par value (“Common Stock”), owned by the Stockholder as of the date hereof (the “Subject Shares”) to the terms and conditions hereof; and

WHEREAS, the continued services of the Stockholder as an employee of the Company are critical to the future success of the Company, and the Stockholder has entered into an Employment Agreement with the Company of even date herewith (the “Employment Agreement”);

NOW, THEREFORE, in consideration of the premises, the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Capitalized Terms. All capitalized terms used herein and not otherwise defined shall have the meaning given to them in the Employment Agreement.

2. Shares. The Subject Shares, together with all shares of capital stock of the Company hereafter acquired by the Stockholder in respect of the Subject Shares through stock dividends, stock splits or other similar reorganization or recapitalization (together with the Subject Shares, the “Shares”), shall be subject to the provisions of this Agreement.

3. Vesting. All of the Shares shall be “vested” on August 22, 2001, and none of the Shares shall be “vested” until August 22, 2001. All Shares which are not “vested” shall be “unvested.” In no event shall the Stockholder sell, transfer, assign, pledge or otherwise encumber any unvested Subject Shares. All unvested Shares shall be fully vested upon: (i) the death or “disability” (as defined in Section 6 of the Employment Agreement) of the Stockholder; (ii) the termination of the employment of the Stockholder by (A) the Company (or its successor) other than for Just Cause, or (B) the Stockholder for Good Reason; or (iii) the occurrence of a “Significant Transaction” (as defined in the Company’s 2000 Equity Incentive Plan, as may be amended from time to time).

4. Repurchase Option.

(a) Upon termination of the employment of the Stockholder by (i) the Company (or its successor) for Just Cause or (ii) the Stockholder other than for Good Reason (in either case, a “Repurchase Event”), all of the unvested Shares shall be subject to the repurchase option set forth in Section 4(b) (the “Repurchase Shares”).

(b) For a period of sixty (60) days from the date of a Repurchase Event, the Company shall have an option to repurchase all, but not less than all, of the Repurchase Shares. Such option must be exercised by the delivery of written notice thereof to the Stockholder (or to the Stockholder’s personal representative, if applicable) prior to the expiration of the option. Upon the delivery of such notice of exercise, the Company shall be obligated to purchase from the Stockholder, and the Stockholder shall be obligated to sell to the Company, all of the Repurchase Shares for the purchase price and upon the terms set forth herein.

5. Purchase Price.

(a) The purchase price for all Repurchase Shares shall be the Stockholder’s original price per share paid in cash, if any.

(b) The Stockholder (or the Stockholder’s personal representative, if applicable) shall have no voice in the decisions of the Company pursuant to Section 4, whether as a Stockholder, director, or officer of the Company; provided, however, that if necessary to secure valid corporate action, the Stockholder (or the Stockholder’s personal representative, if applicable) shall attend a meeting of the Stockholders or directors and vote his shares or take such other action consistent with the request of a majority of the shares of Common Stock not held by the Stockholder.

6. Closing of Purchase and Payment of Purchase Price.

(a) Closing. The closing (the “Closing”) of a purchase hereunder shall take place at the principal office of the Company, on a date selected by the Company which shall not be more than sixty (60) days following delivery by the Company of the notice referenced in Section 4 (the “Closing Date”). As a condition precedent to the Stockholder’s obligation to close, the Company shall cause the Stockholder to be relieved of any and all personal liability with respect to guarantees made by the Stockholder of corporate obligations of the Company, or, if such release cannot be obtained, the Company shall indemnify the Stockholder with respect to such obligations.

(b) Payment of Purchase Price. The purchase price for the Shares shall be payable to the Stockholder in cash or immediately available funds at the Closing.

7. Necessary Documents. If, under the terms of this Agreement, the Repurchase Shares are purchased, the Stockholder, or the legal representative of the Stockholder, shall execute and deliver all necessary documents that may be reasonably required for accomplishing a complete transfer of such shares for the purpose of the repurchase transaction.

8. Endorsement on Stock Certificates. Each certificate representing the Shares of the Company now or hereafter held by the Stockholder shall be stamped with a legend in substantially the following form:

> "The shares of stock represented by this certificate are restricted under the terms of a Stock Restriction Agreement dated the 22nd day of August, 2000, a copy of which is on file at the office of the corporation."

9. Notices. All notices, requests, demands, payments, and other communications hereunder shall be deemed to have been duly given if in writing and hand delivered or sent by certified mail to the appropriate address indicated below or to such other address as may be given in a notice sent to all parties hereto:

(a) If to the Company, to:

Targacept, Inc.
Bowman Gray Technical Center
950 Reynolds Boulevard
Winston-Salem, North Carolina 27105

(b) If to the Stockholder, to:

Dr. J. Donald deBethizy
2519 Woodbine Road
Winston-Salem, NC 27104

10. Entire Agreement. This Agreement (together with the Employment Agreement) supersedes any and all other understandings and agreements, either oral or in writing, between the parties hereto with respect to the subject matter hereof and constitutes the sole and only agreement between the parties with respect to said subject matter. Each party to this Agreement acknowledges that no representations, inducements, promises or agreements, oral or otherwise, have been made by any party or by anyone acting on behalf of any party, which are not embodied herein (or in the Employment Agreement), and that no agreement, statement or promise not contained in this Agreement (or the Employment Agreement) shall be valid or binding or of any force or effect. No change or modification of this Agreement shall be valid or binding upon the parties hereto unless such change or modification is in writing and is signed by the parties hereto.

11. Severability. In the event that any one or more of the provisions contained in this Agreement shall be held by a court of competent jurisdiction to be invalid, illegal or unenforceable in any respect for any reason, such invalidity, illegality or unenforceability shall not affect any other provisions hereof, and this Agreement shall be construed as if that invalid, illegal or unenforceable provision had never been contained herein.

12. Parties Bound. The terms, promises, covenants and agreements contained in this Agreement shall apply to, be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns; provided, however, that this Agreement may not be assigned by the Stockholder without the prior written consent of the Company.

13. Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of North Carolina, without regard to the principles of conflict of laws.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals as of the day and year first above written, the corporate party acting through its duly authorized officer.

ATTEST:

/s/ August Borschke
August Borschke, Secretary
(Corporate Seal)

Targacept, Inc.

By: /s/ J. Donald deBethizy
Name: J. Donald deBethizy
Title: President

/s/ J. Donald deBethizy
Dr. J. Donald deBethizy

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT (“Agreement”) is made as of August 22, 2000 by and between TARGACEPT, INC., a Delaware corporation (“Employer”), and Dr. Merouane Bencherif, an individual resident of North Carolina (“Employee”);

RECITALS:

WHEREAS, Employer considers the availability of Employee’s services to be important to the management and conduct of Employer’s business and desires to secure the continued availability of Employee’s services; and

WHEREAS, Employee is willing to make his services available to Employer on the terms and subject to the conditions set forth herein;

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. Employment. For the Term (as defined in Section 2), Employee shall be employed as Vice President, Biological Sciences. Employee will be located at the Employer’s principal executive offices in Winston-Salem, North Carolina. Employee hereby accepts and agrees to such employment, subject to the general supervision of the Board of Directors of Employer (the “Board”), the Chief Executive Officer and President. Employee shall perform such duties and shall have such powers, authority and responsibilities as are customary for one holding the position of Vice President, Biological Sciences of a business similar to Employer and shall additionally render such other services and duties as may be reasonably assigned to him from time to time by the Board, the Chief Executive Officer or the President.

2. Term of Employment. This Agreement shall commence as of September 15, 2000 (the “Effective Date”) and continue until terminated as provided in Section 6 or Section 7 (such period, the “Term”). Any termination of this Agreement shall not affect the parties’ continuing obligations under Section 5, which shall survive any such termination.

3. Compensation.

(a) For all services rendered by Employee to Employer under this Agreement, Employer shall pay to Employee, during the Term, a base annual salary of not less than $135,000, payable in arrears in accordance with the customary payroll practices of Employer. During the Term, Employee’s annual base salary shall be reviewed and subject to increase in accordance with Employer’s standard policies and procedures. Without limiting the generality of the foregoing, Employee’s base annual salary shall be increased annually to the extent necessary to stay in line with the median base salary of employees of a similar level in comparable companies as described in the then current Radford Biotechnology Compensation Report.

(b) Employee shall be eligible to earn an annual bonus during the Term of up to 25% of Employee's annual base salary, or such higher amount as determined by the Board of Directors (or a compensation committee thereof). The eligibility for the target bonus shall be based upon the achievement of performance objectives mutually agreed upon by Employee and Employer and shall be payable within thirty (30) days of the end of each fiscal year.

(c) All amounts payable hereunder shall be subject to such deductions and withholdings as shall be required by law, if any.

(d) Employee shall be issued 58,017 shares of founder's stock, which stock shall vest in accordance with the Stock Restriction Agreement attached hereto as Exhibit A.

(e) Employee shall be granted an incentive stock option to purchase 174,051 shares of Employer's common stock under the terms of Employer's 2000 Equity Incentive Plan and pursuant to a form of option agreement attached hereto as Exhibit B (the "Option Agreement"). The incentive option shall have a term of ten years and an exercise price of $0.47 per share and shall vest ratably over the twelve (12) quarters commencing twelve (12) months from the Effective Date. Any terms contained in this Agreement regarding the exercisability or vesting of such options, including without limitation this Section 3(e) and Section 7, shall be reflected in the terms of the Option Agreement. Employee shall also be eligible to receive additional awards thereunder in the discretion of the Board (or a compensation committee thereof).

(f) Employee shall also be entitled to holidays, sick leave and other time off and to participate in those life, health or other insurance plans and other employee pension and welfare benefit programs, plans, practices and benefits generally made available from time to time to all employees of Employer; provided that nothing herein shall obligate Employer to continue any of such benefits for Employee if discontinued for other employees. Without limiting the foregoing, Employee shall be entitled to paid vacation during each fiscal year of the term of twenty (20) days.

4. Reimbursement of Expenses. Employer shall pay or reimburse Employee for all reasonable travel and other expenses incurred by Employee in performing his obligations under this Agreement and also, to the extent consistent with Employer's policy, for any dues and costs of appropriate professional organization and continuing professional education, in each case subject to such reasonable documentation and substantiation as Employer shall require.

5. Covenants of Employee.

(a) Covenant Not to Compete. Employee covenants that during the "Noncompetition Period" (as defined in Section 5(g)) and within the "Noncompetition Area" (as defined in Section 5(h)), he shall not, directly or indirectly, as principal, agent, officer, director, shareholder, member, employee, consultant or trustee, or through the agency of any person, firm, corporation, partnership, limited liability company, association or other entity (collectively, "Entity"), engage in the "Business" (as defined in Section 5(i)). Without limiting the generality of the foregoing, Employee agrees that during the Noncompetition Period and within the Noncompetition Area, he shall not be (i) the owner of the outstanding capital stock or other equity interests of any Entity (other than Employer or its affiliates) that, directly or indirectly, engages in the Business; or (ii) an officer, director, partner, manager, member, consultant or employee of any Entity that, directly or indirectly, engages in the Business; provided, that this Section 5(a) shall not prevent Employee from (A) being an employee of any area or division of any Entity to the extent that such area or division does not, directly or indirectly, engage in the Business or (B) beneficially owning less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market.

(b) Nondisclosure Covenant. The parties acknowledge that Employer and its affiliates are enterprises whose success is attributable largely to the ownership, use and development of certain valuable confidential and proprietary information (the "Proprietary Information"), and that Employee's employment with Employer will involve access to and work with such information. Employee acknowledges that his relationship with Employer is a confidential relationship, and agrees that (i) he shall keep and maintain the Proprietary Information in strictest confidence, and (ii) he shall not, either directly or indirectly, use any Proprietary Information for his own benefit, or divulge, disclose or communicate any Proprietary Information in any manner whatsoever to any person or Entity other than to employees or agents of Employer having a need to know such Proprietary Information to perform their responsibilities on behalf of Employer, and to other persons or Entities in the normal course of Employer's business. This nondisclosure obligation shall apply to all Proprietary Information, whether or not Employee participated in the development thereof. Upon termination of his employment with Employer for any reason, Employee will return to Employer all Proprietary Information in any medium and all other documents, data, materials or property of Employer (including any copies thereof) in his possession. For purposes of this Agreement, the term "Proprietary Information" shall include any and all proprietary information related to the business of Employer and its affiliates and stockholders, or to any of their products, services, sales or operations, which is not generally known to the public, specifically including (but without limitation): trade secrets, processes, formulae, compounds and properties thereof, data, files, research results, computer programs and related source codes and object codes, improvements, inventions, techniques, marketing plans, strategies, forecasts, copyrightable material, suppliers, methods and manner of operations; information relating to the identity, needs and location of all past, present and prospective customers; and information with respect to the internal affairs of Employer and its affiliates. Such Proprietary Information may or may not contain legends or other written notice that it is of a confidential or proprietary nature. The parties stipulate that, as between them, the above-described matters are important and confidential and gravely affect the successful conduct of the business of Employer and its affiliates and that any breach of the terms of this Section 5(b) shall be a material breach of this Agreement.

(c) Nonsolicitation Covenant. Employee covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, call upon any of the customers or clients of Employer (or potential customers or clients whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during his employment with Employer) for the purpose of soliciting or providing any product or service similar to that provided by Employer, nor will he, in any way, directly or indirectly, on behalf of himself or any Entity solicit, divert or take away, or attempt to solicit, divert, or take away any of the customers, clients, business or patrons of Employer (or potential customers or clients whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during his employment with Employer). Employee further covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, solicit, induce or encourage any person to leave the employ of Employer.

(d) Inventions. All inventions, designs, formulae, processes, discoveries, drawings, improvements and developments made by Employee, either solely or in collaboration with others, during his employment with Employer, whether or not during working hours, and relating to any methods, apparatus, products, compounds, services or deliverables which are made, furnished, sold, leased, used or developed by Employer or its affiliates or which pertain to the Business (the “Developments”) shall become and remain the sole property of Employer. Employee shall disclose promptly in writing to Employer all such Developments. Employee acknowledges and agrees that all Developments shall be deemed “works made for hire” within the meaning of the United States Copyright Act, as amended. If, for any reason, such Developments are not deemed works made for hire, Employee hereby assigns to Employer all of his right, title and interest (including, but not limited to, copyright and all rights of inventorship) in and to such Developments. At the request and expense of Employer, whether during or after employment with Employer, Employee shall make, execute and deliver all application papers, assignments or instruments, and perform or cause to be performed such other lawful acts as Employer may deem necessary or desirable in making or prosecuting applications, domestic or foreign, for patents (including reissues, continuations and extensions thereof) and copyrights related to such Developments or in vesting in Employer full legal title to such Developments. Employee shall assist and cooperate with Employer or its representatives in any controversy or legal proceeding relating to such Developments, or to any patents, copyrights or trade secrets with respect thereto. If for any reason Employee refuses or is unable to assist Employer in obtaining or enforcing its rights with respect to such Developments, he hereby irrevocably designates and appoints Employer and its duly authorized agents as his agents and attorneys-in-fact to execute and file any documents and to do all other lawful acts necessary to protect Employer’s rights in the Developments. Employee expressly acknowledges that the special foregoing power of attorney is coupled with an interest and is therefore irrevocable and shall survive (i) his death or incompetency, (ii) the termination of his employment with Employer and (iii) the termination of this Agreement.

(e) Independent Covenants. Each of the covenants on the part of Employee contained in Sections 5(a), (b), (c) and (d) of this Agreement shall be construed as an agreement independent of each other such covenant. The existence of any claim or cause of action of Employee against Employer, whether predicated on this Agreement or otherwise, shall not constitute a defense to the enforcement by Employer of any such covenant.

(f) Reasonableness; Injunction. Employee acknowledges that his covenants contained in Section 5 of this Agreement are reasonably necessary for the protection of Employer and its affiliates and their businesses, and that such covenants are reasonably limited with respect to the activities prohibited, the duration thereof, the geographic area thereof, the scope thereof and the effect thereof on Employee and the general public. Employee further acknowledges that violation of the covenants would immeasurably and irreparably damage Employer and its affiliates, and by reason thereof Employee agrees that for violation or threatened violation of any of the provisions of this Agreement, Employer shall, in addition to any other rights and remedies available to it, at law or otherwise, be entitled to an injunction to be issued by any court of competent jurisdiction enjoining and restraining Employee from committing any violation or threatened violation of this Agreement. Employee consents to the issuance of such injunction. Furthermore, Employer shall, in addition to any other rights or remedies available to it, at law or otherwise, be entitled to reimbursement of court costs, attorneys' fees and other expenses incurred as a result of a breach of this Agreement. Employee agrees to reimburse Employer for such expenses promptly following a final determination that he has breached this Agreement.

(g) Noncompetition Period. "Noncompetition Period" shall mean the period commencing on the Effective Date and continuing until nine (9) months following termination of this Agreement.

(h) Noncompetition Area. The "Noncompetition Area" shall consist of the entire world.

(i) Business. For the purposes of this Agreement, the "Business" shall mean the business of developing, manufacturing, marketing or selling therapeutic products that use synthetic nicotinic cholinergic compounds.

6. Disability. Upon the "disability" of Employee, this Agreement may be terminated by action of the Board upon 30 days prior written notice (the "Disability Notice"), such termination to become effective only if such disability continues. If, prior to the effective time of the Disability Notice, Employee shall recover from such disability and return to the full-time active discharge of his duties, then the Disability Notice shall be of no further force and effect and Employee's employment shall continue as if the same had been uninterrupted. If Employee shall not so recover from his disability and return to his duties, then his services shall terminate at the effective time of the Disability Notice with the same force and effect as if that date had been the end of the Term originally provided for hereunder. Such termination shall not prejudice any benefits payable to Employee that are fully vested as of the date of such termination. Prior to the effective time of the Disability Notice, Employee shall continue to earn all compensation to which Employee would have been entitled as if he had not been disabled,

such compensation to be paid at the time, in the amounts, and in the manner provided in Section 3(a). A "disability" of Employee shall be deemed to exist at all times that Employee is considered by the insurance Employer which has issued any policy of disability insurance owned by Employer or for which premiums are paid by Employer (the "Employer Policy") to be totally disabled under the terms of such policy. In the event there is no Employer Policy, "disability" shall mean the inability, by reason of physical or mental incapacity, impairment or infirmity, of Employee to perform, upon request, his regular duties required herein for six consecutive months, and the determination of the existence or nonexistence of disability shall be made by a medical doctor who is licensed to practice medicine in the State of North Carolina mutually acceptable to the Board and to Employee (or, if Employee is incapacitated, his spouse).

7. Termination.

(a) If Employee shall die during the Term, this Agreement and the employment relationship hereunder will automatically terminate on the date of death, which date shall be the last day of the Term; provided that such termination shall not prejudice any benefits payable to Employee or Employee's beneficiaries that are fully vested as of the date of death.

(b) Employer may terminate Employee's employment under this Agreement at any time with or without Just Cause. Any termination without Just Cause shall be effective only on thirty (30) days prior written notice to Employee. Any termination with Just Cause shall be effective immediately or at such other time set by the Board. "Just Cause" shall mean (i) Employee's willful and material breach of this Agreement and his continued failure to cure such breach to the reasonable satisfaction of the Board within thirty (30) days following written notice of such breach to Employee from the Board; (ii) Employee's conviction of, or entry of a plea of guilty or nolo contendere to a felony or a misdemeanor involving moral turpitude, (iii) Employee's willful commission of an act of fraud, breach of trust, or dishonesty including, without limitation, embezzlement, that results in material damage or harm to the business, financial condition or assets of Employer; or (iv) Employee's intentional damage or destruction of substantial property of Employer. Just Cause shall be determined by the Board in its reasonable discretion and the particulars of any determination shall be provided to Employee in writing. At any time within ninety (90) days of receipt by Employee in writing of such determination, Employee may object to such determination in writing and submit the determination to arbitration in accordance with Section 9(j). If such determination is overturned in arbitration, Employee will be treated as having been terminated without Just Cause and shall be entitled to the benefits of Section 7(d).

(c) Employee may voluntarily terminate his employment with Employer on thirty (30) days prior written notice to Employer.

(d) Upon any termination pursuant to this Section 7, Employee shall be entitled to receive a lump sum equal to any base salary, target bonus and other compensation earned and due but not yet paid through the effective date of termination. In addition, if this Agreement and Employee's employment hereunder is terminated by (i) Employer (or its successor) other than for Just Cause, or (ii) Employee for Good Reason, Employee shall be entitled to the following:

(A) severance, payable monthly, equal to Employee's then current base salary for nine (9) months following such termination or, if shorter, until such time as Employee secures other employment (the "Severance Period");

(B) six (6) months acceleration of unvested stock options to purchase capital stock or restricted stock of the Employer held by Employee;

(C) the health care (including medical and dental) and life insurance benefits coverage provided to Employee at his date of termination shall be continued at the same level and in the same manner as if his employment had not terminated (subject to the customary changes in such coverages if Employee reaches age 65 or similar events), for the Severance Period, followed by COBRA election rights. Any additional coverages Employee had at termination, including dependent coverage, will also be continued for such period on the same terms. Any costs Employee was paying for such coverages at the time of termination shall continue to be paid by Employee. If the terms of any benefit plan referred to in this section do not permit continued participation by Employee, then Employer will arrange for other coverage providing substantially similar benefits at the same contribution level of Employee, and

(D) outplacement counseling services selected by Employee, up to a maximum of $ 10,000.

(e) If Employer (or its successor) terminates Employee's employment for Just Cause, Employee shall forfeit any unexercised vested stock options at the date of termination. If Employee terminates his employment or if Employer (or its successor) terminates Employee's employment without Just Cause, Employee shall have ninety (90) days from the date of termination to exercise any vested options.

(f) For purposes hereof, "Good Reason" shall mean the occurrence of any of the following events without Employee's express written consent:

(A) the breach by Employer (or any successor entity) of any material provision of this Agreement;

(B) any purported termination of the employment of Employee by Employer (or any successor entity) which is not effected in accordance with this Agreement; and

(C) any failure of the Employer (or any successor entity) to pay Employee and amounts of base salary or bonus compensation that have become due and payable to Employee within thirty (30) days after Employee has given Employer (or any successor entity) notice of demand therefor.

(g) Except as otherwise provided in this Section 7, upon termination of this Agreement for any reason, Employee shall not be entitled to any form of severance benefits, including benefits otherwise payable under any of Employer's regular severance plans or policies, or any other payment whatsoever. Employee agrees that the payments and benefits provided hereunder, subject to the terms and conditions hereof shall be in full satisfaction of any rights which he might otherwise have or claim by operation of law, by implied contract or otherwise, except for rights which he may have under any employee benefit plan of Employer.

8. Best Efforts of Employee. Employee agrees that he will at all times faithfully, industriously and to the best of his ability, experience and talents perform all the duties that may be required of him pursuant to the express and implicit terms hereof, to the reasonable satisfaction of Employer, commensurate with his position. Such duties shall be rendered at such place as Employer designates and employee acknowledges that he may be required to travel as shall reasonably be required to promote the business of Employer. To the extent reasonably required by the duties assigned to him, Employee shall devote substantially all his time, attention, knowledge and skills to the business and interest of Employer and shall be entitled to all the benefits, profits and other issue arising from or incident to all work, service and advice of Employee. During the Term, Employee shall not be interested, directly or indirectly, in any manner as partner, manager, officer, director, shareholder, member, adviser, consultant, employee or in any other capacity in any other business; provided, that nothing herein contained shall be deemed to prevent or limit the right of Employee to beneficially own less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market as long as such passive investment does not interfere with or conflict with the performance of services to be rendered hereunder.

9. Miscellaneous.

(a) This Agreement shall be governed by and construed in accordance with the laws of the State of North Carolina without regard to conflicts of law principles thereof.

(b) This Agreement constitutes the entire Agreement between Employee and Employer with respect to the subject matter hereof, and supersedes in their entirety any and all prior oral or written agreements, understandings or arrangements between Employee and Employer or any of its affiliates relating to the terms of Employee's employment by Employer, and all such agreements, understandings and arrangements are hereby terminated and are of no force and effect. Employee hereby expressly disclaims any rights under any such agreements, understandings and arrangements. This Agreement may not be amended or terminated except by an agreement in writing signed by both parties.

(c) This Agreement may be executed in two or more counterparts, each of which shall be deemed and original and all of which, taken together, shall constitute one and the same instrument.

(d) Any notice or other communication required or permitted under this Agreement shall be effective only if it is in writing and delivered in person or by nationally recognized overnight courier service or deposited in the mails, postage prepaid, return receipt requested, addressed as follows:

To Employer:

Targacept, Inc.
Bowman Gray Technical Center
950 Reynolds Boulevard
Winston-Salem, North Carolina 27105
Attn: President

To Employee:

Dr. Merouane Bencherif
104 Brampton Court
Winston-Salem, NC 27106

Notices given in person or by overnight courier service shall be deemed given when delivered in person or the day after delivery to the courier addressed to the address required by this Section 9(d), and notices given by mail shall be deemed given three days after deposit in the mails. Any party hereto may designate by written notice to the other party in accordance herewith any other address to which notices addressed to him shall be sent.

(e) The provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity or enforceability of the other provisions hereof. It is understood and agreed that no failure or delay by Employer or Employee in exercising any right, power or privilege under this Agreement shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

(f) This Agreement may not be assigned by Employee without the written consent of Employer. This Agreement shall be binding on any successors or assigns of either party hereto.

(g) For purposes of this Agreement, employment of Employee by any affiliate of Employer shall be deemed to be employment by Employer hereunder, and a transfer of employment of Employee from one such affiliate to another shall not be deemed to be a termination of employment of Employee by Employer or a cessation of the Term, it being the intention of the parties hereto that employment of Employee by any affiliate of Employer shall be treated as employment by Employer and that the provisions of this Agreement shall continue to be fully applicable following any such transfer.

(h) The respective rights and obligations of the parties hereunder shall survive any termination of the Term or Employee's employment with Employer to the extent necessary to preserve such rights and obligations for their stated durations.

(i) In the event that it shall become necessary for either party to retain the services of an attorney to enforce any terms under this Agreement, the prevailing party, in addition to all other rights and remedies hereunder or as provided by law, shall be entitled to reasonable attorneys' fees and costs of suit. Employer shall reimburse Employee for the reasonable fees and expenses of counsel to Employee for the original negotiation of this Agreement.

(j) Any controversy or claim arising out of or relating to this Agreement shall be settled by arbitration in accordance with Commercial Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitration panel, which shall consist of three members, may be entered in any court having jurisdiction. Any arbitration shall be held in Winston-Salem, North Carolina, unless otherwise agreed in writing by the parties. One arbitrator shall be selected by Employee, one arbitrator shall be selected by Employer, and the third arbitrator shall be selected by the two arbitrators selected by Employee and Employer.

[THE NEXT PAGE IS THE SIGNATURE PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
Name: J. Donald deBethizy
Title: President

EMPLOYEE:

/s/ Merouane Bencherif
Dr. Merouane Bencherif

EXHIBIT A

OPTION AGREEMENT

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
(Employees)

THIS AGREEMENT (the "Agreement"), made the 22nd day of August, 2000, between Targacept, Inc., a Delaware corporation (the "Corporation"), and Merouane Bencherif, an employee of the Corporation or a related corporation (the "Participant"), effective as of September 15, 2000;

R E C I T A L S:

In furtherance of the purposes of the 2000 Equity Incentive Plan of Targacept, Inc., as it may be hereafter amended (the "Plan"), and in consideration of the services of the Participant and such other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Corporation and the Participant hereby agree as follows:

1. Incorporation of Plan. The rights and duties of the Corporation and the Participant under this Agreement shall in all respects be subject to and governed by the provisions of the Plan, a copy of which is delivered herewith or has been previously provided to the Participant and the terms of which are incorporated herein by reference. In the event of any conflict between the provisions in the Agreement and those of the Plan, the provisions of the Plan shall govern. Unless otherwise defined herein, capitalized terms in this Agreement shall have the same definitions as set forth in the Plan.

2. Grant of Option; Term of Option. The Corporation hereby grants to the Participant pursuant to the Plan, as a matter of separate inducement and agreement in connection with his employment or service to the Corporation, and not in lieu of any salary or other compensation for his services, the right and Option (the "Option") to purchase all or any part of an aggregate of one hundred seventy-four thousand fifty-one (174,051) shares (the "shares") of the common stock (the "Common Stock") of the Corporation, at a purchase price (the "option price") of forty-seven cents ($0.47) per share. The Option to purchase one hundred seventy-four thousand fifty-one (174,051) of the shares shall be designated as an Incentive Option. To the extent that the Option is designated as an Incentive Option and such Option does not qualify as an Incentive Option, the Option (or portion thereof) shall be treated as a Nonqualified Option. Except as otherwise provided in the Plan, the Option will expire if not exercised in full before September 15, 2010.

3. Exercise of Option. The Option shall become exercisable on the date or dates and subject to such conditions set forth on Schedule A attached hereto; provided, that, as permitted by the Plan, the terms of Section 18(c) of the Plan shall not apply to the Option. To the extent that the Option is exercisable but is not exercised, the Option shall accumulate and be exercisable by the Participant in whole or in part at any time prior to expiration of the Option,

subject to the terms of the Plan and this Agreement. Upon the exercise of an Option in whole or in part and payment of the option price in accordance with the provisions of the Plan and this Agreement, the Corporation shall as soon thereafter as practicable deliver to the Participant a certificate or certificates for the shares purchased. Payment of the option price may be made: (i) in cash or by check; (ii) by delivery (by either actual delivery or attestation) of shares of Common Stock owned by the Participant at the time of exercise for a period of at least six months and otherwise acceptable to the Administrator; (iii) by withholding shares of Common Stock otherwise issuable upon exercise of the Option; (iv) in the event that a public market for the Common Stock exists (as defined in the Plan), by delivery of written notice of exercise to the Corporation and delivery to a broker of written notice of exercise and irrevocable instructions to promptly deliver to the Corporation the amount of sale or loan proceeds to pay the option price; (v) by such other methods as may be permitted by the Administrator in accordance with Section 6(c)(ii) of the Plan; or (vi) by a combination of the foregoing methods. Shares delivered or withheld in payment of the option price shall be valued at their fair market value on the date of exercise, as determined by the Administrator by applying the provisions of the Plan.

4. No Right of Continued Employment or Service. Nothing contained in this Agreement or the Plan shall confer upon the Participant any right to continue in the employment or service of the Corporation or a related corporation or interfere with the right of the Corporation or a related corporation to terminate the Participant's employment or service at any time. Except as otherwise expressly provided in the Plan, all rights of the Participant under the Plan with respect to the unexercised portion of his Option shall terminate upon termination of the employment or service of the Participant with the Corporation or a related corporation.

5. Nontransferability of Option. The Option shall not be transferable other than by will or the laws of intestate succession. Except as may be permitted by the preceding sentence, this Option shall be exercisable during the Participant's lifetime only by the Participant.

6. Superseding Agreement; Binding Effect. This Agreement supersedes any statements, representations or agreements of the Corporation with respect to the grant of the Option or any related rights, and the Participant hereby waives any rights or claims related to any such statements, representations or agreements. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective executors, administrators, next-of-kin, successors and assigns.

7. Representations and Warranties of Participant. The Participant represents and warrants to the Corporation that:

(a) Agrees to Terms of the Plan and Agreement. The Participant has received a copy of the Plan, has read and understands the terms of the Plan and this Agreement, and agrees to be bound by their terms and conditions. The Participant acknowledges that there may be adverse tax consequences upon acquisition or disposition of the shares subject to the Option, and that Participant should consult a tax advisor prior to such exercise or disposition.

(b) Purchase for Own Account for Investment. Any shares of Common Stock acquired pursuant to the Option shall be acquired for Participant's own account for investment purposes only and not with a view to, or for sale in connection with, a distribution of the shares within the meaning of the Securities Act of 1933, as amended (the "Securities Act"). The Participant has no present intention of selling or otherwise disposing of all or any portion of the shares subject to the Option.

(c) Access to Information. The Participant has had access to all information regarding the Corporation and its present and prospective business, assets, liabilities and financial condition that the Participant reasonably considers important in making a decision to acquire the shares subject to the Option, and the Participant has had ample opportunity to ask questions of the Corporation's representatives concerning such matters and this investment.

(d) Understanding of Risks. The Participant is fully aware of: (i) the speculative nature of the investment in the shares of Common Stock; (ii) the financial hazards involved in investment of the Common Stock; (iii) the lack of liquidity of the shares subject to the Option and the restrictions on transferability of such shares; (iv) the qualifications and backgrounds of the management of the Corporation; and (v) the tax consequences of investment in the shares of Common Stock. The Participant is capable of evaluating the merits and risks of this investment, has the ability to protect his own interests in this transaction and is financially capable of bearing a total loss of this investment.

(e) No General Solicitation. At no time was the Participant presented with or solicited by any publicly issued or circulated newspaper, mail, radio, television or other form of general advertising or solicitation in connection with the offer, sale and purchase of the shares subject to the Option.

(f) Compliance with Securities Laws: The shares subject to the Option have not been registered with the Securities and Exchange Commission ("SEC") under the Securities Act and, notwithstanding any other provision of this Agreement or the Plan to the contrary, the right to acquire any shares subject to this Option is expressly conditioned upon compliance with the Securities Act and all applicable state securities laws. The Participant agrees to cooperate with the Corporation to ensure compliance with such laws.

(g) No Transfer Unless Registered or Exempt. The Participant understands that he may not transfer any shares subject to the Option unless such shares are registered under the Securities Act or qualified under applicable state securities laws or unless, in the opinion of counsel to the Corporation, exemptions from such registration and qualification requirements are available. The Participant understands that only the Corporation may file a registration statement with the SEC and that the Corporation is under no obligation to do so with respect to the shares subject to the Option. The Participant has also been advised that

exemptions from registration and qualification may not be available or may not permit the Participant to transfer all or any of the shares subject to the Option in the amounts or at the times proposed by him. The Participant also agrees in connection with any registration of the Corporation's securities that, upon the request of the Corporation or the underwriters managing any public offering of the Corporation's securities, the Participant will not sell or otherwise dispose of any shares without the prior written consent of the Corporation or such underwriters, as the case may be, for such period of time (not to exceed 180 days) after the effective date of such registration requested by such managing underwriters and subject to all restrictions as the Corporation or the underwriters may specify.

8. Other Restrictions on Option and Shares.

(a) As a condition to the issuance and delivery of shares subject to the Option, or the grant of any benefit pursuant to the terms of the Plan, the Corporation may, with the consent of the Participant, require the Participant or other person to become a party to a stockholders' agreement, buy-sell agreement, redemption agreement, repurchase agreement or other agreement between the Corporation and stockholders of the Corporation or among stockholders of the Corporation or such other agreements imposing such restrictions as may be required by the Corporation. *Notwithstanding the foregoing, the Participant hereby expressly acknowledges and agrees that the Corporation shall require, prior to the issuance of any shares pursuant to this Agreement, that the Participant become a party to that certain Stockholders Agreement dated as of August 22, 2000, by and among Targacept, Inc. and the stockholders thereof, as it may be amended from time to time, and the Participant hereby agrees to execute such agreement.*

(b) The Corporation may impose such restrictions on the Option and any shares issuable pursuant to the exercise of the Option as it may deem advisable, including without limitation restrictions under the federal securities laws, the requirements of any stock exchange or similar organization and any blue sky or state securities laws applicable to such shares. Notwithstanding any other provision in the Plan or the Agreement to the contrary, the Corporation shall not be obligated to issue, deliver or transfer shares of Common Stock, to make any other distribution of benefits, or to take any other action, unless such delivery, distribution or action is in compliance with all applicable laws, rules and regulations (including but not limited to the requirements of the Securities Act). The Corporation will be under no obligation to register the shares of Common Stock with the SEC or to effect compliance with the exemption, registration, qualification or listing requirements of any state securities laws, stock exchange or similar organization, and the Corporation will have no liability for any inability or failure to do so. The Corporation may cause a restrictive legend to be placed on any certificate issued pursuant to the exercise of the Option in such form as may be prescribed from time to time by applicable laws and regulations or as may be advised by legal counsel.

9. Governing Law. Except as otherwise provided in the Plan or herein, this Agreement shall be construed and enforced according to the laws of the State of Delaware, without regard to the conflict of laws provisions of any state.

10. Amendment and Termination; Waiver. Subject to the terms of the Plan, this Agreement may be modified or amended only by the written agreement of the parties hereto. The waiver by the Corporation of a breach of any provision of the Agreement by the Participant shall not operate or be construed as a waiver of any subsequent breach by the Participant.

11. No Rights as a Stockholder. The Participant or his legal representatives, legatees or distributees shall not be deemed to be the holder of any shares subject to the Option and shall not have any rights of a stockholder unless and until certificates for such shares have been issued and delivered to him or them.

12. Withholding. The Participant acknowledges that the Corporation shall require the Participant to pay the Corporation the amount of any federal, state, local or other tax or other amount required by any governmental authority to be withheld and paid over by the Corporation to such authority for the account of the Participant, and the Participant agrees, as a condition to the grant of the Option, to satisfy such obligations.

13. Administration. The authority to construe and interpret this Agreement and the Plan, and to administer all aspects of the Plan, shall be vested in the Administrator (as such term is defined in the Plan), and the Administrator shall have all powers with respect to this Agreement as are provided in the Plan. Any interpretation of the Agreement by the Administrator and any decision made by it with respect to the Agreement is final and binding.

14. Notices. Except as may be otherwise provided by the Plan, any written notices provided for in this Agreement or the Plan shall be in writing and shall be deemed sufficiently given if either hand delivered or if sent by fax or overnight courier, or by postage paid first class mail. Notices sent by mail shall be deemed received three business days after mailed but in no event later than the date of actual receipt. Notices shall be directed, if to the Participant, at the Participant's address indicated by the Corporation's records, or if to the Corporation, at the Corporation's principal office.

15. Severability. The provisions of this Agreement are severable and if any one or more provisions may be determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, this Agreement has been executed in behalf of the Corporation and by the Participant effective as of the day and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
Name: J. Donald deBethizy
Title: President

Attest:

/s/ August Borschke
Secretary

[Corporate Seal]

PARTICIPANT

/s/ Merouane Bencherif
Merouane Bencherif

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
(Employees)

SCHEDULE A

Date Option granted: September 15, 2000.
Date Option expires: September 15, 2010.
Number of shares subject to Option: 174,051 shares.
Option price (per share): $0.47.
Class of Option: Incentive.

Date Installment First Exercisable*	Number of Shares In Installment
December 15, 2001	14,505
March 15, 2002	14,504
June 15, 2002	14,504
September 15, 2002	14,504
December 15, 2002	14,505
March 15, 2003	14,504
June 15, 2003	14,504
September 15, 2003	14,504
December 15, 2003	14,505
March 15, 2004	14,504
June 15, 2004	14,504
September 15, 2004	14,504

* So long as the Employment Agreement dated August 22, 2000 between the Participant and the Corporation, as may be amended (the “Employment Agreement), remains effective, if the Participant’s employment by the Corporation is terminated by (i) the Corporation (or its successor) without “Just Cause” or (ii) the Participant for “Good Reason” (all such terms as defined in the Employment Agreement), each date set forth on this Schedule A shall be deemed accelerated by six (6) months (e.g., “June 15, 2002” shall become “December 15, 2001, “September 15, 2002” shall become “March 15, 2002,” etc.).

EXHIBIT B

STOCK RESTRICTION AGREEMENT

STOCK RESTRICTION AGREEMENT

THIS STOCK RESTRICTION AGREEMENT ("Agreement"), is made and entered into as of the 22nd day of August, 2000, by and between TARGACEPT, INC., a Delaware corporation (the "Company"), and Dr. Merouane Bencherif (the "Stockholder"), an individual resident of North Carolina.

WITNESSETH:

WHEREAS, in order to induce the investors named in the Company's Series B Convertible Preferred Stock Purchase Agreement of even date herewith to consummate the purchase of up to 6,537,634 shares of the Company's Series B Convertible Preferred Stock, $0.001 par value per share ("Series B Preferred"), the Stockholder has agreed to subject 58,017 shares of the Company's common stock, $0.001 par value ("Common Stock"), owned by the Stockholder as of the date hereof (the "Subject Shares") to the terms and conditions hereof; and

WHEREAS, the continued services of the Stockholder as an employee of the Company are critical to the future success of the Company, and the Stockholder has entered into an Employment Agreement with the Company of even date herewith (the "Employment Agreement");

NOW, THEREFORE, in consideration of the premises, the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Capitalized Terms. All capitalized terms used herein and not otherwise defined shall have the meaning given to them in the Employment Agreement.

2. Shares. The Subject Shares, together with all shares of capital stock of the Company hereafter acquired by the Stockholder in respect of the Subject Shares through stock dividends, stock splits or other similar reorganization or recapitalization (together with the Subject Shares, the "Shares"), shall be subject to the provisions of this Agreement.

3. Vesting. All of the Shares shall be "vested" on August 22, 2001, and none of the Shares shall be "vested" until August 22, 2001. All Shares which are not "vested" shall be "unvested." In no event shall the Stockholder sell, transfer, assign, pledge or otherwise encumber any unvested Subject Shares. All unvested Shares shall be fully vested upon: (i) the death or "disability" (as defined in Section 6 of the Employment Agreement) of the Stockholder; (ii) the termination of the employment of the Stockholder by (A) the Company (or its successor) other than for Just Cause, or (B) the Stockholder for Good Reason; or (iii) the occurrence of a "Significant Transaction" (as defined in the Company's 2000 Equity Incentive Plan, as may be amended from time to time).

4. Repurchase Option.

(a) Upon termination of the employment of the Stockholder by (i) the Company (or its successor) for Just Cause or (ii) the Stockholder other than for Good Reason (in either case, a "Repurchase Event"), all of the unvested Shares shall be subject to the repurchase option set forth in Section 4(b) (the "Repurchase Shares").

(b) For a period of sixty (60) days from the date of a Repurchase Event, the Company shall have an option to repurchase all, but not less than all, of the Repurchase Shares. Such option must be exercised by the delivery of written notice thereof to the Stockholder (or to the Stockholder's personal representative, if applicable) prior to the expiration of the option. Upon the delivery of such notice of exercise, the Company shall be obligated to purchase from the Stockholder, and the Stockholder shall be obligated to sell to the Company, all of the Repurchase Shares for the purchase price and upon the terms set forth herein.

5. Purchase Price.

(a) The purchase price for all Repurchase Shares shall be the Stockholder's original price per share paid in cash, if any.

(b) The Stockholder (or the Stockholder's personal representative, if applicable) shall have no voice in the decisions of the Company pursuant to Section 4, whether as a Stockholder, director, or officer of the Company; provided, however, that if necessary to secure valid corporate action, the Stockholder (or the Stockholder's personal representative, if applicable) shall attend a meeting of the Stockholders or directors and vote his shares or take such other action consistent with the request of a majority of the shares of Common Stock not held by the Stockholder.

6. Closing of Purchase and Payment of Purchase Price.

(a) Closing. The closing (the "Closing") of a purchase hereunder shall take place at the principal office of the Company, on a date selected by the Company which shall not be more than sixty (60) days following delivery by the Company of the notice referenced in Section 4 (the "Closing Date"). As a condition precedent to the Stockholder's obligation to close, the Company shall cause the Stockholder to be relieved of any and all personal liability with respect to guarantees made by the Stockholder of corporate obligations of the Company, or, if such release cannot be obtained, the Company shall indemnify the Stockholder with respect to such obligations.

(b) Payment of Purchase Price. The purchase price for the Shares shall be payable to the Stockholder in cash or immediately available funds at the Closing.

7. Necessary Documents. If, under the terms of this Agreement, the Repurchase Shares are purchased, the Stockholder, or the legal representative of the Stockholder, shall execute and deliver all necessary documents that may be reasonably required for accomplishing a complete transfer of such shares for the purpose of the repurchase transaction.

8. Endorsement on Stock Certificates. Each certificate representing the Shares of the Company now or hereafter held by the Stockholder shall be stamped with a legend in substantially the following form:

> "The shares of stock represented by this certificate are restricted under the terms of a Stock Restriction Agreement dated the 22nd day of August, 2000, a copy of which is on file at the office of the corporation."

9. Notices. All notices, requests, demands, payments, and other communications hereunder shall be deemed to have been duly given if in writing and hand delivered or sent by certified mail to the appropriate address indicated below or to such other address as may be given in a notice sent to all parties hereto:

(a) If to the Company, to:

Targacept, Inc.
Bowman Gray Technical Center
950 Reynolds Boulevard
Winston-Salem, North Carolina 27105

(b) If to the Stockholder, to:

Dr. Merouane Bencherif
104 Brampton Court
Winston-Salem, NC 27106

10. Entire Agreement. This Agreement (together with the Employment Agreement) supersedes any and all other understandings and agreements, either oral or in writing, between the parties hereto with respect to the subject matter hereof and constitutes the sole and only agreement between the parties with respect to said subject matter. Each party to this Agreement acknowledges that no representations, inducements, promises or agreements, oral or otherwise, have been made by any-party or by anyone acting on behalf of any party, which are not embodied herein (or in the Employment Agreement), and that no agreement, statement or promise not contained in this Agreement (or the Employment Agreement) shall be valid or binding or of any force or effect. No change or modification of this Agreement shall be valid or binding upon the parties hereto unless such change or modification is in writing and is signed by the parties hereto.

11. Severability. In the event that any one or more of the provisions contained in this Agreement shall be held by a court of competent jurisdiction to be invalid, illegal or unenforceable in any respect for any reason, such invalidity, illegality or unenforceability shall not affect any other provisions hereof, and this Agreement shall be construed as if that invalid, illegal or unenforceable provision had never been contained herein.

12. Parties Bound. The terms, promises, covenants and agreements contained in this Agreement shall apply to, be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns; provided, however, that this Agreement may not be assigned by the Stockholder without the prior written consent of the Company.

13. Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of North Carolina, without regard to the principles of conflict of laws.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals as of the day and year first above written, the corporate party acting through its duly authorized officer.

ATTEST:

/s/ August Borschke
Secretary

(Corporate Seal)

Targacept, Inc.

By: /s/ J. Donald deBethizy
J. Donald deBethizy, President

/s/ Merouane Bencherif
Dr. Merouane Bencherif

Exhibit 10.9

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT (“Agreement”) is made as of August 22, 2000 by and between TARGACEPT, INC., a Delaware corporation (“Employer”), and Dr. William S. Caldwell, an individual resident of North Carolina (“Employee”);

RECITALS:

WHEREAS, Employer considers the availability of Employee’s services to be important to the management and conduct of Employer’s business and desires to secure the continued availability of Employee’s services; and

WHEREAS, Employee is willing to make his services available to Employer on the terms and subject to the conditions set forth herein;

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. Employment. For the Term (as defined in Section 2), Employee shall be employed as Vice President, Drug Discovery. Employee will be located at the Employer’s principal executive offices in Winston-Salem, North Carolina. Employee hereby accepts and agrees to such employment, subject to the general supervision of the Board of Directors of Employer (the “Board”), the Chief Executive Officer and President. Employee shall perform such duties and shall have such powers, authority and responsibilities as are customary for one holding the position of Vice President, Drug Discovery of a business similar to Employer and shall additionally render such other services and duties as may be reasonably assigned to him from time to time by the Board, the Chief Executive Officer or the President.

2. Term of Employment. This Agreement shall commence as of September 15, 2000 (the “Effective Date”) and continue until terminated as provided in Section 6 or Section 7 (such period, the “Term”). Any termination of this Agreement shall not affect the parties’ continuing obligations under Section 5, which shall survive any such termination.

3. Compensation.

(a) For all services rendered by Employee to Employer under this Agreement, Employer shall pay to Employee, during the Term, a base annual salary of not less than $135,000, payable in arrears in accordance with the customary payroll practices of Employer. During the Term, Employee’s annual base salary shall be reviewed and subject to increase in accordance with Employer’s standard policies and procedures. Without limiting the generality of the foregoing, Employee’s base annual salary shall be increased annually to the extent necessary to stay in line with the median base salary of employees of a similar level in comparable companies as described in the then current Radford Biotechnology Compensation Report.

(b) Employee shall be eligible to earn an annual bonus during the Term of up to 25% of Employee's annual base salary, or such higher amount as determined by the Board of Directors (or a compensation committee thereof). The eligibility for the target bonus shall be based upon the achievement of performance objectives mutually agreed upon by Employee and Employer and shall be payable within thirty (30) days of the end of each fiscal year.

(c) All amounts payable hereunder shall be subject to such deductions and withholdings as shall be required by law, if any.

(d) Employee shall be issued 58,017 shares of founder's stock, which stock shall vest in accordance with the Stock Restriction Agreement attached hereto as Exhibit A.

(e) Employee shall be granted an incentive stock option to purchase 174,051 shares of Employer's common stock under the terms of Employer's 2000 Equity Incentive Plan and pursuant to a form of option agreement attached hereto as Exhibit B (the "Option Agreement"). The incentive option shall have a term often years and an exercise price of $0.47 per share and shall vest ratably over the twelve (12) quarters commencing twelve (12) months from the Effective Date. Any terms contained in this Agreement regarding the exercisability or vesting of such options, including without limitation this Section 3(e) and Section 7, shall be reflected in the terms of the Option Agreement. Employee shall also be eligible to receive additional awards thereunder in the discretion of the Board (or a compensation committee thereof).

(f) Employee shall also be entitled to holidays, sick leave and other time off and to participate in those life, health or other insurance plans and other employee pension and welfare benefit programs, plans, practices and benefits generally made available from time to time to all employees of Employer; provided that nothing herein shall obligate Employer to continue any of such benefits for Employee if discontinued for other employees. Without limiting the foregoing, Employee shall be entitled to paid vacation during each fiscal year of the term of twenty (20) days.

4. Reimbursement of Expenses. Employer shall pay or reimburse Employee for all reasonable travel and other expenses incurred by Employee in performing his obligations under this Agreement and also, to the extent consistent with Employer's policy, for any dues and costs of appropriate professional organization and continuing professional education, in each case subject to such reasonable documentation and substantiation as Employer shall require.

5. Covenants of Employee.

(a) Covenant Not to Compete. Employee covenants that during the "Noncompetition Period" (as defined in Section 5(g)) and within the "Noncompetition Area" (as defined in Section 5(h)), he shall not, directly or indirectly, as principal, agent, officer, director, shareholder, member, employee, consultant or trustee, or through the agency of any person, firm, corporation, partnership, limited liability company, association or other entity (collectively, "Entity"), engage in the "Business" (as defined in Section 5(i)). Without limiting the generality of the foregoing, Employee agrees that during the Noncompetition Period and within the Noncompetition Area, he shall not be (i) the owner of the outstanding capital stock or other equity interests of any Entity (other than Employer or its affiliates) that, directly or indirectly, engages in the Business; or (ii) an officer, director, partner, manager, member, consultant or employee of any Entity that, directly or indirectly, engages in the Business; provided, that this Section 5(a) shall not prevent Employee from (A) being an employee of any area or division of any Entity to the extent that such area or division does not, directly or indirectly, engage in the Business or (B) beneficially owning less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market.

(b) Nondisclosure Covenant. The parties acknowledge that Employer and its affiliates are enterprises whose success is attributable largely to the ownership, use and development of certain valuable confidential and proprietary information (the "Proprietary Information"), and that Employee's employment with Employer will involve access to and work with such information. Employee acknowledges that his relationship with Employer is a confidential relationship, and agrees that (i) he shall keep and maintain the Proprietary Information in strictest confidence, and (ii) he shall not, either directly or indirectly, use any Proprietary Information for his own benefit, or divulge, disclose or communicate any Proprietary Information in any manner whatsoever to any person or Entity other than to employees or agents of Employer having a need to know such Proprietary Information to perform their responsibilities on behalf of Employer, and to other persons or Entities in the normal course of Employer's business. This nondisclosure obligation shall apply to all Proprietary Information, whether or not Employee participated in the development thereof. Upon termination of his employment with Employer for any reason, Employee will return to Employer all Proprietary Information in any medium and all other documents, data, materials or property of Employer (including any copies thereof) in his possession. For purposes of this Agreement, the term "Proprietary Information" shall include any and all proprietary information related to the business of Employer and its affiliates and stockholders, or to any of their products, services, sales or operations, which is not generally known to the public, specifically including (but without limitation): trade secrets, processes, formulae, compounds and properties thereof, data, files, research results, computer programs and related source codes and object codes, improvements, inventions, techniques, marketing plans, strategies, forecasts, copyrightable material, suppliers, methods and manner of operations; information relating to the identity, needs and location of all past, present and prospective customers; and information with respect to the internal affairs of Employer and its affiliates. Such Proprietary Information may or may not contain legends or other written notice that it is of a confidential or proprietary nature. The parties stipulate that, as between them, the above-described matters are important and confidential and gravely affect the successful conduct of the business of Employer and its affiliates and that any breach of the terms of this Section 5(b) shall be a material breach of this Agreement.

(c) Nonsolicitation Covenant. Employee covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, call upon any of the customers or clients of Employer (or potential customers or clients whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during his employment with Employer) for the purpose of soliciting or providing any product or service similar to that provided by Employer, nor will he, in any way, directly or indirectly, on behalf of himself or any Entity solicit, divert or take away, or attempt to solicit, divert, or take away any of the customers, clients, business or patrons of Employer (or potential customers or clients whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during his employment with Employer). Employee further covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, solicit, induce or encourage any person to leave the employ of Employer.

(d) Inventions. All inventions, designs, formulae, processes, discoveries, drawings, improvements and developments made by Employee, either solely or in collaboration with others, during his employment with Employer, whether or not during working hours, and relating to any methods, apparatus, products, compounds, services or deliverables which are made, furnished, sold, leased, used or developed by Employer or its affiliates or which pertain to the Business (the "Developments") shall become and remain the sole property of Employer. Employee shall disclose promptly in writing to Employer all such Developments. Employee acknowledges and agrees that all Developments shall be deemed "works made for hire" within the meaning of the United States Copyright Act, as amended. If, for any reason, such Developments are not deemed works made for hire, Employee hereby assigns to Employer all of his right, title and interest (including, but not limited to, copyright and all rights of inventorship) in and to such Developments. At the request and expense of Employer, whether during or after employment with Employer, Employee shall make, execute and deliver all application papers, assignments or instruments, and perform or cause to be performed such other lawful acts as Employer may deem necessary or desirable in making or prosecuting applications, domestic or foreign, for patents (including reissues, continuations and extensions thereof) and copyrights related to such Developments or in vesting in Employer full legal title to such Developments. Employee shall assist and cooperate with Employer or its representatives in any controversy or legal proceeding relating to such Developments, or to any patents, copyrights or trade secrets with respect thereto. If for any reason Employee refuses or is unable to assist Employer in obtaining or enforcing its rights with respect to such Developments, he hereby irrevocably designates and appoints Employer and its duly authorized agents as his agents and attorneys-in-fact to execute and file any documents and to do all other lawful acts necessary to protect Employer's rights in the Developments. Employee expressly acknowledges that the special foregoing power of attorney is coupled with an interest and is therefore irrevocable and shall survive (i) his death or incompetency, (ii) the termination of his employment with Employer and (iii) the termination of this Agreement.

(e) Independent Covenants. Each of the covenants on the part of Employee contained in Sections 5(a), (b), (c) and (d) of this Agreement shall be construed as an agreement independent of each other such covenant. The existence of any claim or cause of action of Employee against Employer, whether predicated on this Agreement or otherwise, shall not constitute a defense to the enforcement by Employer of any such covenant.

(f) Reasonableness; Injunction. Employee acknowledges that his covenants contained in Section 5 of this Agreement are reasonably necessary for the protection of Employer and its affiliates and their businesses, and that such covenants are reasonably limited with respect to the activities prohibited, the duration thereof, the geographic area thereof, the scope thereof and the effect thereof on Employee and the general public. Employee further acknowledges that violation of the covenants would immeasurably and irreparably damage Employer and its affiliates, and by reason thereof Employee agrees that for violation or threatened violation of any of the provisions of this Agreement, Employer shall, in addition to any other rights and remedies available to it, at law or otherwise, be entitled to an injunction to be issued by any court of competent jurisdiction enjoining and restraining Employee from committing any violation or threatened violation of this Agreement. Employee consents to the issuance of such injunction. Furthermore, Employer shall, in addition to any other rights or remedies available to it, at law or otherwise, be entitled to reimbursement of court costs, attorneys' fees and other expenses incurred as a result of a breach of this Agreement. Employee agrees to reimburse Employer for such expenses promptly following a final determination that he has breached this Agreement.

(g) Noncompetition Period. "Noncompetition Period" shall mean the period commencing on the Effective Date and continuing until nine (9) months following termination of this Agreement.

(h) Noncompetition Area. The "Noncompetition Area" shall consist of the entire world.

(i) Business. For the purposes of this Agreement, the "Business" shall mean the business of developing, manufacturing, marketing or selling therapeutic products that use synthetic nicotinic cholinergic compounds.

6. Disability. Upon the "disability" of Employee, this Agreement may be terminated by action of the Board upon 30 days prior written notice (the "Disability Notice"), such termination to become effective only if such disability continues. If, prior to the effective time of the Disability Notice, Employee shall recover from such disability and return to the full-time active discharge of his duties, then the Disability Notice shall be of no further force and effect and Employee's employment shall continue as if the same had been uninterrupted. If Employee shall not so recover from his disability and return to his duties, then his services shall terminate at the effective time of the Disability Notice with the same force and effect as if that date had been the end of the Term originally provided for hereunder. Such termination shall not prejudice any benefits payable to Employee that are fully vested as of the date of such termination. Prior to the effective time of the Disability Notice, Employee shall continue to earn all compensation to which Employee would have been entitled as if he had not been disabled,

such compensation to be paid at the time, in the amounts, and in the manner provided in Section 3(a). A “disability” of Employee shall be deemed to exist at all times that Employee is considered by the insurance Employer which has issued any policy of disability insurance owned by Employer or for which premiums are paid by Employer (the “Employer Policy”) to be totally disabled under the terms of such policy. In the event there is no Employer Policy, “disability” shall mean the inability, by reason of physical or mental incapacity, impairment or infirmity, of Employee to perform, upon request, his regular duties required herein for six consecutive months, and the determination of the existence or nonexistence of disability shall be made by a medical doctor who is licensed to practice medicine in the State of North Carolina mutually acceptable to the Board and to Employee (or, if Employee is incapacitated, his spouse).

7. Termination.

(a) If Employee shall die during the Term, this Agreement and the employment relationship hereunder will automatically terminate on the date of death, which date shall be the last day of the Term; provided that such termination shall not prejudice any benefits payable to Employee or Employee’s beneficiaries that are fully vested as of the date of death.

(b) Employer may terminate Employee’s employment under this Agreement at any time with or without Just Cause. Any termination without Just Cause shall be effective only on thirty (30) days prior written notice to Employee. Any termination with Just Cause shall be effective immediately or at such other time set by the Board. “Just Cause” shall mean (i) Employee’s willful and material breach of this Agreement and his continued failure to cure such breach to the reasonable satisfaction of the Board within thirty (30) days following written notice of such breach to Employee from the Board; (ii) Employee’s conviction of, or entry of a plea of guilty or nolo contendere to a felony or a misdemeanor involving moral turpitude, (iii) Employee’s willful commission of an act of fraud, breach of trust, or dishonesty including, without limitation, embezzlement, that results in material damage or harm to the business, financial condition or assets of Employer; or (iv) Employee’s intentional damage or destruction of substantial property of Employer. Just Cause shall be determined by the Board in its reasonable discretion and the particulars of any determination shall be provided to Employee in writing. At any time within ninety (90) days of receipt by Employee in writing of such determination, Employee may object to such determination in writing and submit the determination to arbitration in accordance with Section 9(j). If such determination is overturned in arbitration, Employee will be treated as having been terminated without Just Cause and shall be entitled to the benefits of Section 7(d).

(c) Employee may voluntarily terminate his employment with Employer on thirty (30) days prior written notice to Employer.

(d) Upon any termination pursuant to this Section 7, Employee shall be entitled to receive a lump sum equal to any base salary, target bonus and other compensation earned and due but not yet paid through the effective date of termination. In addition, if this Agreement and Employee’s employment hereunder is terminated by (i) Employer (or its successor) other than for Just Cause, or (ii) Employee for Good Reason, Employee shall be entitled to the following:

(A) severance, payable monthly, equal to Employee's then current base salary for nine (9) months following such termination or, if shorter, until such time as Employee secures other employment (the "Severance Period");

(B) six (6) months acceleration of unvested stock options to purchase capital stock or restricted stock of the Employer held by Employee;

(C) the health care (including medical and dental) and life insurance benefits coverage provided to Employee at his date of termination shall be continued at the same level and in the same manner as if his employment had not terminated (subject to the customary changes in such coverages if Employee reaches age 65 or similar events), for the Severance Period, followed by COBRA election rights. Any additional coverages Employee had at termination, including dependent coverage, will also be continued for such period on the same terms. Any costs Employee was paying for such coverages at the time of termination shall continue to be paid by Employee. If the terms of any benefit plan referred to in this section do not permit continued participation by Employee, then Employer will arrange for other coverage providing substantially similar benefits at the same contribution level of Employee, and

(D) outplacement counseling services selected by Employee, up to a maximum of $10,000.

(e) If Employer (or its successor) terminates Employee's employment for Just Cause, Employee shall forfeit any unexercised vested stock options at the date of termination. If Employee terminates his employment or if Employer (or its successor) terminates Employee's employment without Just Cause, Employee shall have ninety (90) days from the date of termination to exercise any vested options.

(f) For purposes hereof, Good Reason" shall mean the occurrence of any of the following events without Employee's express written consent:

(A) the breach by Employer (or any successor entity) of any material provision of this Agreement;

(B) any purported termination of the employment of Employee by Employer (or any successor entity) which is not effected in accordance with this Agreement;

(C) any failure of the Employer (or any successor entity) to pay Employee and amounts of base salary or bonus compensation that have become due and payable to Employee within thirty (30) days after Employee has given Employer (or any successor entity) notice of demand therefor.

(g) Except as otherwise provided in this Section 7, upon termination of this Agreement for any reason, Employee shall not be entitled to any form of severance benefits, including benefits otherwise payable under any of Employer's regular severance plans or policies, or any other payment whatsoever. Employee agrees that the payments and benefits provided hereunder, subject to the terms and conditions hereof shall be in full satisfaction of any rights which he might otherwise have or claim by operation of law, by implied contract or otherwise, except for rights which he may have under any employee benefit plan of Employer.

8. Best Efforts of Employee. Employee agrees that he will at all times faithfully, industriously and to the best of his ability, experience and talents perform all the duties that may be required of him pursuant to the express and implicit terms hereof, to the reasonable satisfaction of Employer, commensurate with his position. Such duties shall be rendered at such place as Employer designates and employee acknowledges that he may be required to travel as shall reasonably be required to promote the business of Employer. To the extent reasonably required by the duties assigned to him, Employee shall devote substantially all his time, attention, knowledge and skills to the business and interest of Employer and shall be entitled to all the benefits, profits and other issue arising from or incident to all work, service and advice of Employee. During the Term, Employee shall not be interested, directly or indirectly, in any manner as partner, manager, officer, director, shareholder, member, adviser, consultant, employee or in any other capacity in any other business; provided, that nothing herein contained shall be deemed to prevent or limit the right of Employee to beneficially own less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market as long as such passive investment does not interfere with or conflict with the performance of services to be rendered hereunder.

9. Miscellaneous.

(a) This Agreement shall be governed by and construed in accordance with the laws of the State of North Carolina without regard to conflicts of law principles thereof.

(b) This Agreement constitutes the entire Agreement between Employee and Employer with respect to the subject matter hereof, and supersedes in their entirety any and all prior oral or written agreements, understandings or arrangements between Employee and Employer or any of its affiliates relating to the terms of Employee's employment by Employer, and all such agreements, understandings and arrangements are hereby terminated and are of no force and effect. Employee hereby expressly disclaims any rights under any such agreements, understandings and arrangements. This Agreement may not be amended or terminated except by an agreement in writing signed by both parties.

(c) This Agreement may be executed in two or more counterparts, each of which shall be deemed and original and all of which, taken together, shall constitute one and the same instrument.

(d) Any notice or other communication required or permitted under this Agreement shall be effective only if it is in writing and delivered in person or by nationally recognized overnight courier service or deposited in the mails, postage prepaid, return receipt requested, addressed as follows:

To Employer:

Targacept, Inc.
Bowman Gray Technical Center
950 Reynolds Boulevard
Winston-Salem, North Carolina 27105
Attn: President

To Employee:

Dr. William S. Caldwell
1270 Yorkshire Road
Winston-Salem, NC 27106.

Notices given in person or by overnight courier service shall be deemed given when delivered in person or the day after delivery to the courier addressed to the address required by this Section 9(d), and notices given by mail shall be deemed given three days after deposit in the mails. Any party hereto may designate by written notice to the other party in accordance herewith any other address to which notices addressed to him shall be sent.

(e) The provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity or enforceability of the other provisions hereof. It is understood and agreed that no failure or delay by Employer or Employee in exercising any right, power or privilege under this Agreement shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

(f) This Agreement may not be assigned by Employee without the written consent of Employer. This Agreement shall be binding on any successors or assigns of either party hereto.

(g) For purposes of this Agreement, employment of Employee by any affiliate of Employer shall be deemed to be employment by Employer hereunder, and a transfer of employment of Employee from one such affiliate to another shall not be deemed to be a termination of employment of Employee by Employer or a cessation of the Term, it being the intention of the parties hereto that employment of Employee by any affiliate of Employer shall be treated as employment by Employer and that the provisions of this Agreement shall continue to be fully applicable following any such transfer.

(h) The respective rights and obligations of the parties hereunder shall survive any termination of the Term or Employee’s employment with Employer to the extent necessary to preserve such rights and obligations for their stated durations.

(i) In the event that it shall become necessary for either party to retain the services of an attorney to enforce any terms under this Agreement, the prevailing party, in addition to all other rights and remedies hereunder or as provided by law, shall be entitled to reasonable attorneys’ fees and costs of suit. Employer shall reimburse Employee for the reasonable fees and expenses of counsel to Employee for the original negotiation of this Agreement.

(j) Any controversy or claim arising out of or relating to this Agreement shall be settled by arbitration in accordance with Commercial Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitration panel, which shall consist of three members, may be entered in any court having jurisdiction. Any arbitration shall be held in Winston-Salem, North Carolina, unless otherwise agreed in writing by the parties. One arbitrator shall be selected by Employee, one arbitrator shall be selected by Employer, and the third arbitrator shall be selected by the two arbitrators selected by Employee and Employer.

[THE NEXT PAGE IS THE SIGNATURE PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
Name: J. Donald deBethizy
Title: President

EMPLOYEE:

/s/ William S. Caldwell
Dr. William S. Caldwell

EXHIBIT A

OPTION AGREEMENT

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
(Employees)

THIS AGREEMENT (the "Agreement"), made the 22nd day of August, 2000, between Targacept, Inc., a Delaware corporation (the "Corporation"), and William S. Caldwell, an employee of the Corporation or a related corporation (the "Participant"), effective as of September 15, 2000;

R E C I T A L S :

In furtherance of the purposes of the 2000 Equity Incentive Plan of Targacept, Inc., as it may be hereafter amended (the "Plan"), and in consideration of the services of the Participant and such other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Corporation and the Participant hereby agree as follows:

1. Incorporation of Plan. The rights and duties of the Corporation and the Participant under this Agreement shall in all respects be subject to and governed by the provisions of the Plan, a copy of which is delivered herewith or has been previously provided to the Participant and the terms of which are incorporated herein by reference. In the event of any conflict between the provisions in the Agreement and those of the Plan, the provisions of the Plan shall govern. Unless otherwise defined herein, capitalized terms in this Agreement shall have the same definitions as set forth in the Plan.

2. Grant of Option; Term of Option. The Corporation hereby grants to the Participant pursuant to the Plan, as a matter of separate inducement and agreement in connection with his employment or service to the Corporation, and not in lieu of any salary or other compensation for his services, the right and Option (the "Option") to purchase all or any part of an aggregate of one hundred seventy-four thousand fifty-one (174,051) shares (the "shares") of the common stock (the "Common Stock") of the Corporation, at a purchase price (the "option price") of forty-seven cents ($0.47) per share. The Option to purchase one hundred seventy-four thousand fifty-one (174,051) of the shares shall be designated as an Incentive Option. To the extent that the Option is designated as an Incentive Option and such Option does not qualify as an Incentive Option, the Option (or portion thereof) shall be treated as a Nonqualified Option. Except as otherwise provided in the Plan, the Option will expire if not exercised in full before September 15, 2010.

3. Exercise of Option. The Option shall become exercisable on the date or dates and subject to such conditions set forth on Schedule A attached hereto; provided, that, as permitted by the Plan, the terms of Section 18(c) of the Plan shall not apply to the Option. To the extent that the Option is exercisable but is not exercised, the Option shall accumulate and be exercisable by the Participant in whole or in part at any time prior to expiration of the Option,

subject to the terms of the Plan and this Agreement. Upon the exercise of an Option in whole or in part and payment of the option price in accordance with the provisions of the Plan and this Agreement, the Corporation shall as soon thereafter as practicable deliver to the Participant a certificate or certificates for the shares purchased. Payment of the option price may be made: (i) in cash or by check; (ii) by delivery (by either actual delivery or attestation) of shares of Common Stock owned by the Participant at the time of exercise for a period of at least six months and otherwise acceptable to the Administrator; (iii) by withholding shares of Common Stock otherwise issuable upon exercise of the Option; (iv) in the event that a public market for the Common Stock exists (as defined in the Plan), by delivery of written notice of exercise to the Corporation and delivery to a broker of written notice of exercise and irrevocable instructions to promptly deliver to the Corporation the amount of sale or loan proceeds to pay the option price; (v) by such other methods as may be permitted by the Administrator in accordance with Section 6(c)(ii) of the Plan; or (vi) by a combination of the foregoing methods. Shares delivered or withheld in payment of the option price shall be valued at their fair market value on the date of exercise, as determined by the Administrator by applying the provisions of the Plan.

4. No Right of Continued Employment or Service. Nothing contained in this Agreement or the Plan shall confer upon the Participant any right to continue in the employment or service of the Corporation or a related corporation or interfere with the right of the Corporation or a related corporation to terminate the Participant's employment or service at any time. Except as otherwise expressly provided in the Plan, all rights of the Participant under the Plan with respect to the unexercised portion of his Option shall terminate upon termination of the employment or service of the Participant with the Corporation or a related corporation.

5. Nontransferability of Option. The Option shall not be transferable other than by will or the laws of intestate succession. Except as may be permitted by the preceding sentence, this Option shall be exercisable during the Participant's lifetime only by the Participant.

6. Superseding Agreement; Binding Effect. This Agreement supersedes any statements, representations or agreements of the Corporation with respect to the grant of the Option or any related rights, and the Participant hereby waives any rights or claims related to any such statements, representations or agreements. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective executors, administrators, next-of-kin, successors and assigns.

7. Representations and Warranties of Participant. The Participant represents and warrants to the Corporation that:

(a) Agrees to Terms of the Plan and Agreement. The Participant has received a copy of the Plan, has read and understands the terms of the Plan and this Agreement, and agrees to be bound by their terms and conditions. The Participant acknowledges that there may be adverse tax consequences upon acquisition or disposition of the shares subject to the Option, and that Participant should consult a tax advisor prior to such exercise or disposition.

(b) Purchase for Own Account for Investment. Any shares of Common Stock acquired pursuant to the Option shall be acquired for Participant's own account for investment purposes only and not with a view to, or for sale in connection with, a distribution of the shares within the meaning of the Securities Act of 1933, as amended (the "Securities Act"). The Participant has no present intention of selling or otherwise disposing of all or any portion of the shares subject to the Option.

(c) Access to Information. The Participant has had access to all information regarding the Corporation and its present and prospective business, assets, liabilities and financial condition that the Participant reasonably considers important in making a decision to acquire the shares subject to the Option, and the Participant has had ample opportunity to ask questions of the Corporation's representatives concerning such matters and this investment.

(d) Understanding of Risks. The Participant is fully aware of: (i) the speculative nature of the investment in the shares of Common Stock; (ii) the financial hazards involved in investment of the Common Stock; (iii) the lack of liquidity of the shares subject to the Option and the restrictions on transferability of such shares; (iv) the qualifications and backgrounds of the management of the Corporation; and (v) the tax consequences of investment in the shares of Common Stock. The Participant is capable of evaluating the merits and risks of this investment, has the ability to protect his own interests in this transaction and is financially capable of bearing a total loss of this investment.

(e) No General Solicitation. At no time was the Participant presented with or solicited by any publicly issued or circulated newspaper, mail, radio, television or other form of general advertising or solicitation in connection with the offer, sale and purchase of the shares subject to the Option.

(f) Compliance with Securities Laws. The shares subject to the Option have not been registered with the Securities and Exchange Commission ("SEC") under the Securities Act and, notwithstanding any other provision of this Agreement or the Plan to the contrary, the right to acquire any shares subject to this Option is expressly conditioned upon compliance with the Securities Act and all applicable state securities laws. The Participant agrees to cooperate with the Corporation to ensure compliance with such laws.

(g) No Transfer Unless Registered or Exempt. The Participant understands that he may not transfer any shares subject to the Option unless such shares are registered under the Securities Act or qualified under applicable state securities laws or unless, in the opinion of counsel to the Corporation, exemptions from such registration and qualification requirements are available. The Participant understands that only the Corporation may file a registration statement with the SEC and that the Corporation is under no obligation to do so with respect to the shares subject to the Option. The Participant has also been advised that

exemptions from registration and qualification may not be available or may not permit the Participant to transfer all or any of the shares subject to the Option in the amounts or at the times proposed by him. The Participant also agrees in connection with any registration of the Corporation's securities that, upon the request of the Corporation or the underwriters managing any public offering of the Corporation's securities, the Participant will not sell or otherwise dispose of any shares without the prior written consent of the Corporation or such underwriters, as the case may be, for such period of time (not to exceed 180 days) after the effective date of such registration requested by such managing underwriters and subject to all restrictions as the Corporation or the underwriters may specify.

8. Other Restrictions on Option and Shares.

(a) As a condition to the issuance and delivery of shares subject to the Option, or the grant of any benefit pursuant to the terms of the Plan, the Corporation may, with the consent of the Participant, require the Participant or other person to become a party to a stockholders' agreement, buy-sell agreement, redemption agreement, repurchase agreement or other agreement between the Corporation and stockholders of the Corporation or among stockholders of the Corporation or such other agreements imposing such restrictions as may be required by the Corporation. *Notwithstanding the foregoing, the Participant hereby expressly acknowledges and agrees that the Corporation shall require, prior to the issuance of any shares pursuant to this Agreement, that the Participant become a party to that certain Stockholders Agreement dated as of August 22, 2000, by and among Targacept, Inc. and the stockholders thereof, as it may be amended from time to time, and the Participant hereby agrees to execute such agreement.*

(b) The Corporation may impose such restrictions on the Option and any shares issuable pursuant to the exercise of the Option as it may deem advisable, including without limitation restrictions under the federal securities laws, the requirements of any stock exchange or similar organization and any blue sky or state securities laws applicable to such shares. Notwithstanding any other provision in the Plan or the Agreement to the contrary, the Corporation shall not be obligated to issue, deliver or transfer shares of Common Stock, to make any other distribution of benefits, or to take any other action, unless such delivery, distribution or action is in compliance with all applicable laws, rules and regulations (including but not limited to the requirements of the Securities Act). The Corporation will be under no obligation to register the shares of Common Stock with the SEC or to effect compliance with the exemption, registration, qualification or listing requirements of any state securities laws, stock exchange or similar organization, and the Corporation will have no liability for any inability or failure to do so. The Corporation may cause a restrictive legend to be placed on any certificate issued pursuant to the exercise of the Option in such form as may be prescribed from time to time by applicable laws and regulations or as may be advised by legal counsel.

9. Governing Law. Except as otherwise provided in the Plan or herein, this Agreement shall be construed and enforced according to the laws of the State of Delaware, without regard to the conflict of laws provisions of any state.

10. Amendment and Termination; Waiver. Subject to the terms of the Plan, this Agreement may be modified or amended only by the written agreement of the parties hereto. The waiver by the Corporation of a breach of any provision of the Agreement by the Participant shall not operate or be construed as a waiver of any subsequent breach by the Participant.

11. No Rights as a Stockholder. The Participant or his legal representatives, legatees or distributees shall not be deemed to be the holder of any shares subject to the Option and shall not have any rights of a stockholder unless and until certificates for such shares have been issued and delivered to him or them.

12. Withholding. The Participant acknowledges that the Corporation shall require the Participant to pay the Corporation the amount of any federal, state, local or other tax or other amount required by any governmental authority to be withheld and paid over by the Corporation to such authority for the account of the Participant, and the Participant agrees, as a condition to the grant of the Option, to satisfy such obligations.

13. Administration. The authority to construe and interpret this Agreement and the Plan, and to administer all aspects of the Plan, shall be vested in the Administrator (as such term is defined in the Plan), and the Administrator shall have all powers with respect to this Agreement as are provided in the Plan. Any interpretation of the Agreement by the Administrator and any decision made by it with respect to the Agreement is final and binding.

14. Notices. Except as may be otherwise provided by the Plan, any written notices provided for in this Agreement or the Plan shall be in writing and shall be deemed sufficiently given if either hand delivered or if sent by fax or overnight courier, or by postage paid first class mail. Notices sent by mail shall be deemed received three business days after mailed but in no event later than the date of actual receipt. Notices shall be directed, if to the Participant, at the Participant’s address indicated by the Corporation’s records, or if to the Corporation, at the Corporation’s principal office.

15. Severability. The provisions of this Agreement are severable and if any one or more provisions may be determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, this Agreement has been executed in behalf of the Corporation and by the Participant effective as of the day and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
Name: J. Donald deBethizy
Title: President

Attest:

/s/ August Borschke
Secretary

[Corporate Seal]

PARTICIPANT

/s/ William S. Caldwell
William S. Caldwell

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
(Employees)

SCHEDULE A

Date Option granted: September 15, 2000.
Date Option expires: September 15, 2010.
Number of shares subject to Option: 174,051 shares.
Option price (per share): $0.47.
Class of Option: Incentive.

Date Installment First Exercisable*	Number of Shares In Installment
December 15, 2001	14,505
March 15, 2002	14,504
June 15, 2002	14,504
September 15, 2002	14,504
December 15, 2002	14,505
March 15, 2003	14,504
June 15, 2003	14,504
September 15, 2003	14,504
December 15, 2003	14,505
March 15, 2004	14,504
June 15, 2004	14,504
September 15, 2004	14,504

* So long as the Employment Agreement dated August 22, 2000 between the Participant and the Corporation, as may be amended (the “Employment Agreement), remains effective, if the Participant’s employment by the Corporation is terminated by (i) the Corporation (or its successor) without “Just Cause” or (ii) the Participant for “Good Reason” (all such terms as defined in the Employment Agreement), each date set forth on this Schedule A shall be deemed accelerated by six (6) months (e.g., “June 15, 2002” shall become “December 15, 2001, “September 15, 2002” shall become “March 15, 2002,” etc.).

EXHIBIT B

STOCK RESTRICTION AGREEMENT

STOCK RESTRICTION AGREEMENT

THIS STOCK RESTRICTION AGREEMENT ("Agreement"), is made and entered into as of the 22nd day of August, 2000, by and between TARGACEPT, INC., a Delaware corporation (the "Company"), and Dr. William S. Caldwell (the "Stockholder"), an individual resident of North Carolina.

WITNESSETH:

WHEREAS, in order to induce the investors named in the Company's Series B Convertible Preferred Stock Purchase Agreement of even date herewith to consummate the purchase of up to 6,537,634 shares of the Company's Series B Convertible Preferred Stock, $0.001 par value per share ("Series B Preferred"), the Stockholder has agreed to subject 58,017 shares of the Company's common stock, $0.001 par value ("Common Stock"), owned by the Stockholder as of the date hereof (the "Subject Shares") to the terms and conditions hereof; and

WHEREAS, the continued services of the Stockholder as an employee of the Company are critical to the future success of the Company, and the Stockholder has entered into an Employment Agreement with the Company of even date herewith (the "Employment Agreement");

NOW, THEREFORE, in consideration of the premises, the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Capitalized Terms. All capitalized terms used herein and not otherwise defined shall have the meaning given to them in the Employment Agreement.

2. Shares. The Subject Shares, together with all shares of capital stock of the Company hereafter acquired by the Stockholder in respect of the Subject Shares through stock dividends, stock splits or other similar reorganization or recapitalization (together with the Subject Shares, the "Shares"), shall be subject to the provisions of this Agreement.

3. Vesting. All of the Shares shall be "vested" on August 22, 2001, and none of the Shares shall be "vested" until August 22, 2001. All Shares which are not "vested" shall be "unvested." In no event shall the Stockholder sell, transfer, assign, pledge or otherwise encumber any unvested Subject Shares. All unvested Shares shall be fully vested upon: (i) the death or "disability" (as defined in Section 6 of the Employment Agreement) of the Stockholder; (ii) the termination of the employment of the Stockholder by (A) the Company (or its successor) other than for Just Cause, or (B) the Stockholder for Good Reason; or (iii) the occurrence of a "Significant Transaction" (as defined in the Company's 2000 Equity Incentive Plan, as may be amended from time to time).

4. Repurchase Option.

(a) Upon termination of the employment of the Stockholder by (i) the Company (or its successor) for Just Cause or (ii) the Stockholder other than for Good Reason (in either case, a "Repurchase Event"), all of the unvested Shares shall be subject to the repurchase option set forth in Section 4(b) (the "Repurchase Shares").

(b) For a period of sixty (60) days from the date of a Repurchase Event, the Company shall have an option to repurchase all, but not less than all, of the Repurchase Shares. Such option must be exercised by the delivery of written notice thereof to the Stockholder (or to the Stockholder's personal representative, if applicable) prior to the expiration of the option. Upon the delivery of such notice of exercise, the Company shall be obligated to purchase from the Stockholder, and the Stockholder shall be obligated to sell to the Company, all of the Repurchase Shares for the purchase price and upon the terms set forth herein.

5. Purchase Price.

(a) The purchase price for all Repurchase Shares shall be the Stockholder's original price per share paid in cash, if any.

(b) The Stockholder (or the Stockholder's personal representative, if applicable) shall have no voice in the decisions of the Company pursuant to Section 4, whether as a Stockholder, director, or officer of the Company; provided, however, that if necessary to secure valid corporate action, the Stockholder (or the Stockholder's personal representative, if applicable) shall attend a meeting of the Stockholders or directors and vote his shares or take such other action consistent with the request of a majority of the shares of Common Stock not held by the Stockholder.

6. Closing of Purchase and Payment of Purchase Price.

(a) Closing. The closing (the "Closing") of a purchase hereunder shall take place at the principal office of the Company, on a date selected by the Company which shall not be more than sixty (60) days following delivery by the Company of the notice referenced in Section 4 (the "Closing Date"). As a condition precedent to the Stockholder's obligation to close, the Company shall cause the Stockholder to be relieved of any and all personal liability with respect to guarantees made by the Stockholder of corporate obligations of the Company, or, if such release cannot be obtained, the Company shall indemnify the Stockholder with respect to such obligations.

(b) Payment of Purchase Price. The purchase price for the Shares shall be payable to the Stockholder in cash or immediately available funds at the Closing.

7. Necessary Documents. If, under the terms of this Agreement, the Repurchase Shares are purchased, the Stockholder, or the legal representative of the Stockholder, shall execute and deliver all necessary documents that may be reasonably required for accomplishing a complete transfer of such shares for the purpose of the repurchase transaction.

8. Endorsement on Stock Certificates. Each certificate representing the Shares of the Company now or hereafter held by the Stockholder shall be stamped with a legend in substantially the following form:

> "The shares of stock represented by this certificate are restricted under the terms of a Stock Restriction Agreement dated the 22nd day of August, 2000, a copy of which is on file at the office of the corporation."

9. Notices. All notices, requests, demands, payments, and other communications hereunder shall be deemed to have been duly given if in writing and hand delivered or sent by certified mail to the appropriate address indicated below or to such other address as may be given in a notice sent to all parties hereto:

(a) If to the Company, to:

Targacept, Inc.
Bowman Gray Technical Center
950 Reynolds Boulevard
Winston-Salem, North Carolina 27105

(b) If to the Stockholder, to:

Dr. William S. Caldwell
1270 Yorkshire Road
Winston-Salem, NC 27106

10. Entire Agreement. This Agreement (together with the Employment Agreement) supersedes any and all other understandings and agreements, either oral or in writing, between the parties hereto with respect to the subject matter hereof and constitutes the sole and only agreement between the parties with respect to said subject matter. Each party to this Agreement acknowledges that no representations, inducements, promises or agreements, oral or otherwise, have been made by any party or by anyone acting on behalf of any party, which are not embodied herein (or in the Employment Agreement), and that no agreement, statement or promise not contained in this Agreement (or the Employment Agreement) shall be valid or binding or of any force or effect. No change or modification of this Agreement shall be valid or binding upon the parties hereto unless such change or modification is in writing and is signed by the parties hereto.

11. Severability. In the event that any one or more of the provisions contained in this Agreement shall be held by a court of competent jurisdiction to be invalid, illegal or unenforceable in any respect for any reason, such invalidity, illegality or unenforceability shall not affect any other provisions hereof, and this Agreement shall be construed as if that invalid, illegal or unenforceable provision had never been contained herein.

12. Parties Bound. The terms, promises, covenants and agreements contained in this Agreement shall apply to, be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns; provided, however, that this Agreement may not be assigned by the Stockholder without the prior written consent of the Company.

13. Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of North Carolina, without regard to the principles of conflict of laws.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals as of the day and year first above written, the corporate party acting through its duly authorized officer.

ATTEST:	Targacept, Inc.
/s/ A. Borschke	By: /s/ J. Donald deBethizy
Secretary	J. Donald deBethizy, President
(Corporate Seal)	
	/s/ William S. Caldwell
	Dr. William S. Caldwell

Exhibit 10.10

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT ("Agreement") is made as of April 24, 2001 by and between TARGACEPT, INC., a Delaware corporation ("Employer"), and Dr. Geoffrey Dunbar, an individual resident of Connecticut ("Employee");

RECITALS:

WHEREAS, Employer considers the availability of Employee's services to be important to the management and conduct of Employer's business and desires to secure the continued availability of Employee's services; and

WHEREAS, Employee is willing to make his services available to Employer on the terms and subject to the conditions set forth herein;

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:.

1. Employment. For the Term (as defined in Section 2), Employee shall be employed as Vice President, Clinical Development. Employee will be located at the Employer's principal executive offices in Winston-Salem, North Carolina. Employee hereby accepts and agrees to such employment, subject to the general supervision of the Board of Directors of Employer (the "Board"), the Chief Executive Officer and President. Employee shall perform such duties and shall have such powers, authority and responsibilities as are customary for one holding the position of Vice President, Clinical Development of a business similar to Employer and shall additionally render such other services and duties as may be reasonably assigned to him from time to time by the Board, the Chief Executive Officer or the President.

2. Term of Employment. This Agreement shall commence as of June 1, 2001 (the "Effective Date") and continue until terminated as provided in Section 6 or Section 7 (such period, the "Term"). Any termination of this Agreement shall not affect the parties' continuing obligations under Section 5, which shall survive any such termination.

3. Compensation.

(a) For all services rendered by Employee to Employer under this Agreement, Employer shall pay to Employee, during the Term, a base annual salary of not less than $246,750, payable in arrears in accordance with the customary payroll practices of Employer. During the Term, Employee's annual base salary shall be reviewed and subject to increase in accordance with Employer's standard policies and procedures. Without limiting the generality of the foregoing, Employee's base annual salary shall be increased annually to the extent necessary to stay in line with the median base salary of employees of a similar level in comparable companies as described in the then current Radford Biotechnology Compensation Report.

(b) Employee shall be eligible to earn an annual bonus during the Term of up to 30% of Employee's annual base salary, or such higher amount as determined by the Board of Directors (or a compensation committee thereof). The eligibility for the target bonus shall be based upon the achievement of performance objectives mutually agreed upon by Employee and Employer and shall be payable within thirty (30) days of the end of each fiscal year.

(c) All amounts payable hereunder shall be subject to such deductions and withholdings as shall be required by law, if any.

(d) Employee shall be granted a relocation package attached hereto as Exhibit A.

(e) Employee shall be granted an incentive stock option to purchase 152,500 shares of Employer's common stock under the terms of Employer's 2000 Equity Incentive Plan and pursuant to a form of option agreement attached hereto as Exhibit B (the "Option Agreement"). The incentive option shall have a term of ten years and an exercise price of $0.68 per share and shall vest ratably over the twelve (12) quarters commencing twelve (12) months from the Effective Date. Any terms contained in this Agreement regarding the exercisability or vesting of such options, including without limitation this Section 3(e) and Section 7, shall be reflected in the terms of the Option Agreement. Employee shall also be eligible to receive additional awards thereunder in the discretion of the Board (or a compensation committee thereof).

(f) Employee shall also be entitled to holidays, sick leave and other time off and to participate in those life, health or other insurance plans and other employee pension and welfare benefit programs, plans, practices and benefits generally made available from time to time to all employees of Employer; provided that nothing herein shall obligate Employer to continue any of such benefits for Employee if discontinued for other employees. Without limiting the foregoing, Employee shall be entitled to paid vacation during each fiscal year of the term of twenty (20) days.

4. Reimbursement of Expenses. Employer shall pay or reimburse Employee for all reasonable travel and other expenses incurred by Employee in performing his obligations under this Agreement and also, to the extent consistent with Employer's policy, for any dues and costs of appropriate professional organization and continuing professional education, in each case subject to such reasonable documentation and substantiation as Employer shall require.

5. Covenants of Employee.

(a) Covenant Not to Compete. Employee covenants that during the "Noncompetition Period" (as defined in Section 5(g)) and within the "Noncompetition Area" (as defined in Section 5(h)), he shall not, directly or indirectly, as principal, agent, officer, director, shareholder, member, employee, consultant or trustee, or through the agency of any person, firm, corporation, partnership, limited liability company, association or other entity (collectively, "Entity"), engage in the "Business" (as defined in Section 5(i)). Without limiting the generality of the foregoing, Employee agrees that during the Noncompetition Period and within the Noncompetition Area, he shall not be (i) the owner of the outstanding capital stock or other equity interests of any Entity (other than Employer or its affiliates) that, directly or indirectly, engages in the Business; or (ii) an officer, director, partner, manager, member, consultant or employee of any Entity that, directly or indirectly, engages in the Business; provided, that this Section 5(a) shall not prevent Employee from (A) being an employee of any area or division of any Entity to the extent that such area or division does not, directly or indirectly, engage in the Business or (B) beneficially owning less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market.

(b) Nondisclosure Covenant. The parties acknowledge that Employer and its affiliates are enterprises whose success is attributable largely to the ownership, use and development of certain valuable confidential and proprietary information (the "Proprietary Information"), and that Employee's employment with Employer will involve access to and work with such information. Employee acknowledges that his relationship with Employer is a confidential relationship, and agrees that (i) he shall keep and maintain the Proprietary Information in strictest confidence, and (ii) he shall not, either directly or indirectly, use any Proprietary Information for his own benefit, or divulge, disclose or communicate any Proprietary Information in any manner whatsoever to any person or Entity other than to employees or agents of Employer having a need to know such Proprietary Information to perform their responsibilities on behalf of Employer, and to other persons or Entities in the normal course of Employer's business. This nondisclosure obligation shall apply to all Proprietary Information, whether or not Employee participated in the development thereof. Upon termination of his employment with Employer for any reason, Employee will return to Employer all Proprietary Information in any medium and all other documents, data, materials or property of Employer (including any copies thereof) in his possession. For purposes of this Agreement, the term "Proprietary Information" shall include any and all proprietary information related to the business of Employer and its affiliates and stockholders, or to any of their products, services, sales or operations, which is not generally known to the public, specifically including (but without limitation): trade secrets, processes, formulae, compounds and properties thereof, data, files, research results, computer programs and related source codes and object codes, improvements, inventions, techniques, marketing plans, strategies, forecasts, copyrightable material, suppliers, methods and manner of operations; information relating to the identity, needs and location of all past, present and prospective customers; and information with respect to the internal affairs of Employer and its affiliates. Such Proprietary Information may or may not contain legends or other written notice that it is of a confidential or proprietary nature. The parties stipulate that, as between them, the above-described matters are important and confidential and gravely affect the successful conduct of the business of Employer and its affiliates and that any breach of the terms of this Section 5(b) shall be a material breach of this Agreement.

(c) Nonsolicitation Covenant. Employee covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, call upon any of the customers or clients of Employer (or potential customers or clients whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during his employment with Employer) for the purpose of soliciting or providing any product or service similar to that provided by Employer, nor will he, in any way, directly or indirectly, on behalf of himself or any Entity solicit, divert or take away, or attempt to solicit, divert, or take away any of the customers, clients, business or patrons of Employer (or potential customers or clients whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during his employment with Employer). Employee further covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, solicit, induce or encourage any person to leave the employ of Employer.

(d) Inventions. All inventions, designs, formulae, processes, discoveries, drawings, improvements and developments made by Employee, either solely or in collaboration with others, during his employment with Employer, whether or not during working hours, and relating to any methods, apparatus, products, compounds, services or deliverables which are made, furnished, sold, leased, used or developed by Employer or its affiliates or which pertain to the Business (the "Developments") shall become and remain the sole property of Employer. Employee shall disclose promptly in writing to Employer all such Developments. Employee acknowledges and agrees that all Developments shall be deemed "works made for hire" within the meaning of the United States Copyright Act, as amended. If, for any reason, such Developments are not deemed works made for hire, Employee hereby assigns to Employer all of his right, title and interest (including, but not limited to, copyright and all rights of inventorship) in and to such Developments. At the request and expense of Employer, whether during or after employment with Employer, Employee shall make, execute and deliver all application papers, assignments or instruments, and perform or cause to be performed such other lawful acts as Employer may deem necessary or desirable in making or prosecuting applications, domestic or foreign, for patents (including reissues, continuations and extensions thereof) and copyrights related to such Developments or in vesting in Employer full legal title to such Developments. Employee shall assist and cooperate with Employer or its representatives in any controversy or legal proceeding relating to such Developments, or to any patents, copyrights or trade secrets with respect thereto. If for any reason Employee refuses or is unable to assist Employer in obtaining or enforcing its rights with respect to such Developments, he hereby irrevocably designates and appoints Employer and its duly authorized agents as his agents and attorneys-in-fact to execute and file any documents and to do all other lawful acts necessary to protect Employer's rights in the Developments. Employee expressly acknowledges that the special foregoing power of attorney is coupled with an interest and is therefore irrevocable and shall survive (i) his death or incompetency, (ii) the termination of his employment with Employer and (iii) the termination of this Agreement.

(e) Independent Covenants. Each of the covenants on the part of Employee contained in Sections 5(a), (b), (c) and (d) of this Agreement shall be construed as an agreement independent of each other such covenant. The existence of any claim or cause of action of Employee against Employer, whether predicated on this Agreement or otherwise, shall not constitute a defense to the enforcement by Employer of any such covenant.

(f) Reasonableness; Injunction. Employee acknowledges that his covenants contained in Section 5 of this Agreement are reasonably necessary for the protection of

Employer and its affiliates and their businesses, and that such covenants are reasonably limited with respect to the activities prohibited, the duration thereof, the geographic area thereof, the scope thereof and the effect thereof on Employee and the general public. Employee further acknowledges that violation of the covenants would immeasurably and irreparably damage Employer and its affiliates, and by reason thereof Employee agrees that for violation or threatened violation of any of the provisions of this Agreement, Employer shall, in addition to any other rights and remedies available to it, at law or otherwise, be entitled to an injunction to be issued by any court of competent jurisdiction enjoining and restraining Employee from committing any violation or threatened violation of this Agreement. Employee consents to the issuance of such injunction. Furthermore, Employer shall, in addition to any other rights or remedies available to it, at law or otherwise, be entitled to reimbursement of court costs, attorneys' fees and other expenses incurred as a result of a breach of this Agreement. Employee agrees to reimburse Employer for such expenses promptly following a final determination that he has breached this Agreement.

(g) Noncompetition Period. "Noncompetition Period" shall mean the period commencing on the Effective Date and continuing until nine (9) months following termination of this Agreement.

(h) Noncompetition Area. The "Noncompetition Area" shall consist of the entire world.

(i) Business. For the purposes of this Agreement, the "Business" shall mean the business of developing, manufacturing, marketing or selling therapeutic products that use synthetic nicotinic cholinergic compounds.

6. Disability. Upon the "disability" of Employee, this Agreement may be terminated by action of the Board upon 30 days prior written notice (the "Disability Notice"), such termination to become effective only if such disability continues. If, prior to the effective time of the Disability Notice, Employee shall recover from such disability and return to the full-time active discharge of his duties, then the Disability Notice shall be of no further force and effect and Employee's employment shall continue as if the same had been uninterrupted. If Employee shall not so recover from his disability and return to his duties, then his services shall terminate at the effective time of the Disability Notice with the same force and effect as if that date had been the end of the Term originally provided for hereunder. Such termination shall not prejudice any benefits payable to Employee that are fully vested as of the date of such termination. Prior to the effective time of the Disability Notice, Employee shall continue to earn all compensation to which Employee would have been entitled as if he had not been disabled, such compensation to be paid at the time, in the amounts, and in the manner provided in Section 3(a). A "disability" of Employee shall be deemed to exist at all times that Employee is considered by the insurance Employer which has issued any policy of disability insurance owned by Employer or for which premiums are paid by Employer (the "Employer Policy") to be totally disabled under the terms of such policy. In the event there is no Employer Policy, "disability" shall mean the inability, by reason of physical or mental incapacity, impairment or infirmity, of Employee to perform, upon request, his regular duties required herein for six consecutive

months, and the determination of the existence or nonexistence of disability shall be made by a medical doctor who is licensed to practice medicine in the State of North Carolina mutually acceptable to the Board and to Employee (or, if Employee is incapacitated, his spouse).

7. Termination.

(a) If Employee shall die during the Term, this Agreement and the employment relationship hereunder will automatically terminate on the date of death, which date shall be the last day of the Term; provided that such termination shall not prejudice any benefits payable to Employee or Employee's beneficiaries that are fully vested as of the date of death.

(b) Employer may terminate Employee's employment under this Agreement at any time with or without Just Cause. Any termination without Just Cause shall be effective only on thirty (30) days prior written notice to Employee. Any termination with Just Cause shall be effective immediately or at such other time set by the Board. "Just Cause" shall mean (i) Employee's willful and material breach of this Agreement and his continued failure to cure such breach to the reasonable satisfaction of the Board within thirty (30) days following written notice of such breach to Employee from the Board; (ii) Employee's conviction of, or entry of a plea of guilty or nolo contendere to a felony or a misdemeanor involving moral turpitude, (iii) Employee's willful commission of an act of fraud, breach of trust, or dishonesty including, without limitation, embezzlement, that results in material damage or harm to the business, financial condition or assets of Employer; or (iv) Employee's intentional damage or destruction of substantial property of Employer. Just Cause shall be determined by the Board in its reasonable discretion and the particulars of any determination shall be provided to Employee in writing. At any time within ninety (90) days of receipt by Employee in writing of such determination, Employee may object to such determination in writing and submit the determination to arbitration in accordance with Section 9(j). If such determination is overturned in arbitration, Employee will be treated as having been terminated without Just Cause and shall be entitled to the benefits of Section 7(d).

(c) Employee may voluntarily terminate his employment with Employer on thirty (30) days prior written notice to Employer.

(d) Upon any termination pursuant to this Section 7, Employee shall be entitled to receive a lump sum equal to any base salary, target bonus and other compensation earned and due but not yet paid through the effective date of termination. In addition, if this Agreement and Employee's employment hereunder is terminated by (i) Employer (or its successor) other than for Just Cause, or (ii) Employee for Good Reason, Employee shall be entitled to the following:

(A) severance, payable monthly, equal to Employee's then current base salary for nine (9) months following such termination or, if shorter, until such time as Employee secures other employment (the "Severance Period");

(B) six (6) months acceleration of unvested stock options to purchase capital stock or restricted stock of the Employer held by Employee;

(C) the health care (including medical and dental) and life insurance benefits coverage provided to Employee at his date of termination shall be continued at the same level and in the same manner as if his employment had not terminated (subject to the customary changes in such coverages if Employee reaches age 65 or similar events), for the Severance Period, followed by COBRA election rights. Any additional coverages Employee had at termination, including dependent coverage, will also be continued for such period on the same terms. Any costs Employee was paying for such coverages at the time of termination shall continue to be paid by Employee. If the terms of any benefit plan referred to in this section do not permit continued participation by Employee, then Employer will arrange for other coverage providing substantially similar benefits at the same contribution level of Employee, and

(D) outplacement counseling services selected by Employee, up to a maximum of $10,000.

(e) If Employer (or its successor) terminates Employee's employment for Just Cause, Employee shall forfeit any unexercised vested stock options at the date of termination. If Employee terminates his employment or if Employer (or its successor) terminates Employee's employment without Just Cause, Employee shall have ninety (90) days from the date of termination to exercise any vested options.

(f) For purposes hereof, Good Reason" shall mean the occurrence of any of the following events without Employee's express written consent:

(A) the breach by Employer (or any successor entity) of any material provision of this Agreement;

(B) any purported termination of the employment of Employee by Employer (or any successor entity) which is not effected in accordance with this Agreement;

(C) any failure of the Employer (or any successor entity) to pay Employee and amounts of base salary or bonus compensation that have become due and payable to Employee within thirty (30) days after Employee has given Employer (or any successor entity) notice of demand therefor.

(g) Except as otherwise provided in this Section 7, upon termination of this Agreement for any reason, Employee shall not be entitled to any form of severance benefits, including benefits otherwise payable under any of Employer's regular severance plans or policies, or any other payment whatsoever. Employee agrees that the payments and benefits provided hereunder, subject to the terms and conditions hereof shall be in full satisfaction of any rights which he might otherwise have or claim by operation of law, by implied contract or otherwise, except for rights which he may have under any employee benefit plan of Employer.

8. Best Efforts of Employee. Employee agrees that he will at all times faithfully, industriously and to the best of his ability, experience and talents perform all the duties that may be required of him pursuant to the express and implicit terms hereof, to the reasonable satisfaction of Employer, commensurate with his position. Such duties shall be rendered at such place as Employer designates and employee acknowledges that he may be required to travel as shall reasonably be required to promote the business of Employer. To the extent reasonably required by the duties assigned to him, Employee shall devote substantially all his time, attention, knowledge and skills to the business and interest of Employer and shall be entitled to all the benefits, profits and other issue arising from or incident to all work, service and advice of Employee. During the Term, Employee shall not be interested, directly or indirectly, in any manner as partner, manager, officer, director, shareholder, member, adviser, consultant, employee or in any other capacity in any other business; provided, that nothing herein contained shall be deemed to prevent or limit the right of Employee to beneficially own less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market as long as such passive investment does not interfere with or conflict with the performance of services to be rendered hereunder.

9. Miscellaneous.

(a) This Agreement shall be governed by and construed in accordance with the laws of the State of North Carolina without regard to conflicts of law principles thereof.

(b) This Agreement constitutes the entire Agreement between Employee and Employer with respect to the subject matter hereof, and supersedes in their entirety any and all prior oral or written agreements, understandings or arrangements between Employee and Employer or any of its affiliates relating to the terms of Employee's employment by Employer, and all such agreements, understandings and arrangements are hereby terminated and are of no force and effect. Employee hereby expressly disclaims any rights under any such agreements, understandings and arrangements. This Agreement may not be amended or terminated except by an agreement in writing signed by both parties.

(c) This Agreement may be executed in two or more counterparts, each of which shall be deemed and original and all of which, taken together, shall constitute one and the same instrument.

(d) Any notice or other communication required or permitted under this Agreement shall be effective only if it is in writing and delivered in person or by nationally recognized overnight courier service or deposited in the mails, postage prepaid, return receipt requested, addressed as follows:

To Employer:

Targacept, Inc.
Bowman Gray Technical Center
950 Reynolds Boulevard
Winston-Salem, North Carolina 27105
Attn: President

To Employee:

Dr. Geoffrey C. Dunbar
3 Lochwood at The River Highland
Cromwell, CT 06416

Notices given in person or by overnight courier service shall be deemed given when delivered in person or the day after delivery to the courier addressed to the address required by this Section 9(d), and notices given by mail shall be deemed given three days after deposit in the mails. Any party hereto may designate by written notice to the other party in accordance herewith any other address to which notices addressed to him shall be sent.

(e) The provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity or enforceability of the other provisions hereof. It is understood and agreed that no failure or delay by Employer or Employee in exercising any right, power or privilege under this Agreement shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

(f) This Agreement may not be assigned by Employee without the written consent of Employer. This Agreement shall be binding on any successors or assigns of either party hereto.

(g) For purposes of this Agreement, employment of Employee by any affiliate of Employer shall be deemed to be employment by Employer hereunder, and a transfer of employment of Employee from one such affiliate to another shall not be deemed to be a termination of employment of Employee by Employer or a cessation of the Term, it being the intention of the parties hereto that employment of Employee by any affiliate of Employer shall be treated as employment by Employer and that the provisions of this Agreement shall continue to be fully applicable following any such transfer.

(h) The respective rights and obligations of the parties hereunder shall survive any termination of the Term or Employee's employment with Employer to the extent necessary to preserve such rights and obligations for their stated durations.

(i) In the event that it shall become necessary for either party to retain the services of an attorney to enforce any terms under this Agreement, the prevailing party, in addition to all other rights and remedies hereunder or as provided by law, shall be entitled to reasonable attorneys' fees and costs of suit. Employer shall reimburse Employee for the reasonable fees and expenses of counsel to Employee for the original negotiation of this Agreement.

(j) Any controversy or claim arising out of or relating to this Agreement shall be settled by arbitration in accordance with Commercial Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitration panel, which shall consist of three members, may be entered in any court having jurisdiction. Any arbitration shall be held in Winston-Salem, North Carolina, unless otherwise agreed in writing by the parties. One arbitrator shall be selected by Employee, one arbitrator shall be selected by Employer, and the third arbitrator shall be selected by the two arbitrators selected by Employee and Employer.

[THE NEXT PAGE IS THE SIGNATURE PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
Name: J. Donald deBethizy, Ph.D.
Title: President and CEO

EMPLOYEE:

/s/ Geoffrey C. Dunbar
Dr. Geoffrey C. Dunbar

7 May 2001

EXHIBIT A

RELOCATION PACKAGE

Net Signing Bonus	**$50,000**
Lump Sum Moving	**$10,000**
Moving Expenses	**100% of Moving Company (Estimated at $12,000)**
Closing Costs	**Normal Costs associated with a closing but excludes points (homeowners insurance, pro-rata taxes and interest)**
Temporary Living	**6 Months up to $15,000 maximum temporary living expenses**

<u>EXHIBIT B</u>

OPTION AGREEMENT

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
(Geoffrey Dunbar)

Date Option granted: June 1, 2001.
Date Option expires: June 1, 2011.
Number of shares subject to Option: 152,500 shares.
Option price (per share): $0.68.
Class of Option: Incentive.

Date Installment First Exercisable	Number of Shares in Installment
June 30, 2001	38,125.00
September 30, 2001	9,531.25
December 31, 2001	9,531.25
March 31, 2002	9,531.25
June 30, 2002	9,531.25
September 30, 2002	9,531.25
December 31, 2002	9,531.25
March 31, 2003	9,531.25
June 30, 2003	9,531.25
September 30, 2003	9,531.25
December 31, 2003	9,531.25
March 31, 2004	9,531.25
June 30, 2004	9,531.25

Exhibit 10.11

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT ("Agreement") is made as of February 8, 2002 by and between TARGACEPT, INC., a Delaware corporation ("Employer"), and Alan Musso, an individual resident of North Carolina ("Employee");

RECITALS:

WHEREAS, Employer considers the availability of Employee's services to be important to the management and conduct of Employer's business and desires to secure the continued availability of Employee's services; and

WHEREAS, Employee is willing to make his services available to Employer on the terms and subject to the conditions set forth herein;

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. Employment. For the Term (as defined in Section 2), Employee shall be employed as Vice President and Chief Financial Officer. Employee will be located at the Employer's principal executive offices in Winston-Salem, North Carolina. Employee hereby accepts and agrees to such employment, subject to the general supervision of the Board of Directors of Employer (the "Board"), the Chief Executive Officer and President. Employee shall perform such duties and shall have such powers, authority and responsibilities as are customary for one holding the position of Chief Financial Officer of a business similar to Employer and shall additionally render such other services and duties as may be reasonably assigned to him from time to time by the Board, the Chief Executive Officer or the President.

2. Term of Employment. This Agreement shall commence as of February 25, 2002 (the "Effective Date") and continue until terminated as provided in Section 6 or Section 7 (such period, the "Term"). Any termination of this Agreement shall not affect the parties' continuing obligations under Section 5, which shall survive any such termination.

3. Compensation.

(a) For all services rendered by Employee to Employer under this Agreement, Employer shall pay to Employee, during the Term, a base annual salary of not less than $180,000, payable in arrears in accordance with the customary payroll practices of Employer. During the Term, Employee's annual base salary shall be reviewed and subject to increase in accordance with Employer's standard policies and procedures. Without limiting the generality of the foregoing, Employee's base annual salary shall be increased annually to the extent necessary to stay in line with the median base salary of employees of a similar level in comparable companies as described in the then current Radford Biotechnology Compensation Report.

(b) Employee shall be eligible to earn an annual bonus during the Term of up to 25% of Employee's annual base salary, or such higher amount as determined by the Board of Directors (or a compensation committee thereof). The eligibility for the target bonus shall be based upon the achievement of performance objectives mutually agreed upon by Employee and Employer and shall be payable within thirty (45) days of the end of each fiscal year.

(c) All amounts payable hereunder shall be subject to such deductions and withholdings as shall be required by law, if any.

(d) Employee shall be granted a relocation package attached hereto as Exhibit A.

(e) Employee shall be granted an incentive stock option to purchase 165,000 shares of Employer's common stock under the terms of Employer's 2000 Equity Incentive Plan and pursuant to a form of option agreement attached hereto as Exhibit B (the "Option Agreement"). The incentive option shall have a term often years and an exercise price of $0.68 per share and shall vest ratably over the twelve (12) quarters commencing twelve (12) months from the Effective Date. Any terms contained in this Agreement regarding the exercisability or vesting of such options, including without limitation this Section 3(e) and Section 7, shall be reflected in the terms of the Option Agreement. Employee shall also be eligible to receive additional awards thereunder in the discretion of the Board (or a compensation committee thereof).

(f) Employee shall also be entitled to holidays, sick leave and other time off and to participate in those life, health or other insurance plans and other employee pension and welfare benefit programs, plans, practices and benefits generally made available from time to time to all employees of Employer; provided that nothing herein shall obligate Employer to continue any of such benefits for Employee if discontinued for other employees. Without limiting the foregoing, Employee shall be entitled to paid vacation during each fiscal year of the term of twenty (20) days.

4. Reimbursement of Expenses. Employer shall pay or reimburse Employee for all reasonable travel and other expenses incurred by Employee in performing his obligations under this Agreement and also, to the extent consistent with Employer's policy, for any dues and costs of appropriate professional organization and continuing professional education, in each case subject to such reasonable documentation and substantiation as Employer shall require.

5. Covenants of Employee.

(a) Covenant Not to Compete. Employee covenants that during the "Noncompetition Period" (as defined in Section 5(g)) and within the "Noncompetition Area" (as defined in Section 5(h)), he shall not, directly or indirectly, as principal, agent, officer, director, shareholder, member, employee, consultant or trustee, or through the agency of any person, firm, corporation, partnership, limited liability company, association or other entity (collectively, "Entity"), engage in the "Business" (as defined in Section 5(i)). Without limiting the generality of the foregoing, Employee agrees that during the Noncompetition Period and within the Noncompetition Area, he shall not be (i) the owner of the outstanding capital stock or other equity interests of any Entity (other than Employer or its affiliates) that, directly or indirectly, engages in the Business; or (ii) an officer, director, partner, manager, member, consultant or employee of any Entity that, directly or indirectly, engages in the Business; provided, that this Section 5 (a) shall not prevent Employee from (A) being an employee of any area or division of any Entity to the extent that such area or division does not, directly or indirectly, engage in the Business or (B) beneficially owning less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market.

(b) Nondisclosure Covenant. The parties acknowledge that Employer and its affiliates are enterprises whose success is attributable largely to the ownership, use and development of certain valuable confidential and proprietary information (the "Proprietary Information"), and that Employee's employment with Employer will involve access to and work with such information. Employee acknowledges that his relationship with Employer is a confidential relationship, and agrees that (i) he shall keep and maintain the Proprietary Information in strictest confidence, and (ii) he shall not, either directly or indirectly, use any Proprietary Information for his own benefit, or divulge, disclose or communicate any Proprietary Information in any manner whatsoever to any person or Entity other than to employees or agents of Employer having a need to know such Proprietary Information to perform their responsibilities on behalf of Employer, and to other persons or Entities in the normal course of Employer's business. This nondisclosure obligation shall apply to all Proprietary Information, whether or not Employee participated in the development thereof. Upon termination of his employment with Employer for any reason, Employee will return to Employer all Proprietary Information in any medium and all other documents, data, materials or property of Employer (including any copies thereof) in his possession. For purposes of this Agreement, the term "Proprietary Information" shall include any and all proprietary information related to the business of Employer and its affiliates and stockholders, or to any of their products, services, sales or operations, which is not generally known to the public, specifically including (but without limitation): trade secrets, processes, formulae, compounds and properties thereof, data, files, research results, computer programs and related source codes and object codes, improvements, inventions, techniques, marketing plans, strategies, forecasts, copyrightable material, suppliers, methods and manner of operations; information relating to the identity, needs and location of all past, present and prospective customers; and information with respect to the internal affairs of Employer and its affiliates. Such Proprietary Information may or may not contain legends or other written notice that it is of a confidential or proprietary nature. The parties stipulate that, as between them, the above-described matters are important and confidential and gravely affect the successful conduct of the business of Employer and its affiliates and that any breach of the terms of this Section 5(b) shall be a material breach of this Agreement.

(c) Nonsolicitation Covenant. Employee covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, call upon any of the customers or clients of Employer (or potential customers or clients whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during his employment with Employer) for the purpose of soliciting or providing any product or service similar to that provided by Employer, nor will he, in any way, directly or indirectly, on behalf of himself or any Entity solicit, divert or take away, or attempt to solicit, divert, or take away any of the customers, clients, business or patrons of Employer (or potential customers or clients whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during his employment with Employer). Employee further covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, solicit, induce or encourage any person to leave the employ of Employer.

(d) Inventions. All inventions, designs, formulae, processes, discoveries, drawings, improvements and developments made by Employee, either solely or in collaboration with others, during his employment with Employer, whether or not during working hours, and relating to any methods, apparatus, products, compounds, services or deliverables which are made, furnished, sold, leased, used or developed by Employer or its affiliates or which pertain to the Business (the "Developments") shall become and remain the sole property of Employer. Employee shall disclose promptly in writing to Employer all such Developments. Employee acknowledges and agrees that all Developments shall be deemed "works made for hire" within the meaning of the United States Copyright Act, as amended. If, for any reason, such Developments are not deemed works made for hire, Employee hereby assigns to Employer all of his right, title and interest (including, but not limited to, copyright and all rights of inventorship) in and to such Developments. At the request and expense of Employer, whether during or after employment with Employer, Employee shall make, execute and deliver all application papers, assignments or instruments; and perform or cause to be performed such other lawful acts as Employer may deem necessary or desirable in making or prosecuting applications, domestic or foreign, for patents (including reissues, continuations and extensions thereof) and copyrights related to such Developments or in vesting in Employer full legal title to such Developments. Employee shall assist and cooperate with Employer or its representatives in any controversy or legal proceeding relating to such Developments, or to any patents, copyrights or trade secrets with respect thereto. If for any reason Employee refuses or is unable to assist Employer in obtaining or enforcing its rights with respect to such Developments, he hereby irrevocably designates and appoints Employer and its duly authorized agents as his agents and attorneys-in-fact to execute and file any documents and to do all other lawful acts necessary to protect Employer's rights in the Developments. Employee expressly acknowledges that the special foregoing power of attorney is coupled with an interest and is therefore irrevocable and shall survive (i) his death or incompetency, (ii) the termination of his employment with Employer and (iii) the termination of this Agreement.

(e) Independent Covenants. Each of the covenants on the part of Employee contained in Sections 5(a), (b), (c) and (d) of this Agreement shall be construed as an agreement independent of each other such covenant. The existence of any claim or cause of action of Employee against Employer, whether predicated on this Agreement or otherwise, shall not constitute a defense to the enforcement by Employer of any such covenant.

(f) Reasonableness; Injunction. Employee acknowledges that his covenants contained in Section 5 of this Agreement are reasonably necessary for the protection of

Employer and its affiliates and their businesses, and that such covenants are reasonably limited with respect to the activities prohibited, the duration thereof, the geographic area thereof, the scope thereof and the effect thereof on Employee and the general public. Employee further acknowledges that violation of the covenants would immeasurably and irreparably damage Employer and its affiliates, and by reason thereof Employee agrees that for violation or threatened violation of any of the provisions of this Agreement, Employer shall, in addition to any other rights and remedies available to it, at law or otherwise, be entitled to an injunction to be issued by any court of competent jurisdiction enjoining and restraining Employee from committing any violation or threatened violation of this Agreement. Employee consents to the issuance of such injunction. Furthermore, Employer shall, in addition to any other rights or remedies available to it, at law or otherwise, be entitled to reimbursement of court costs, attorneys' fees and other expenses incurred as a result of a breach of this Agreement. Employee agrees to reimburse Employer for such expenses promptly following a final determination that he has breached this Agreement.

(g) Noncompetition Period. "Noncompetition Period" shall mean the period commencing on the Effective Date and continuing until nine (9) months following termination of this Agreement.

(h) Noncompetition Area. The "Noncompetition Area" shall consist of the entire world.

(i) Business. For the purposes of this Agreement, the "Business" shall mean the business of developing, manufacturing, marketing or selling therapeutic products that use synthetic nicotinic cholinergic compounds.

6. Disability. Upon the "disability" of Employee, this Agreement may be terminated by action of the Board upon 30 days prior written notice (the "Disability Notice"), such termination to become effective only if such disability continues. If, prior to the effective time of the Disability Notice, Employee shall recover from such disability and return to the full-time active discharge of his duties, then the Disability Notice shall be of no further force and effect and Employee's employment shall continue as if the same had been uninterrupted. If Employee shall not so recover from his disability and return to his duties, then his services shall terminate at the effective time of the Disability Notice with the same force and effect as if that date had been the end of the Term originally provided for hereunder. Such termination shall not prejudice any benefits payable to Employee that are fully vested as of the date of such termination. Prior to the effective time of the Disability Notice, Employee shall continue to earn all compensation to which Employee would have been entitled as if he had not been disabled, such compensation to be paid at the time, in the amounts, and in the manner provided in Section 3(a). A "disability" of Employee shall be deemed to exist at all times that Employee is considered by the insurance Employer which has issued any policy of disability insurance owned by Employer or for which premiums are paid by Employer (the "Employer Policy") to be totally disabled under the terms of such policy. In the event there is no Employer Policy, "disability" shall mean the inability, by reason of physical or mental incapacity, impairment or infirmity, of Employee to perform, upon request, his regular duties required herein for six consecutive

months, and the determination of the existence or nonexistence of disability shall be made by a medical doctor who is licensed to practice medicine in the State of North Carolina mutually acceptable to the Board and to Employee (or, if Employee is incapacitated, his spouse).

7. Termination.

(a) If Employee shall die during the Term, this Agreement and the employment relationship hereunder will automatically terminate on the date of death, which date shall be the last day of the Term; provided that such termination shall not prejudice any benefits payable to Employee or Employee's beneficiaries that are fully vested as of the date of death.

(b) Employer may terminate Employee's employment under this Agreement at any time with or without Just Cause. Any termination without Just Cause shall be effective only on thirty (30) days prior written notice to Employee. Any termination with Just Cause shall be effective immediately or at such other time set by the Board. "Just Cause" shall mean (i) Employee's willful and material breach of this Agreement and his continued failure to cure such breach to the reasonable satisfaction of the Board within thirty (30) days following written notice of such breach to Employee from the Board; (ii) Employee's conviction of, or entry of a plea of guilty or nolo contendere to a felony or a misdemeanor involving moral turpitude, (iii) Employee's willful commission of an act of fraud, breach of trust, or dishonesty including, without limitation, embezzlement, that results in material damage or harm to the business, financial condition or assets of Employer; or (iv) Employee's intentional damage or destruction of substantial property of Employer. Just Cause shall be determined by the Board in its reasonable discretion and the particulars of any determination shall be provided to Employee in writing. At any time within ninety (90) days of receipt by Employee in writing of such determination, Employee may object to such determination in writing and submit the determination to arbitration in accordance with Section 9(j). If such determination is overturned in arbitration, Employee will be treated as having been terminated without Just Cause and shall be entitled to the benefits of Section 7(d).

(c) Employee may voluntarily terminate his employment with Employer on thirty (30) days prior written notice to Employer.

(d) Upon any termination pursuant to this Section 7, Employee shall be entitled to receive a lump sum equal to any base salary, target bonus and other compensation earned and due but not yet paid through the effective date of termination. In addition, if this Agreement and Employee's employment hereunder is terminated by (i) Employer (or its successor) other than for Just Cause, or (ii) Employee for Good Reason, Employee shall be entitled to the following:

(A) severance, payable monthly, equal to Employee's then current base salary for nine (9) months following such termination or, if shorter, until such time as Employee secures other employment (the "Severance Period");

(B) six (6) months acceleration of unvested stock options to purchase capital stock or restricted stock of the Employer held by Employee;

(C) the health care (including medical and dental) and life insurance benefits coverage provided to Employee at his date of termination shall be continued at the same level and in the same manner as if his employment had not terminated (subject to the customary changes in such coverages if Employee reaches age 65 or similar events), for the Severance Period, followed by COBRA election rights. Any additional coverages Employee had at termination, including dependent coverage, will also be continued for such period on the same terms. Any costs Employee was paying for such coverages at the time of termination shall continue to be paid by Employee. If the terms of any benefit plan referred to in this section do not permit continued participation by Employee, then Employer will arrange for other coverage providing substantially similar benefits at the same contribution level of Employee, and

(D) outplacement counseling services selected by Employee, up to a maximum of $ 10,000.

(e) If Employer (or its successor) terminates Employee's employment for Just Cause, Employee shall forfeit any unexercised vested stock options at the date of termination. If Employee terminates his employment or if Employer (or its successor) terminates Employee's employment without Just Cause, Employee shall have ninety (90) days from the date of termination to exercise any vested options.

(f) For purposes hereof, Good Reason shall mean the occurrence of any of the following events without Employee's express written consent:

(A) the breach by Employer (or any successor entity) of any material provision of this Agreement;

(B) any purported termination of the employment of Employee by Employer (or any successor entity) which is not effected in accordance with this Agreement;.

(C) any failure of the Employer (or any successor entity) to pay Employee and amounts of base salary or bonus compensation that have become due and payable to Employee within thirty (30) days after Employee has given Employer (or any successor entity) notice of demand therefor.

(g) Except as otherwise provided in this Section 7, upon termination of this Agreement for any reason, Employee shall not be entitled to any form of severance benefits, including benefits otherwise payable under any of Employer's regular severance plans or policies, or any other payment whatsoever. Employee agrees that the payments and benefits provided hereunder, subject to the terms and conditions hereof shall be in full satisfaction of any rights which he might otherwise have or claim by operation of law, by implied contract or otherwise, except for rights which he may have under any employee benefit plan of Employer.

8. Best Efforts of Employee. Employee agrees that he will at all times faithfully, industriously and to the best of his ability, experience and talents perform all the duties that may be required of him pursuant to the express and implicit terms hereof, to the reasonable satisfaction of Employer, commensurate with his position. Such duties shall be rendered at such place as Employer designates and employee acknowledges that he may be required to travel as shall reasonably be required to promote the business of Employer. To the extent reasonably required by the duties assigned to him, Employee shall devote substantially all his time, attention, knowledge and skills to the business and interest of Employer and shall be entitled to all the benefits, profits and other issue arising from or incident to all work, service and advice of Employee. During the Term, Employee shall not be interested, directly or indirectly, in any manner as partner, manager, officer, director, shareholder, member, adviser, consultant, employee or in any other capacity in any other business; provided, that nothing herein contained shall be deemed to prevent or limit the right of Employee to beneficially own less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market as long as such passive investment does not interfere with or conflict with the performance of services to be rendered hereunder.

9. Miscellaneous.

(a) This Agreement shall be governed by and construed in accordance with the laws of the State of North Carolina without regard to conflicts of law principles thereof.

(b) This Agreement constitutes the entire Agreement between Employee and Employer with respect to the subject matter hereof, and supersedes in their entirety any and all prior oral or written agreements, understandings or arrangements between Employee and Employer or any of its affiliates relating to the terms of Employee's employment by Employer, and all such agreements, understandings and arrangements are hereby terminated and are of no force and effect. Employee hereby expressly disclaims any rights under any such agreements, understandings and arrangements. This Agreement may not be amended or terminated except by an agreement in writing signed by both parties.

(c) This Agreement may be executed in two or more counterparts, each of which shall be deemed and original and all of which, taken together, shall constitute one and the same instrument.

(d) Any notice or other communication required or permitted under this Agreement shall be effective only if it is in writing and delivered in person or by nationally recognized overnight courier service or deposited in the mails, postage prepaid, return receipt requested, addressed as follows:

To Employer:

Targacept, Inc.
200 East First Street
Suite 300
Winston-Salem, North Carolina 27101
Attn: President

To Employee:

Alan Musso
110 Montauk Point Place
Cary, North Carolina 27513

Notices given in person or by overnight courier service shall be deemed given when delivered in person or the day after delivery to the courier addressed to the address required by this Section 9(d), and notices given by mail shall be deemed given three days after deposit in the mails. Any party hereto may designate by written notice to the other party in accordance herewith any other address to which notices addressed to him shall be sent.

(e) The provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity or enforceability of the other provisions hereof. It is understood and agreed that no failure or delay by Employer or Employee in exercising any right, power or privilege under this Agreement shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

(f) This Agreement may not be assigned by Employee without the written consent of Employer. This Agreement shall be binding on any successors or assigns of either party hereto.

(g) For purposes of this Agreement, employment of Employee by any affiliate of Employer shall be deemed to be employment by Employer hereunder, and a transfer of employment of Employee from one such affiliate to another shall not be deemed to be a termination of employment of Employee by Employer or a cessation of the Term, it being the intention of the parties hereto that employment of Employee by any affiliate of Employer shall be treated as employment by Employer and that the provisions of this Agreement shall continue to be fully applicable following any such transfer.

(h) The respective rights and obligations of the parties hereunder shall survive any termination of the Term or Employee’s employment with Employer to the extent necessary to preserve such rights and obligations for their stated durations.

(i) In the event that it shall become necessary for either party to retain the services of an attorney to enforce any terms under this Agreement, the prevailing party, in addition to all other rights and remedies hereunder or as provided by law, shall be entitled to reasonable attorneys' fees and costs of suit. Employer shall reimburse Employee for the reasonable fees and expenses of counsel to Employee for the original negotiation of this Agreement.

(j) Any controversy or claim arising out of or relating to this Agreement shall be settled by arbitration in accordance with Commercial Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitration panel, which shall consist of three members, may be entered in any court having jurisdiction. Any arbitration shall be held in Winston-Salem, North Carolina, unless otherwise agreed in writing by the parties. One arbitrator shall be selected by Employee, one arbitrator shall be selected by Employer, and the third arbitrator shall be selected by the two arbitrators selected by Employee and Employer.

[THE NEXT PAGE IS THE SIGNATURE PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
J. Donald deBethizy, Ph.D.
President and CEO

EMPLOYEE:

/s/ Alan Musso
Alan Musso

EXHIBIT A

RELOCATION PACKAGE

Lump Sum Moving	**$10,000**
Moving Expenses	**100% of Moving Company (Estimated at $9,000)**
Closing Costs	**Normal Costs associated with a closing but excludes points, homeowners insurance, pro-rata taxes and interest). This includes the sale of current residence and purchase of new residence.**
Temporary Housing	**Targacept, Inc. will provide temporary housing from the first date of employment through June 30,2002.**

Standard & Customary Benefits Package

- **Medical Insurance**
- **Dental Insurance**
- **6% 401(k) Match**
- **Life Insurance (2 times annual salary)**
- **Accidental Death Insurance**
- **Short-Term Disability**
- **Long-Term Disability**
- **11 Paid Holidays**
- **4 Weeks Vacation (paid at year end for any unused days)**

EXHIBIT B

OPTION AGREEMENT

2000 EQUITY INCENTIVE PLAN
OF
TARGACEPT, INC.

Stock Option Agreement
__________name

Date Option granted: _____________.
Date Option expires: _____________.
Number of shares subject to Option: 165,000 shares.
Option price (per share): $0.68.
Class of Option: Incentive.

Date Installment First Exercisable	Number of Shares in Installment
March 31, 2003	41,250.00
June 30, 2003	10,312.00
September 30, 2003	10,313.00
December 31, 2003	10,312.00
March 31, 2004	10,313.00
June 30, 2004	10,312.00
September 30, 2004	10,313.00
December 31, 2004	10,312.00
March 31, 2005	10,313.00
June 30, 2005	10,312.00
September 30, 2005	10,313.00
December 31, 2006	10,312.00
March 31, 2006	10,313.00

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT ("Agreement") is made as of September 1, 2003, by and between TARGACEPT, INC., a Delaware corporation ("Employer"), and Jeffrey P. Brennan, an individual resident of Connecticut ("Employee");

RECITALS:

WHEREAS, Employer considers the availability of Employee's services to be important to the management and conduct of Employer's business and desires to secure the continued availability of Employee's services; and

WHEREAS, Employee is willing to continue to make his services available to Employer on the terms and subject to the conditions set forth herein; and

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. Employment. For the Term (as defined in Section 2), Employee shall be employed as Vice President of Business Development and Commercialization. Employee will be located at the Employer's principal executive offices in Winston-Salem, North Carolina. Employee hereby accepts and agrees to such employment, subject to the general supervision of the President and Chief Executive Officer and the Board of Directors of Employer (the "Board"). Employee shall perform such duties and shall have such powers, authority and responsibilities as are customary for one holding the position of Vice President of Business Development and Commercialization of a business similar to Employer and shall additionally render such other services and duties as may be reasonably assigned to him from time to time by the President and Chief Executive Officer and/or the Board.

2. Term of Employment. This Agreement shall commence as of September 1, 2003 (the "Effective Date") and shall remain in effect until December 31, 2007, unless earlier terminated as provided in Section 6 or Section 7 (such period, the "Term"). Any termination of this Agreement shall not affect the parties' continuing obligations under Section 5, which shall survive any such termination consistent with its terms.

3. Compensation.

(a) For all services rendered by Employee to Employer under this Agreement, Employer shall pay to Employee, during the Term, a base annual salary of not less than $225,000, payable in arrears in accordance with the customary payroll practices of Employer. During the Term, Employee's annual base salary shall be reviewed and subject to increase in accordance with Employer's standard policies and procedures. Without limiting the generality of the foregoing, Employee's base salary shall be increased annually to the extent necessary to stay in line with the median base salary of employees of a similar level in comparable companies as described in the then current Radford Biotechnology Compensation Report.

(b) Employee shall be eligible to earn an annual bonus during the Term of up to 30% of Employee's annual base salary, or such higher amount as determined by the Board of Directors (or a compensation committee thereof). The eligibility for the target bonus shall be based upon the achievement of performance objectives mutually agreed upon by Employee and Employer and shall be payable within thirty (30) days of the end of each fiscal year.

(c) All amounts payable hereunder shall be subject to such deductions and withholdings as shall be required by law, if any.

(d) Employee shall be granted a relocation package, the details of which are shown on Exhibit A attached hereto.

(e) Employee shall be granted an incentive stock option to purchase 160,000 shares of Employer's common stock under the terms of Employer's 2000 Equity Incentive Plan (the "Plan") and pursuant to a form of option agreement attached hereto as Exhibit B (the "Option Agreement"). The incentive option shall have a term of ten years and an exercise price of $0.68 per share and shall vest as follows: 25% after 90-day initial employment probationary period, 25% ratably over the next 12 quarters, and 50% ratably over the twelve (12) quarters commencing nine (9) months from the Effective Date. Any terms contained in this Agreement regarding the exercisability or vesting of such options, including without limitation this Section 3(e) and Section 7, shall be reflected in the terms of the Option Agreement. Employee shall also be eligible to receive additional awards thereunder at the discretion of the Board (or a compensation committee thereof).

(f) Employee shall also be entitled to holidays, sick leave and other time off and to participate in those life, health or other insurance plans and other employee pension and welfare benefit programs, plans, practices and benefits generally made available from time to time to all employees of Employer; provided that nothing herein shall obligate Employer to continue any of such benefits for Employee if discontinued for other employees. Without limiting the foregoing, Employee shall be entitled to paid vacation during each fiscal year of the term of twenty (20) days.

4. Reimbursement of Expenses. Employer shall pay or reimburse Employee for all reasonable travel and other expenses incurred by Employee in performing his obligations under this Agreement and also, to the extent consistent with Employer's policy, for any dues and costs of appropriate professional organization and continuing professional education, in each case subject to such reasonable documentation and substantiation as Employer may require.

5. Covenants of Employee.

(a) Covenant Not to Compete. Employee covenants that during the "Noncompetition Period" ((as defined in Section 5(h)) and within the "Noncompetition Area" (as defined in Section 5(i)), he shall not, directly or indirectly, as principal, agent, officer, director, shareholder, member, employee, consultant or trustee, or through the agency of any person, firm, corporation, partnership, limited liability company, association or other entity (collectively, "Entity"), engage in the "Business" (as defined in Section 5(j)). Without limiting the generality of the foregoing, Employee agrees that during the Noncompetition Period and within the Noncompetition Area, he shall not be (i) the owner of the outstanding capital stock or other equity interests of any Entity (other than Employer or its affiliates) that, directly or indirectly, engages in the Business; or (ii) an officer, director, partner, manager, member, consultant or employee of any Entity that, directly or indirectly, engages in the Business; provided, that this Section 5(a) shall not prevent Employee from (A) being an employee of any area or division of any Entity to the extent that such area or division does not, directly or indirectly, engage in the Business or (B) beneficially owning less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market.

(b) Nondisclosure Covenant. The parties acknowledge that Employer and its affiliates are enterprises whose success is attributable largely to the ownership, use and development of certain valuable confidential and proprietary information (the "Proprietary Information"), and that Employee's employment with Employer will involve access to and work with such information. Employee acknowledges that his relationship with Employer is a confidential relationship, and agrees that (i) he shall not, either directly or indirectly, use any Proprietary Information for his own benefit, or divulge, disclose or communicate any Proprietary Information in any manner whatsoever to any person or Entity other than to employees or agents of Employer having a need to know such Proprietary Information to perform their responsibilities on behalf of Employer, and to other person or Entities in the normal course of Employer's business. This nondisclosure obligation shall apply to all Proprietary Information, whether or not Employee participated in the development thereof. Upon termination of his employment with Employer for any reason, Employee will return to Employer all Proprietary Information in any medium and all other documents, data, materials or property of Employer (including any copies thereof) in his possession. For purposes of this Agreement, the term "Proprietary Information" shall include any and all proprietary information related to the business of Employer and its affiliates and stockholders, or to any of their products, services, sales or operations, which is not generally known to the public, specifically including (but without limitation): trade secrets, processes, formulae, compounds and properties thereof, data, files, research results, computer programs and related source codes and object codes, improvements, inventions, techniques, marketing plans, strategies, forecasts, copyrightable material, suppliers, methods and manner of operations; information relating to the identity, needs and location of all past, present and prospective customers; and information with respect to the internal affairs of Employer and its affiliates. Such Proprietary Information may or may not contain legends or other written notice that it is of a confidential or proprietary nature. The parties stipulate that, as between them, the above-described matters are important and confidential and gravely affect the successful conduct of the business of Employer and its affiliates and that any breach of the terms of this Section 5(b) shall be a material breach of this Agreement.

(c) Nonsolicitation Covenant. Employee covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, call upon any of the customers or clients of Employer (or potential customers or clients whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during this employment with Employer) for the purpose of soliciting or providing any product or service similar to that provided by Employer, nor will he, in any way, directly or indirectly, on behalf of himself or any Entity solicit, divert or take away, or attempt to solicit, divert, or take away any of the customers, clients, business or patrons of Employer (or potential customers or clients) whose business Employee solicited on behalf of Employer or about whose needs Employee gained information during this employment with Employer). Employee further covenants that during the Noncompetition Period he shall not, directly or indirectly, on behalf of himself or any Entity, solicit, induce or encourage any person to leave the employ of Employer.

(d) Inventions. All inventions, designs, formulae, processes, discoveries, drawings, improvements and developments made by Employee, either solely or in collaboration with others, during his employment with Employer, whether or not during working hours, and relating to any methods, apparatus, products, compounds, services or deliverables which are made, furnished, sold, leased, used or developed by Employer or its affiliates or which pertain to the Business (the “Developments”) shall become and remain the sole property of Employer. Employee shall disclose promptly in writing to Employer all such Developments. Employee acknowledges and agrees that all Developments shall be deemed “works made for hire” within the meaning of the United States Copyright Act, as amended. If, for any reason, such Developments are not deemed works made for hire, Employee hereby assigns to Employer all of his right, title and interest (including, but not limited to, copyright and all rights of inventorship) in and to such Developments. At the request and expense of Employer, whether during or after employment with Employer, Employee shall make, execute and deliver all application papers, assignments or instruments, and perform or cause to be performed such other lawful acts as Employer may deem necessary or desirable in making or prosecuting applications, domestic or foreign, for patents (including reissues, continuations and extensions thereof) and copyrights related to such Developments or in vesting in Employer full legal title to such Developments. Employee shall assist and cooperate with Employer or its representatives in any controversy or legal proceeding relating to such Developments, or to any patents, copyrights or trade secrets with respect thereto. If for any reason Employee refuses or is unable to assist Employer in obtaining or enforcing its rights with respect to such Developments, he hereby irrevocably designates and appoints Employer and its duly authorized agents as his agents and attorneys-in- fact to execute and file any documents and to do all other lawful acts necessary to protect Employer’s rights in the Developments. Employee expressly acknowledges that the special foregoing power of attorney is coupled with an interest and is therefore irrevocable and shall survive (i) his death or incompetency, (ii) the termination of his employment with Employer and (iii) the termination of this Agreement.

(e) Loyalty and Best Efforts. Employee agrees to be a loyal employee and that he will at all times faithfully, industriously and to the best of his ability, experience and talents perform all the duties that may be required of him pursuant to the express and implicit terms hereof, to the reasonable satisfaction of Employer, commensurate with his position, and to comply with all rules, regulations, and policies established or issued by Employer. Such duties shall be rendered at such place as Employer designates and Employee acknowledges that he may be required to travel as shall reasonably be required to promote the business of Employer. To the extent reasonably required by the duties assigned to him, Employee shall devote substantially all his time, attention, knowledge and skills to the business and interest of Employer and Employer shall be entitled to all the benefits, profits and other issue arising from or incident to all work, service and advice of Employee. During the Term, Employee shall not be interested, directly or indirectly, in any manner as partner, manager, officer, director, shareholder, member, adviser, consultant, employee or in any other capacity in any other business; provided, that nothing herein contained shall be deemed to prevent or limit the right of Employee to beneficially own less than 1% of the stock of a corporation traded on a national securities exchange or The Nasdaq National Market as long as such passive investment does not interfere with or conflict with the performance of services to be rendered hereunder. Employee pledges that during the term of this Agreement, Employee shall not, directly or indirectly, engage in any business which could detract from Employee’s ability to apply his best efforts to the performance of his duties hereunder. Employee further agrees to obtain prior written consent before engaging in any other occupation, and he agrees to refrain from taking advantage of any corporate opportunities of the Employer.

(f) Independent Covenants. Each of the covenants on the part of Employee contained in Sections 5(a), (b), (c), (d) and (e) of this Agreement shall be construed as an agreement independent of each other such covenant. The existence of any claim or cause of action of Employee against Employer, whether predicated on this Agreement or otherwise, shall not constitute a defense to the enforcement by Employer of any such covenant.

(g) Reasonableness; Injunction. Employee acknowledges that his covenants contained in Section 5 of this Agreement are reasonably necessary for the protection of Employer and its affiliates and their businesses, and that such covenants are reasonably limited with respect to the activities prohibited, the duration thereof, the geographic area thereof, the scope thereof and the effect thereof on Employee and the general public. Employee further acknowledges that violation of the covenants would immeasurably and irreparably damage Employer and its affiliates, and by reason thereof Employee agrees that for a violation or threatened violation of any of the provisions of this Agreement, Employer shall, in addition to any other rights and remedies available to it, at law or otherwise, be entitled to an injunction to be issued by any court of competent jurisdiction enjoining and restraining Employee from committing any violation or threatened violation of this Agreement. Employee consents to the issuance of such injunction. Furthermore, Employer shall, in addition to any other rights or remedies available to it, at law or otherwise, be entitled to reimbursement of court costs, attorneys’ fees and other expenses incurred as a result of a breach of this Agreement. Employee agrees to reimburse Employer for such expenses promptly following a final determination that he has breached this Agreement.

(h) Noncompetition Period. “Noncompetition Period” shall mean the period commencing on the date Employee’s employment is terminated, for whatever reason, and continuing until nine (9) months following such termination of Employee’s employment.

(i) Noncompetition Area. The “Noncompetition Area” shall consist of the entire world.

(j) Business. For the purposes of this Agreement, the "Business" shall mean the business of developing, manufacturing, marketing or selling therapeutic products that use synthetic nicotine cholinergic compounds.

(6) Disability. Upon the "disability" of Employee, this Agreement may be terminated by action of the Board upon 30 days prior written notice (the "Disability Notice"), such termination to become effective only if such disability continues. If, prior to the effective time of the Disability Notice, Employee shall recover from such disability and return to the full-time active discharge of his duties, then the Disability Notice shall be of no further force and effect and Employee's employment shall continue as if the same had been uninterrupted. If Employee shall not so recover from his disability and return to his duties, then his services shall terminate at the effective time of the Disability Notice with the same force and effect as if that date had been the end of the Term originally provided for hereunder. Such termination shall not prejudice any benefits payable to Employee that are fully vested as of the date of such termination. Prior to the effective time of the Disability Notice, Employee shall continue to earn all compensation to which Employee would have been entitled as if he had not been disabled, such compensation to be paid at the time, in the amounts, and in the manner provided in Section 3(a). A "disability" of Employee shall be deemed to exist at all times that Employee is considered by the insurance Employer which has issued any policy of disability insurance owned by Employer or for which premiums are paid by Employer (the "Employer Policy") to be totally disabled under the terms of such policy. In the event there is no Employer Policy, "disability" shall mean the inability, by reason of physical or mental incapacity, impairment or infirmity, of Employee to perform, upon request, his regular duties required herein for six consecutive months, and the determination of the existence or nonexistence of disability shall be made by a medical doctor who is licensed to practice medicine in the State of North Carolina mutually acceptable to the Board and to Employee (or, if Employee is incapacitated, his spouse).

7. Termination.

(a) If Employee shall die during the Term, this Agreement and the employment relationship hereunder will automatically terminate on the date of death, which date shall be the last day of the Term; provided that such termination shall not prejudice any benefits payable to Employee or Employee's beneficiaries that are fully vested as the date of death.

(b) Employer may terminate Employee's employment under this Agreement at any time with or without Just Cause. Any termination without Just Cause shall be effective upon written notice to Employee. Any termination with Just Cause shall be effective immediately or at such other time set by the Board. "Just Cause" shall mean (i) Employee's willful and material breach of this Agreement and his continued failure to cure such breach to the reasonable satisfaction of the Board within thirty (30) days following written notice of such breach to Employee from the Board; (ii) Employee's conviction of, or entry of a plea of guilty or nolo contendere to a felony or a misdemeanor involving moral turpitude, (iii) Employee's willful commission of an act of fraud, breach of trust, or dishonesty including, without limitation, embezzlement, that results in material damage or harm to the business, financial condition or assets of Employer; (iv) Employee's intentional damage or destruction of substantial property of Employer; (v) Employee's violation of Employer's policies prohibiting employment discrimination and/or workplace harassment; and (vi) Employee's commission of any act (or omission) contrary to the ethical or professional standards generally expected of Employer or of Employee's profession. Just Cause shall be determined by the Board in its reasonable discretion and the particulars of any determination shall be provided to Employee in writing. At any time within ninety (90) days of receipt by Employee in writing of such determination, Employee may object to such determination in writing and submit the determination to arbitration in accordance with Section 8(j). If such determination is overturned in arbitration, Employee will be treated as having been terminated without Just Cause and shall be entitled to the benefits of Section 7(d).

(c) Employee may voluntarily terminate his employment with Employer on thirty (30) days prior written notice to Employer.

(d) Upon any termination pursuant to this Section 7, Employee shall be entitled to receive a lump sum equal to any base salary earned as of the termination date, and a *pro rata* portion of the target bonus, reflecting bonus, if any, earned and accrued as of the termination date. In addition, if this Agreement and Employee's employment hereunder is terminated by (i) Employer (or its successor) other than for Just Cause, or (ii) Employee for Good Reason, Employee shall be entitled to the following:

(A) severance, payable monthly, equal to Employee's then current base salary for nine (9) months following such termination or, if shorter, until such time as Employee secures other employment (the "Severance Period");

(B) nine (9) months acceleration of unvested stock options to purchase capital stock or restricted stock of the Employer held by Employee;

(C) the health care (including medical and dental) and life insurance benefits coverage provided to Employee at his date of termination shall be continued at the same level and in the same manner as if his employment had not terminated (subject to the customary changes in such coverages if Employee reaches age 65 or similar events), for the Severance Period, followed by COBRA election rights. Any additional coverages Employee had at termination, including dependent coverage, will also be continued for such period on the same terms. Any costs Employee was paying for such coverages at the time of termination shall continue to be paid by Employee. If the terms of any benefit plan referred to in this section do not permit continued participation by Employee, then Employer will arrange for other coverage providing substantially similar benefits at the same contribution level of Employee, and

(D) outplacement counseling services selected by Employer, up to a maximum of $10,000.

(e) If Employer (or its successor) terminates Employee's employment for Just Cause, Employee shall forfeit any unexercised vested stock options at the date of termination. If

Employee terminates his employment or if Employment (or its successor) terminates Employee's employment without Just Cause, Employee shall have ninety (90) days from the date of termination to exercise any vested options.

(f) For purposes hereof, "Good Reason" shall mean the occurrence of any of the following events without Employee's express written consent, and absent such events as listed in the following subsections (A) and (B), employee waives any right or entitlement to claim or contend that he has been "constructively discharged" as this term is defined under applicable common law or statute:

(A) Employer's breach of its obligation to confer any of the benefits and compensation provided in Sections 3 and 4 of this Agreement, which breach is not cured within thirty (30) days following written notice to Employer from Employee; and

(B) any purported termination of the employment of Employee by Employer (or any successor entity) which is not effected in accordance with this Agreement.

(g) Except as otherwise provided in this Section 7, upon termination of this Agreement for any reason, Employee shall not be entitled to any form of severance benefits, including benefits otherwise payable under any of Employer's regular severance plans or policies, or any other payment whatsoever. Employee agrees that the payments and benefits provided hereunder, subject to the terms and conditions hereof shall be in full satisfaction of any rights which he might otherwise have or claim by operation of law, by implied contract or otherwise, except for rights which he may have under any employee benefit plan of Employer. Accordingly, Employee understands that his rights under this Section 7 shall be forfeited in the event that he files any claim or lawsuit with a court or governmental agency seeking damages, back wages, or similar remedies under state or federal law pertaining to the employment relationship.

8. <u>Miscellaneous</u>.

(a) This Agreement shall be governed by and construed in accordance with the laws of the State of North Carolina without regard to conflicts of law principles thereof.

(b) With the exception of the aforementioned Option Agreement, this Agreement constitutes the entire Agreement between Employee and Employer with respect to the subject matter hereof, and supersedes in their entity any and all prior oral or written agreements, understandings or arrangements between Employee and Employer or any of its affiliates relating to the terms of Employee's employment by Employer (including without limitation the 2000 Equity Incentive Plan), and all such agreements, understandings and arrangements are hereby terminated and are of no force and effect. Employee hereby expressly disclaims any rights under any such agreements, understandings and arrangements. This Agreement may not be amended or terminated except by an agreement in writing signed by both parties.

(c) This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which, taken together, shall constitute one and the same instrument.

(d) Any notice or other communication required or permitted under this Agreement shall be effective only if it is in writing and delivered in person or by nationally recognized overnight courier service or deposited in the mails, postage prepaid, return receipt requested, addressed as follows:

To Employer:

Targacept, Inc.
200 East First Street
Suite 300
Winston-Salem, North Carolina 27101-4165
Attn: President

To Employee:

Jeffrey P. Brennan
230 Sturbridge Lane
Southport, CT 06890

Notices given in person or by overnight courier service shall be deemed given when delivered in person or the day after delivery to the courier addressed to the address required by this Section 8(d), and notices given by mail shall be deemed given three days after deposit in the mails. Any party hereto may designate by written notice to the other party in accordance herewith any other address to which notices addressed to him shall be sent.

(e) The provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity or enforceability of the other provisions hereof. It is understood and agreed that no failure or delay by Employer or Employee in exercising any right, power or privilege under this Agreement shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

(f) This Agreement may not be assigned by Employee without the written consent of Employer. This Agreement shall be binding on any successors or assigns or either party hereto.

(g) For purposes of this Agreement, employment of Employee by any affiliate of Employer shall be deemed to be employment by Employer hereunder, and a transfer of employment of Employee from one such affiliate to another shall not be deemed to be a termination of employment of Employee by Employer or a cessation of the Term, it being the intention of the parties hereto that employment of Employee by any affiliate of Employer shall be treated as employment by Employer and that the provisions of this Agreement shall continue to be fully applicable following any such transfer.

(h) The respective rights and obligations of the parties hereunder shall survive any termination of the Term or Employee's employment with Employer to the extent necessary to preserve such rights and obligations for their stated durations.

(i) In the event that it shall become necessary for either party to retain the services of an attorney to enforce any terms under this Agreement, the prevailing party, in addition to all other rights and remedies hereunder or as provided by law, shall be entitled to reasonable attorneys' fees and costs of suit. Employer shall reimburse Employee for the reasonable fees and expenses of counsel to Employee for the original negotiation of this Agreement.

(j) Any controversy or claim arising out of or relating to this Agreement shall be settled by arbitration in accordance with Commercial Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitration panel, which shall consist of three members, may be entered in any court having jurisdiction. Any arbitration shall be held in Winston-Salem, North Carolina, unless otherwise agreed in writing by the parties. One arbitrator shall be selected by Employee, one arbitrator shall be selected by Employer, and the third arbitrator shall be selected by the two arbitrators selected by Employee and Employer.

[THE NEXT PAGE IS THE SIGNATURE PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date and year first above written.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
J. Donald deBethizy, Ph.D.
President and CEO

EMPLOYEE:

/s/ Jeffrey P. Brennan
Jeffrey P. Brennan

Exhibit A

Relocation Package

Moving Expenses:	100% of moving company costs.
Closing Costs:	Seller’s normal closing costs, including realtor’s fee, for the residence in Connecticut; excludes prepaid or escrowed interest, taxes, insurance. Purchaser’s normal closing costs associated with the purchase of a residence in North Carolina; excludes points, pro-forma interest and taxes.
Temporary Living:	Subsidy of up to $1,500/month for maximum of 12 months for temporary housing in Winston-Salem. If Connecticut residence is sold prior to August 2004, Targacept will subsidize temporary housing in Connecticut up to $3,000/month and pay temporary storage of furniture in the state of Connecticut through August 31, 2004.
Relocation Allowance:	$3,000 lump sum.

Exhibit B

Option Agreement

2000 Equity Incentive Plan
of
Targacept, Inc.

Stock Option Agreement
(Jeffrey P. Brennan)

Date Option granted: September 1, 2003
Date Option expires: September 1, 2013
Number of shares subject to Option: 160,000
Option price (per share): $0.68
Class of Option: Incentive Stock Options

Date Installment First Exercisable	Number of Shares in Installment
November 29, 2003	40,000
December 31, 2003	3,334
March 31, 2004	3,333
June 30, 2004	10,000
September 30, 2004	10,000
December 31, 2004	10,000
March 31, 2005	10,000
June 30, 2005	10,000
September 30, 2005	10,000
December 31, 2005	10,000
March 31, 2006	10,000
June 30, 2006	10,000
September 30, 2006	10,001
December 31, 2006	6,666
March 31, 2007	6,666

Exhibit 10.13(a)

[********] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

COLLABORATIVE RESEARCH AND LICENSE AGREEMENT

between

TARGACEPT, INC.

and

AVENTIS PHARMA SA

TABLE OF CONTENTS

COLLABORATIVE RESEARCH AND LICENSE AGREEMENT

This Collaborative Research and License Agreement (this "Agreement") is made and entered into as of January 21, 2002 (the "Effective Date"), by and between **Targacept, Inc.**, a Delaware corporation having its principal place of business at 950 Reynolds Boulevard, Winston-Salem, North Carolina 27105 ("Targacept"), and **Aventis Pharma SA**, a corporation organized and existing under the laws of France having its principal place of business at 20, avenue Raymond Aron, 92160 Antony, France ("Aventis"). Each of Targacept and Aventis may be referred to individually herein as a "Party" and together as the "Parties."

Recitals:

WHEREAS, Aventis has know-how and experience in the discovery, development and marketing of pharmaceutical drugs, including drugs for the treatment of neurological diseases, and has specific know-how in the field of nicotinic compounds and their biological properties;

WHEREAS, Targacept has specific know-how and experience in the discovery, characterization and optimization of nicotinic compounds; and

WHEREAS, Targacept and Aventis have previously entered into the Original Agreement (as defined herein) under which Targacept and Aventis collaborate in the discovery, development and commercialization of certain nicotinic compounds for specified indications; and

WHEREAS, Targacept and Aventis now wish to collaborate further in the discovery, development and commercialization of nicotinic compounds included in, or derived from, the Aventis Compound Library (as defined herein) for specified indications;

Now, therefore, in consideration of the various promises and undertakings set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1

Definitions

Unless otherwise specifically provided herein, the following terms shall have the following meanings:

1.1 "Affiliate" means any Person which Controls, is Controlled by or is under common Control with a Party hereto.

1.2 "Agreement" shall have the meaning ascribed to it in the preamble.

1.3 “Alliance Back-Up Compound” means any Alliance Compound that has been selected as such hereunder, or any salt, solvate, prodrug form, inclusion complex or metabolite thereof.

1.4 “Alliance Compound” means any Aventis Compound that, following High Throughput Screening, Secondary Screening and/or Chemical Optimization, is identified as a Nicotinic Compound, meets the standard set forth in the Research and Development Plan, and is nominated by the SRC or otherwise by Aventis as a “Lead” or otherwise to be further pursued as an Alliance Compound under the terms and conditions of this Agreement. For the avoidance of doubt, (i) all compounds within the same compound series as an Alliance Compound shall also be Alliance Compounds, (ii) all Alliance Development Compounds and Alliance Back-Up Compounds shall also be Alliance Compounds and (iii) an Alliance Terminated Compound shall no longer be an Alliance Compound.

1.5 “Alliance Development Compound” means any Alliance Compound that has been nominated by the SRC or otherwise by Aventis as an “Early Development Candidate,” or otherwise to be further pursued as an Alliance Development Compound, or any salt, solvate, prodrug form, inclusion complex or metabolite thereof.

1.6 “Alliance Product” means any product, including any formulation thereof, containing or comprised of an Alliance Development Compound. For the avoidance of doubt, no Targacept Licensed Product shall be an Alliance Product.

1.7 “Alliance Terminated Compound” means (i) any Alliance Compound that is not nominated by the SRC or otherwise by Aventis as an Alliance Development Compound or (ii) any Alliance Development Compound or Alliance Back-Up Compound the development of which is terminated by Aventis pursuant to the terms of this Agreement. For the avoidance of doubt, any Aventis Compound that was not nominated as an Alliance Compound shall not be an Alliance Terminated Compound.

1.8 “ARC” means that alliance research committee to be formed pursuant to Section 6.1.

1.9 “Aventis” shall have the meaning ascribed to it in the preamble.

1.10 “Aventis Compound” means any chemical compound from the Aventis Compound Library and any derivative or improvement of such compound.

1.11 “Aventis Compound Library” means all chemical compounds (i) discovered, identified or synthesized by or on behalf of Aventis or its Affiliates, or acquired by Aventis or its Affiliates (including under license) from a Third Party, and (ii) contained in Aventis’ compound library located in Frankfurt am Main, Germany on the Effective Date.

1.12 “Aventis Indemnitees” shall have the meaning ascribed to it in Section 10.2.

1.13 “Aventis Know-How” means all know-how, trade secrets, techniques, methods, developments, materials, compositions, inventions or data of any kind necessary or useful for the identification, pharmacological development, synthesis, characterization, optimization, assaying, formulation and/or use of Alliance Compounds, Alliance Terminated Compounds, Alliance

Products or Targacept Licensed Products that is Controlled by Aventis or an Affiliate of Aventis at any time during the Research Term or the Follow-Up Period (but excluding the Aventis Patents, Joint Patents, the Research Technology and any information that Aventis is restricted from disclosing due to confidentiality obligations to a Third Party).

1.14 "Aventis Patents" means all Patent Rights Controlled by Aventis or its Affiliates that claim: (a) Alliance Compounds, Alliance Terminated Compounds, Alliance Products or Targacept Licensed Products (or pharmaceutical preparations containing the same); (b) the manufacture or use of any Alliance Compounds, Alliance Terminated Compounds, Alliance Products or Targacept Licensed Products; (c) methods or materials used for discovering, identifying, assaying, characterizing or optimizing any Alliance Compounds or Alliance Terminated Compounds; or (d) Aventis Compounds within the Research Technology, to the extent that such Patent Rights claim inventions made prior to or during the Research Term or during the Follow-Up Period.

1.14A "Aventis Research Technology" means (i) the Research Technology made, developed or discovered solely by employees or agents of Aventis and/or its Affiliates and (ii) the Aventis Technology.

1.14B "Aventis Technology" means (i) all regulatory and clinical documentation and data produced under the Research and Development Plan and (ii) any Aventis Compounds, Nicotinic Compounds, Alliance Compounds, Alliance Terminated Compounds (including, without limitation, Targacept Development Compounds and Targacept Licensed Products) and Alliance Products within the Research Technology made by employees or agents of (a) Targacept and/or its Affiliates, (b) Aventis and/or its Affiliates or (c) Targacept and/or its Affiliates and Aventis and/or its Affiliates, jointly.

1.15 "Chemical Optimization" means the synthesis of compounds which are chemical analogs to Alliance Compounds or Nicotinic Compounds with improved pharmacological, pharmacokinetic or safety properties.

1.16 "Confidential Information" means all information and data (including (without limitation) all Know-How and Research Technology) supplied by a Party to the other Party under this Agreement.

1.17 "Control" means: (a) with respect to an item of information or an intellectual property right, possession of the ability, whether by ownership or license, to grant a license or sublicense as provided for herein with respect to such item or right without violating the terms of any agreement or other arrangements with any Third Party; and (b) with respect to a Person, (i) the possession, directly or indirectly, of the power to direct the management or policies of such Person, whether through the ownership of voting securities, by contract or otherwise, or (ii) the ownership, directly or indirectly, of more than 50% of the voting securities or other ownership interests of such Person.

1.18 "Development Plan" shall have the meaning ascribed to it in Section 3.1.

1.19 "Effective Date" means the date set forth in the first paragraph.

1.20 "Estimated Amount" shall have the meaning ascribed to it in Section 2.6(b)(1).

1.21 “FDA” means the United States Food and Drug Administration, or the successor federal agency thereto.

1.22 “Field” means the treatment or prevention in humans of one or more Indications.

1.23 “First Commercial Sale” means, with respect to any Alliance Product or Targacept Licensed Product in any country, the first sale for use or consumption by the general public of such Alliance Product or Targacept Licensed Product, as the case may be, in such country after all Regulatory Approvals have been obtained in such country.

1.24 “Follow-Up Period” means the period commencing immediately after the Research Term and ending six (6) months after the Research Term, as extended by mutual agreement of the Parties.

1.25 “FTE” means a full-time Targacept scientist or laboratory technician or any other employee of Targacept or its Affiliates specifically approved as an FTE by Aventis, who is dedicated to the Research or support thereof, or in the case of a less than full-time dedicated person, a full-time, equivalent person year, based upon a total of forty-seven (47) weeks (*i.e.*, one thousand eight hundred eighty (1,880) hours) per year of scientific work on or directly related to the Research. Work on or directly related to the Research to be performed by such employees may include, without limitation, experimental laboratory work, recording and writing up results, reviewing literature and references, holding scientific discussions, and any other activities assigned to Targacept under the Research Plan.

1.26 “FTE Rate” means the annual rate per FTE of **[********]**, unless otherwise agreed to by the Parties.

1.27 “High Throughput Screening” means all initial screening of Aventis Compounds, primarily **[********]**.

1.28 “IND” means an Investigational New Drug Application filed pursuant to the requirements of the FDA for approval to commence human clinical trials, and any equivalent application filed with any analogous regulatory authority in other countries or regulatory jurisdictions.

1.29 “Indication” means any of the following indications:

(a) Alzheimer’s Disease (based upon ante mortem diagnostic evaluations in use as of the Effective Date);

(b) Parkinson’s Disease; or

(c) any other disorder of the central nervous system. For the avoidance of doubt, each disorder of the central nervous system shall be a separate Indication for all purposes, including without limitation milestone payments pursuant to Section 7.1.

1.30 [Intentionally Omitted]

1.31 "Joint Patents" means all Patent Rights that claim or cover inventions within the Joint Research Technology.

1.32 "Joint Research Technology" means all Research Technology that is made, developed or discovered jointly by employees or agents of Targacept and/or its Affiliates and employees or agents of Aventis and/or its Affiliates at any time during the Research Term or during the Follow-Up Period, but excluding Aventis Technology.

1.33 "Know-How" means Targacept Know-How or Aventis Know-How, as the case may be.

1.34 "Losses" shall have the meaning ascribed to it in Section 10.1.

1.35 "Major Country" means each of France, Germany, Italy, Japan, Spain, the United Kingdom and the United States.

1.36 "Major Pharmaceutical Market" means each of the United States, the European Union (as it may be constituted from time to time) and Japan.

1.37 "Material Unexpected Technical Problem" means an unanticipated scientific or technical problem that is likely to preclude Targacept from fulfilling any obligation set forth in a Semi-Annual Research Plan with the FTEs budgeted to the performance of such obligation.

1.38 "Materials" shall have the meaning ascribed to it in Section 2.9.

1.39 "Milestone Event" shall have the meaning ascribed to it in Section 7.1.

1.40 "NDA" means a New Drug Application filed pursuant to the requirements of the FDA, as more fully defined in 21 C.F.R. § 314.50 *et seq*, and any equivalent application filed with any analogous regulatory authority in a Major Country (or, in the case of the centralized application process in the European Union, the European Medicines Evaluation Agency).

1.41 "Net Sales" means [********].

1.42 "New Nicotinic Compound" means a chemical compound **[********]** receptors **[********]** that is discovered, identified or synthesized by or on behalf of Aventis or its Affiliates, or acquired by Aventis or its Affiliates (including under license) from a Third Party, after the Effective Date.

1.43 "Nicotinic Compound" means (i) any Aventis Compound, (ii) any compound discovered, identified or synthesized by or on behalf of Aventis or its Affiliates, or acquired by Aventis or its Affiliates (including under license) from a Third Party, after the Effective Date and made by Aventis, at its sole discretion, subject to this Agreement, or (iii) any new compound which results from the Chemical Optimization performed under this Agreement of Nicotinic Compounds or Alliance Compounds, in each case only if such compound **[********]** receptors **[********]**.

1.44 "Original Agreement" means the Collaborative Research and License Agreement dated as of December 30, 1998 between Targacept and Aventis Pharmaceutical Products Inc., Collegeville, Pennsylvania, USA (formerly known as Rhône-Poulenc Rorer Pharmaceuticals Inc.), as amended from time to time.

1.45 "Party" and **"Parties"** shall have the meaning ascribed to its in the preamble.

1.46 "Patent Right" means rights under (a) any then issued and existing letters patent, including any extensions, supplemental protection certificates, registration, confirmation, reissue, reexamination or renewal thereof, (b) pending applications, including any continuation, divisional, continuation-in-part application thereof, for any of the foregoing, and (c) all counterparts to any of the foregoing issued by or filed in any country or other jurisdiction.

1.47 "PCT" means the Patent Cooperation Treaty.

1.48 "Pentad Patents" means all Patent Rights Controlled by Targacept or an Affiliate of Targacept that claim the Pentad Technology.

1.49 "Pentad Technology" means proprietary know-how of Targacept and its Affiliates concerning structure activity relationships of nicotinic compounds (i.e., compounds with a primary mechanism of action, activation or inhibition of the neuronal nicotinic receptor system) and nicotinic receptors, pharmacophore mapping of nicotinic receptors and proprietary computational algorithms for use in the design, synthesis and evaluation of pharmacologically active agents.

1.50 "Person" means any natural person, corporation, firm, business trust, joint venture, association, organization, company, partnership or other business entity, or any government or agency or political subdivision thereof.

1.51 "Phase I" means that portion of the clinical development program which generally provides for the first introduction into humans of a product with the primary purpose of determining safety, metabolism and pharmacokinetic properties and clinical pharmacology of the product.

1.52 "Phase II" means that portion of the clinical development program which provides for small-scale clinical trials primarily to determine efficacy of a product and certain other factors, such as dosing range.

1.53 "Phase III" means that portion of the clinical development program which provides for the pivotal trials of a product in sufficient numbers of patients to establish the safety and efficacy of a product for the desired label claims and indications.

1.54 "Primary Indication" means either:

(a) Alzheimer's Disease (based upon ante mortem diagnostic evaluations in use as of the Effective Date); or

(b) Parkinson's Disease.

1.55 "Project Leaders" shall have the meaning ascribed to it in Section 6.7.

1.56 "Regulatory Approval" means any and all approvals (including price and reimbursement approvals), licenses, registrations, or authorizations of any federal, national, state, provincial or local regulatory agency, department, bureau or other government entity, necessary for the manufacture, use, storage, import, transport and sale of an Alliance Product in a country.

1.57 "Research" means the collaborative research program set forth in the Research and Development Plan undertaken by the Parties pursuant to this Agreement to characterize, optimize and conduct research activities regarding Alliance Compounds for use in the Field. For the avoidance of doubt and without limitation, research and development activities performed by Aventis or Targacept with respect to (i) any Aventis Compound (or other compound described in clauses (ii) or (iii) of the definition of Nicotinic Compound) prior to its identification as a Nicotinic Compound (including, without limitation, High Throughput Screening and Secondary Screening) or (ii) any Nicotinic Compound prior to its nomination as an Alliance Compound (including, without limitation, Chemical Optimization of Nicotinic Compounds and Alliance Compounds as provided for herein) shall constitute Research.

1.58 "Research and Development Plan" shall mean the research and development plan attached hereto as Exhibit A, as may be modified from time to time in accordance with the terms of this Agreement, which shall expressly provide for High Throughput Screening of the Aventis Compound Library.

1.59 "Research Technology" means all tangible and intangible know-how, trade secrets, inventions (whether or not patentable), discoveries, developments, data, clinical and preclinical results, information, and physical, chemical or biological material, compounds, and any replication of or any part of any of the foregoing, made by employees or agents of Targacept and/or its Affiliates, or of Aventis and/or its Affiliates, either alone or jointly, in the conduct of Research during the Research Term or the Follow-Up Period.

1.60 "Research Term" means the period during which the Parties shall conduct the Research, commencing on the Effective Date and terminating on the second anniversary of the Effective Date or such other date as may be mutually agreed by the Parties.

1.61 "Royalty Term" shall have the meaning ascribed to it in Section 7.3.

1.62 "Secondary Screening" means conducting any assay, screen or other test run after the High Throughput Screening on Aventis Compounds or Nicotinic Compounds or Chemical Optimization of Aventis Compounds or Nicotinic Compounds.

1.63 "Selection Period" shall have the meaning ascribed to it in Section 2.2(f).

1.64 "Semi-Annual Research Plan" means a detailed research plan and budget prepared by the Parties on a semi-annual basis, as may be modified from time to time in accordance with the terms of this Agreement.

1.65 "SRC" means the Scientific Review Committee of Aventis or any successor committee thereof.

1.66 “Sublicensee” means any Third Party to which Aventis or Targacept (as applicable) has granted sublicense rights under the licenses granted by Targacept to Aventis or by Aventis to Targacept hereunder, which rights include at least the rights to make and sell Alliance Products or Targacept Licensed Products, as the case may be; provided, that Third Parties that are permitted to distribute and resell finished Alliance Products or Targacept Licensed Products, as the case may be, or that manufacture or finish Alliance Products or Targacept Licensed Products, as the case may be, for supply, only to Aventis or its Affiliates or Targacept or its Affiliates are not “Sublicensees.”

1.67 “Targacept” shall have the meaning ascribed to it in the preamble.

1.68 “Targacept Development Compound” means an Alliance Terminated Compound that Targacept elects to develop further for use in the Targacept Licensed Field pursuant to the terms and conditions of this Agreement.

1.69 “Targacept Indemnitees” shall have the meaning ascribed to it in Section 10.1.

1.70 “Targacept Know-How” means all know-how, trade secrets, techniques, methods, developments, materials, compositions, inventions or data of any kind necessary or useful for the identification, pharmacological development, synthesis, characterization, optimization, assaying, formulation, manufacture and/or use of Alliance Compounds or Alliance Products that is Controlled by Targacept or an Affiliate of Targacept at any time during the Research Term or the Follow-Up Period, but excluding the Pentad Technology, the Pentad Patents, the Targacept Patents, the Joint Patents, the Research Technology and any information that Targacept is restricted from disclosing due to confidentiality obligations to a Third Party.

1.71 “Targacept Licensed Field” means the treatment or prevention in humans of (i) one or more indications that are not Indications and (ii) with respect to each Alliance Terminated Compound, all Indications set forth on Exhibit B for which Aventis does not notify Targacept in writing within two (2) years after such compound has become an Alliance Terminated Compound that it intends to develop and commercialize one or more products.

1.72 “Targacept Licensed Product” means any product, including any formulation thereof, containing or comprised of a Targacept Development Compound.

1.73 “Targacept Patents” means all Patent Rights that are Controlled by Targacept or its Affiliates that claim methods or materials used for discovering, identifying, assaying, characterizing or optimizing any Alliance Compounds, to the extent that such Patent Rights claim inventions made prior to or during the Research Term or during the Follow-Up Period. For the avoidance of doubt, neither Pentad Patents nor Pentad Technology shall be Targacept Patents.

1.73A “Targacept Research Technology” means the Research Technology made, developed or discovered solely by employees or agents of Targacept and/or its Affiliates, but excluding the Aventis Technology.

1.74 “Term” means the period beginning on the Effective Date and ending on the earlier to occur of the date on which (i) this Agreement is terminated in its entirety in accordance with the provisions hereof or (ii) all royalty and other payment obligations hereunder have expired.

1.75 “Third Party” means a Person other than Targacept, Aventis and Affiliates of either.

1.76 “Third Party License” shall have the meaning ascribed to it in Section 7.7.

1.77 “Threshold EU Market” means at any time any set of countries within the European Union which constituted during the prior calendar year at least 50% in dollar amount of all central nervous system-related pharmaceutical sales in the European Union.

1.78 “Valid Claim” means a claim of an issued and unexpired patent which has not been revoked or held unenforceable or invalid by a decision of a court or governmental agency of competent jurisdiction from which no appeal can be taken or, after mutual consultation and agreement between the Parties, an appeal is not taken within the time allowed for appeal, and which has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue or disclaimer or otherwise.

ARTICLE 2

Research

2.1 Collaborative Research. Commencing on the Effective Date, the Parties shall conduct the Research pursuant to the Research and Development Plan, with the goals of: (a) identifying those Aventis Compounds that may constitute Nicotinic Compounds; (b) identifying those Nicotinic Compounds that should be recommended for nomination as Alliance Compounds; (c) identifying those Alliance Compounds that do not warrant further scientific evaluation and should instead be classified as Alliance Terminated Compounds; and (d) identifying those Alliance Compounds that should be recommended for nomination as Alliance Development Compounds. The Parties shall conduct the Research in accordance with this Agreement, the Research and Development Plan and the Semi-Annual Research Plans established pursuant to the provisions of this Article 2.

2.2 Screening and Selection of Alliance Compounds and Alliance Development Compounds.

(a) *High Throughput Screening of Aventis Compounds and Secondary Screening of Aventis Compounds and Nicotinic Compounds.*

During the Research Term, Targacept and Aventis shall conduct High Throughput Screening of Aventis Compounds and Secondary Screening of Aventis Compounds and Nicotinic Compounds, as set forth in the Research and Development Plan and the Semi-Annual Research Plans, and shall inform the ARC of the progress and results thereof.

(b) *Secondary Screening of Aventis Compounds and Nicotinic Compounds and Chemical Optimization.*

(1) The ARC shall review the results of the High Throughput Screening and Secondary Screening performed pursuant to Section 2.2(a) and shall select the Aventis Compounds and Nicotinic Compounds which shall be subject to further Secondary Screening and/or Chemical Optimization.

(2) For the avoidance of doubt, any Aventis Compounds that are not identified as Nicotinic Compounds and that the ARC decides not to further pursue under this Agreement shall be neither Alliance Compounds nor Alliance Terminated Compounds.

(c) *Selection or Rejection of Nicotinic Compounds as Alliance Compounds.*

(1) The ARC shall review the results of any further Secondary Screening and Chemical Optimization performed pursuant to Section 2.2(b). Based upon the standards set forth in the Research and Development Plan and such other criteria as the Parties may mutually agree, the ARC shall determine which of these Nicotinic Compounds shall be recommended to the SRC for nomination as an Alliance Compound, if any.

(2) The SRC (or otherwise Aventis) shall be entitled to nominate, in its sole discretion, such Nicotinic Compounds that shall be Alliance Compounds.

(3) For the avoidance of doubt, any Nicotinic Compounds that are not nominated by the SRC, or otherwise by Aventis, as Alliance Compounds shall not be Alliance Terminated Compounds.

(d) *Chemical Optimization of Alliance Compounds.*

To the extent deemed necessary by the ARC, Aventis shall conduct Chemical Optimization of Alliance Compounds. Targacept shall cooperate in all reasonable respects in the conduct by Aventis of Chemical Optimization of Alliance Compounds.

(e) *Selection or Rejection of Alliance Compounds as Alliance Development Compounds.*

(1) From time to time, the ARC shall review data relating to the Alliance Compounds that are generated by the Research. Based upon standards set forth in the Research and Development Plan and such other criteria as the ARC deems appropriate, the ARC shall identify and recommend to the SRC certain Alliance Compounds for nomination as Alliance Development Compounds or Alliance Back Up Compounds for development (or potential development) in accordance with the Research and Development Plan.

(2) The SRC (or otherwise Aventis) shall be entitled to designate, in its sole discretion, Alliance Compounds that shall be Alliance Development Compounds or Alliance Back-Up Compounds.

(3) If an Alliance Compound (i) is rejected as an Alliance Development Compound or an Alliance Back Up Compound or (ii) is not selected by the SRC as an Alliance Development Compound within six (6) months after the end of the

Research Term, then such compound shall be considered as an Alliance Terminated Compound and shall automatically cease to be an Alliance Compound.

(f) *Selection by Targacept of Alliance Terminated Compounds as Targacept Development Compounds.*

Targacept shall be entitled to select, at its discretion, those Alliance Terminated Compounds that it desires to further develop as Targacept Development Compounds for use in the Targacept Licensed Field, subject to the terms and conditions contained herein. Targacept shall make such election, on an Alliance Terminated Compound by Alliance Terminated Compound basis, by written notice to Aventis within two (2) years from the earlier of (i) the date on which Aventis gives written notice to Targacept that the applicable Alliance Compound has been expressly rejected as an Alliance Development Compound and an Alliance Back Up Compound, thereby becoming an Alliance Terminated Compound, or (ii) six (6) months after the end of the Research Term (such period, the "Selection Period"). As soon as reasonably practicable following receipt of notice from Targacept under this Section 2.2(f), Aventis shall notify Targacept in writing that Aventis (A) owns right, title and interest in and to the Alliance Terminated Compound in question or (B) licenses right, title and interest in and to the Alliance Terminated Compound in question from a Third Party and, in the case of (B), that such license is in full force and effect and that it has the right to sublicense its rights to Targacept. In the case of (B), Aventis shall provide Targacept with a copy of all of the documents governing such license. Upon receipt of such notice from Aventis, Targacept may, in its sole discretion, then withdraw its election to license such Alliance Terminated Compound. After the Selection Period, any Alliance Terminated Compound that Targacept has not selected for further development as provided above may not be developed further by Targacept without Aventis' prior written approval.

2.3 Research and Development Plan. The Research and Development Plan sets forth the plan for the Research activities expected to be performed by each Party pursuant to this Agreement. The Research and Development Plan may be amended by the ARC from time to time in accordance with the provisions of Article 6.

2.4 Semi-Annual Research Plans. On the first day of each January and July during the Research Term, the Parties shall establish a Semi-Annual Research Plan for the activities to be performed by Aventis and Targacept as part of the Research during the next six (6) month period (or such longer period as may be set forth for certain tasks in the Semi-Annual Research Plan). Each Semi-Annual Research Plan may be amended by the ARC from time to time in accordance with the provisions of Article 6, shall be consistent with the Research and Development Plan and shall specify in reasonable detail:

(a) the objectives of the Research for the ensuing period;

(b) the specific research and other activities to be performed by Aventis and Targacept during such period;

(c) the specific deliverables expected to be provided by Aventis and Targacept, and the projected dates by which such deliverables will be provided;

(d) the FTEs to be devoted by Targacept to its tasks under the Semi-Annual Research Plan; and

(e) the total funding expected to be provided to Targacept for the ensuing six-month period to support Targacept's Research activities (which funding will be subject to adjustment as provided in Section 2.6).

2.5 Preparation and Approval of Semi-Annual Research Plans. The Parties undertake to complete and mutually approve the Semi-Annual Research Plan for the initial period of the Research Term within sixty (60) days of the Effective Date, which Semi-Annual Research Plan shall, upon such mutual agreement, be attached to this Agreement as Exhibit C. The ARC shall meet at the earliest reasonably practicable time to establish, by mutual agreement of the Parties, the priority for performing the High Throughput Screening and Secondary Screening of the Aventis Compounds and Secondary Screening of the Nicotinic Compounds and to amend the initial Semi-Annual Research Plan as required to reflect such agreement. It is intended that the Semi-Annual Research Plan for each subsequent period during the Research Term shall be approved by the ARC by the first day of each January and July during the Research Term.

2.6 Targacept Research Efforts.

(a) Targacept agrees to commit such of its resources as are specified in the Semi-Annual Research Plans to perform its obligations set forth therein; provided, however, that (x) in no event shall Targacept be required, directly or indirectly, to utilize the Pentad Technology and (y) Targacept shall have the right to notify the ARC promptly upon becoming aware of a Material Unexpected Technical Problem. As part of such notification, Targacept shall provide the ARC with a reasonably detailed description of such Material Unexpected Technical Problem, together with its good faith estimate of the number of additional FTEs and the time that will be required to perform such obligation in light of such Material Unexpected Technical Problem. Upon receipt of such notification, the ARC shall then determine whether to modify the Semi-Annual Research Plan as it applies to such obligation to: (i) refocus the remaining unused FTE resources allocated to such obligation to other obligations under the Semi-Annual Research Plan; (ii) increase the funding to be provided by Aventis to Targacept for such obligation, subject to the agreement of both Parties on the amount of such increased funding; (iii) terminate any further Targacept activities relating to such obligation; (iv) provide additional non-financial resources from Aventis to support Targacept's activities, or (v) take such other action as may be mutually acceptable to the Parties; provided, however, that, following notification of a Material Unexpected Technical Problem with respect to any obligation, Targacept shall not be required to perform activities related to such obligation unless and until the ARC acts to provide additional funding. In connection with the performance by Targacept of its obligations hereunder, Targacept shall maintain (or cause its Affiliates to maintain) and utilize such scientific staff, laboratories, offices and other facilities as are reasonably designed for such purposes. Targacept shall use personnel with such skills and experience as are reasonably designed to accomplish efficiently and expeditiously the objectives of the Research as set forth in the Research and Development Plan and each Semi-Annual Research Plan in good scientific manner and in compliance in all material respects with all applicable laws, rules, regulations, and all other requirements of applicable good laboratory practices; provided, however, that except as otherwise required by law, Targacept shall be required to comply only with general good laboratory practices as practiced by like companies in the biotechnology industry in performing similar research and not with the requirements for “Good Laboratory Practices” prescribed by the FDA.

(b) Aventis shall reimburse Targacept for all fully documented expenses set forth in the Semi-Annual Research Plan and incurred by Targacept in performing its obligations under the Semi-Annual Research Plans in accordance with the following procedures:

(1) Promptly following the commencement of the first calendar quarter covered by each Semi-Annual Research Plan, Targacept shall furnish Aventis with an invoice in the amount of **[********]** of the product of (i) the FTE Rate and (ii) the total number of FTEs specified in such Semi-Annual Research Plan pursuant to Section 2.4(d). Aventis shall advance Targacept such amount (the “Estimated Amount”) within forty-five (45) days after receipt of such invoice.

(2) No later than the last day of the first month that begins immediately following the end of the six-month period covered by such Semi-Annual Research Plan, Targacept shall furnish Aventis with a statement detailing the number of FTEs actually dedicated to the performance of each Research obligation set forth in such Semi-Annual Research Plan. However, such statement shall not state a number of FTEs greater than **[********]** of the budgeted FTEs allocated to the obligation of Targacept as set forth in such Semi-Annual Research Plan even if the number of FTEs actually dedicated to such performance was greater than **[********]** of such budgeted amount.

(3) Within forty-five (45) days after the receipt of such statement from Targacept, Aventis shall pay Targacept an amount equal to the positive difference, if any, between (i) the product of (A) the FTE Rate and (B) the total number of FTEs properly set forth in the statement furnished pursuant to Section 2.6(b)(2), and (ii) the Estimated Amount for such Semi-Annual Research Plan paid to Targacept pursuant to Section 2.6(b)(1).

(4) Targacept shall keep complete and accurate books and financial records pertaining to its costs and expenses of performing the Research (in accordance with United States generally accepted accounting principles, consistently applied) and shall retain such books and financial records for three (3) years after the end of the period to which such books and financial records pertain. Aventis shall have the right, at its expense, to have certified public accountants, who shall be reasonably acceptable to Targacept, audit the books and financial records of Targacept relating to its costs and expenses during one or more six-month periods; provided, however, that Aventis shall not have the right to (i) audit any six-month period more than two (2) years after the end of the fiscal year in which such period falls, (ii) conduct more than one such audit in any twelve-month period or (iii) audit any six-month period more than once.

2.7 Aventis Research Efforts.

(a) Aventis agrees to commit such resources as are specified in the Semi-Annual Research Plans to perform its obligations set forth therein. Aventis agrees to commit such further resources as are reasonably necessary to perform its obligations set forth in each Semi-Annual Research Plan; provided that Aventis shall have the right to notify the ARC promptly upon becoming aware of an unanticipated scientific or technical problem that would be likely to preclude Aventis from completing an obligation set forth in a Semi-Annual Research Plan for a manpower expenditure within **[********]** of original expectations and shall be permitted to discontinue work on such obligation if the ARC does not modify the Semi-Annual Research Plan with respect to such obligation in a manner reasonably acceptable to Aventis. In the performance of its obligations, Aventis shall maintain and utilize such scientific staff, laboratories, offices and other facilities as are reasonably designed for such purposes. Aventis shall use personnel with such skills and experience as are reasonably designed to accomplish efficiently and expeditiously the objectives of the Research as set forth in the Research and Development Plan and each Semi-Annual Research Plan in good scientific manner and in compliance in all material respects with all applicable laws, rules, regulations, and all other requirements of applicable good laboratory practices; provided, however, that except as otherwise required by law, Aventis shall be required to comply only with general good laboratory practices as practiced by like companies in the pharmaceutical industry in performing similar research and not with the requirements for "Good Laboratory Practices" prescribed by the FDA.

(b) Aventis shall be solely responsible for bearing the costs of any and all activities performed by Aventis in connection with the Research.

2.8 Termination of Agreement During Research Term.

(a) Termination for Material Breach of Research Obligations by Targacept. In the event that Targacept materially fails to perform its obligations with respect to the Research, Aventis may give notice to Targacept specifying the nature of the default, requiring it to cure such default and stating Aventis' intention to terminate Targacept's participation in the Research if such default is not cured within the period set forth below. If the default is neither (i) cured within sixty (60) days after the receipt of such notice nor (ii) curable within such sixty-day period and, in the case of clause (ii), Targacept has not commenced reasonable actions to cure such default or does not diligently continue to perform such actions, Aventis may elect to terminate this Agreement. Upon the election of Aventis described above, Targacept shall promptly refund to Aventis any amounts paid to Targacept under Section 2.6(b)(1) relating to unused FTEs, transfer to Aventis copies of all data, reports, records and other materials under Targacept's Control that relate to the Research and furnish to Aventis all Materials developed or Controlled by Targacept that are used or useful in connection with the Research for use by Aventis after termination of this Agreement as provided for herein, and the consequences of termination set forth in Section 11.4, Section 11.5(a) and Section 11.5(b) shall apply.

(b) Termination for Material Breach of Research Obligations by Aventis. In the event that Aventis materially fails to perform its obligations with respect to the Research, Targacept may give notice to Aventis specifying the nature of the default, requiring it to cure such default and stating Targacept's intention to terminate this Agreement during the Research Term if such default is not cured within the period set forth below. If the default is neither (i) cured within sixty (60) days after the receipt of such notice nor (ii) curable within such sixty-day period and, in the case of clause (ii), Aventis has not commenced reasonable actions to cure such default or does not diligently continue to perform

such actions, Targacept shall have the right to terminate this Agreement, and the consequences of termination set forth in Section 11.4, Section 11.5(a) and Section 11.5(b) shall apply.

2.9 Material Transfer. In order to facilitate the Research, either Party may provide to the other Party certain biological materials or chemical compounds including, but not limited to Aventis Compounds and Alliance Compounds, receptors, reagents and screens (collectively, "Materials") owned by or licensed to the supplying Party (other than under this Agreement) for use by the other Party in furtherance of the Research, subject, if desired by the supplying Party, to a separate global Material Transfer Agreement in a form to be mutually agreed by the Parties. Except as otherwise provided under this Agreement, all such Materials delivered to the other Party shall remain the sole property of the supplying Party, shall be used only in furtherance of the Research and solely under the control of the other Party, shall not be used or delivered to or for the benefit of any Third Party without the prior written consent of the supplying Party, and shall not be used in research or testing involving human subjects. The Materials supplied under this Section 2.9 shall be used with prudence and appropriate caution in any experimental work, since not all of their characteristics may be known. SUBJECT TO SECTION 12.1 OR AS OTHERWISE PROVIDED IN ANY MATERIAL TRANSFER AGREEMENT BETWEEN THE PARTIES, THE MATERIALS ARE PROVIDED "AS IS" AND WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY WARRANTY THAT THE USE OF THE MATERIALS WILL NOT INFRINGE OR VIOLATE ANY PATENT OR OTHER PROPRIETARY RIGHTS OF ANY THIRD PARTY.

2.10 Liability. Except as otherwise expressly set forth in Sections 10.1 and 10.2, in connection with the conduct of the Research, each Party shall be responsible for, and hereby assumes, any and all risks of personal injury or property damage attributable to the negligent acts or omissions of that Party or its Affiliates and their respective directors, officers, employees and agents.

2.11 Exclusivity of Research. During the Research Term, each Party agrees not to, and agrees to cause its Affiliates not to: (a) conduct any activity, either on its own, or for the benefit of, sponsored by, or pursuant to any type of corporate partnership with, any Third Party, that has as its goal or intent discovering, identifying, researching, developing or marketing chemical compounds **[********]** receptors **[********]** (including, without limitation, any Alliance Compounds) for use in the Field; or (b) grant any license, either express or implied, or any option to license, to any Third Party to utilize any intellectual property Controlled by such Party or its Affiliates for the purpose of discovering, identifying, researching, developing or marketing chemical compounds **[********]** receptors **[********]** for use in the Field, in each case except pursuant to this Agreement or the Original Agreement; provided, that: (i) the restrictions set forth in this Section 2.11 shall be limited to the Primary Indications; (ii) the restrictions set forth in this Section 2.11 shall apply to Targacept only for so long as both (A) Aventis shall be using commercially reasonable efforts (as further described in Section 3.5), which efforts shall be not less than those used by Aventis with respect to the development of other compounds of comparable commercial significance, to develop and commercialize a "Collaboration Compound" for the corresponding "Indication" in each "Major Pharmaceutical Market" (all such terms as defined in the Original Agreement); and (B) the Original Agreement is in full force and effect with respect to such Indication; and (iii) a Party may terminate the foregoing covenant as it applies to such Party, as one of its remedies and not to the exclusion of any other remedy such Party may have, if the other Party materially violates its obligations under the foregoing covenant.

2.12 Subcontractors. Either Party may subcontract to Affiliates or Third Parties portions of the Research to be performed by it, subject to the provisions of this Section 2.12. Any subcontractor shall enter into a confidentiality agreement with the contracting party and shall be in compliance in all material respects with all requirements of applicable laws and regulations and all applicable good laboratory practices and good manufacturing practices. The contracting Party shall at all times be responsible for the performance of such subcontractor. Upon the reasonable request of the other Party, a Party shall provide a written list of all subcontractors other than Affiliates with which such Party has subcontracted under this Section 2.12.

2.13 No Warranty of Success. Nothing contained in this Agreement shall be construed as a warranty on the part of either Party that such Party will achieve any particular result or that any particular Patent Rights or Know-How developed in the conduct of the Research will be commercially exploitable.

2.14 No Solicitation of Employees. During the Research Term and for a period of two (2) years thereafter, each Party agrees not to, and agrees to cause its Affiliates not to, without the consent of the other Party, solicit the employment of any person who during the course of employment with such other Party or any of such other Party's Affiliates was involved with activities related to or conducted in furtherance of the Research. For purposes of this Section 2.14, "solicit" shall not be deemed to cover general solicitations of employment not specifically targeted at employees of the other party or any of its Affiliates. This provision shall not preclude either Party from soliciting the employment of any person whose employment with the other Party has terminated or any person who has announced his or her impending resignation or retirement from the other Party.

ARTICLE 3

Development and Commercialization

3.1 Development Plans. Within sixty (60) days after an Alliance Development Compound is selected for development in accordance with Section 2.2(e), Aventis shall prepare a reasonably detailed plan for the initial development of such Alliance Development Compound in each Major Pharmaceutical Market for review and comment by the ARC (each, a "Development Plan"), which comments Aventis shall consider reasonably. On a semi-annual basis, Aventis shall apprise the ARC of progress under each Development Plan and shall submit revisions to existing Development Plans to the ARC for review and comment by the ARC, which comments Aventis shall consider reasonably.

3.2 Development Responsibilities of Aventis. Aventis shall be solely responsible for and shall have the sole right to develop the Alliance Development Compounds through preclinical development and all phases of clinical trials, and to make all applications for and obtain all Regulatory Approvals on a worldwide basis. Aventis shall be solely responsible for bearing all costs and expenses in connection with the development of each Alliance Development Compound.

3.3 Termination of Development of an Alliance Development Compound. Aventis may terminate the development of any Alliance Development Compound (or Alliance Back-up

Compound) at any time and at any development stage upon prior notice to the ARC and, in such event, such Alliance Development Compound (or Alliance Back-Up Compound) shall be an Alliance Terminated Compound.

3.4 Development Information and Reporting. From and after the commencement of the first Phase I trial covering an Alliance Development Compound, Aventis shall prepare and maintain complete and accurate information regarding the worldwide clinical development of Alliance Development Compounds and shall make such information available to the ARC in the form of reasonably detailed reports provided to the ARC at least on a semi-annual basis. Such reports shall reasonably and accurately summarize the status and results of such development efforts. Aventis also shall respond to reasonable requests by the ARC for additional information regarding the development of Alliance Development Compounds. The ARC may provide comments to Aventis regarding such development efforts, and Aventis shall reasonably consider such comments.

3.5 Commercialization Responsibilities of Aventis; Diligence. Aventis shall be solely responsible for and shall have the sole right to commercialize each Alliance Product for each Indication. With respect to each Alliance Product, after receipt of the respective Regulatory Approval, Aventis shall use commercially reasonable efforts, which efforts shall not be less than those used by Aventis with respect to the commercialization of other products of comparable commercial significance, to commercialize such Alliance Product for the relevant Indication in each Major Pharmaceutical Market; provided that, if Aventis reasonably determines that it would not be commercially viable to Aventis to commercialize an Alliance Product in a particular Major Pharmaceutical Market, then Aventis shall not be required to commercialize such Alliance Product in such Major Pharmaceutical Market. For the purpose of assessing the commercial reasonableness of such efforts, the effect on other competitive products of Aventis and its Affiliates of diverting resources to the commercialization of the Alliance Product shall not be considered. Aventis shall be solely responsible for bearing all costs and expenses in connection with the commercialization efforts described in this Section 3.5.

3.6 Termination of Commercialization of an Alliance Product. Subject to its obligations set forth in Section 3.5, Aventis may terminate the commercialization of any Alliance Product at any time upon prior notice to Targacept and, in such event, the Alliance Compounds contained in or comprising such Alliance Product shall be Alliance Terminated Compounds.

3.7 Commercialization Information and Reporting. From and after the First Commercial Sale of an Alliance Product, Aventis shall provide to Targacept on a semi-annual basis reasonably detailed reports regarding the worldwide commercialization of such Alliance Product. Aventis also shall respond to reasonable requests by Targacept for additional information regarding the commercialization of Alliance Products.

3.8 Applicability of Article 3 to Targacept. The provisions of this Article 3 shall apply to Targacept with respect to Targacept Development Compounds and Targacept Licensed Products to the same extent as such provisions apply to Aventis with respect to Alliance Development Compounds and Alliance Products.

ARTICLE 4

Information Exchange

4.1 Disclosure of Enabling Technology; Maintenance of Records Regarding Research and Inventions.

(a) During the Research Term, each Party shall disclose to the other the Know-How and Patent Rights of such Party for which letters patent have not yet been issued as the other Party reasonably needs to perform its obligations and assigned tasks under the Research and Development Plan; provided, however, that (i) in no event shall Targacept be required to disclose the Pentad Technology and (ii) all such disclosed Know-How and Patent Rights shall be considered Confidential Information.

(b) All work conducted by each Party in the course of the Research shall be thoroughly and accurately recorded, in detail and in good scientific manner and, to the extent reasonably practicable, in separate laboratory notebooks distinct from other work being conducted by such Party. On reasonable notice, and at reasonable intervals, each Party shall have the right to inspect and copy all such records maintained by the other Party reflecting Research Technology or work done under the Research and Development Plan, to the extent reasonably required to carry out its obligations and to exercise its rights hereunder. All such records shall, notwithstanding Section 1.16 and whether or not marked, constitute Confidential Information and shall be deemed the property of the Party creating such records.

(c) In order to protect the Parties' Patent Rights under U.S. law in any inventions conceived or reduced to practice during or as a result of the Research, each Party agrees to establish and support a policy that requires its employees to record and maintain all data and information developed in performing the Research in such a manner as to enable the Parties to use such records to establish the earliest date of invention and/or diligence to reduction to practice. At a minimum, the policy shall require such individuals to record all inventions generated by them in standard laboratory notebooks that are dated and corroborated by non-inventors on a regular, contemporaneous basis.

4.2 Information and Reports. Each Party shall disclose to the other Party from time to time during the Research Term any Know-How or Research Technology learned, acquired, discovered, invented or made by such Party, to the extent reasonably required by the other Party to carry out its obligations and to exercise its rights hereunder; provided, however, that in no event shall Targacept be required to disclose the Pentad Technology. Each Party will also provide the other with copies of the raw data generated in the course of the Research to the extent reasonably necessary for the other Party to carry out its obligations and to exercise its rights hereunder.

ARTICLE 5

Licenses

5.1 Licenses to Aventis. Subject to the other provisions of this Agreement:

(a) Targacept hereby grants to Aventis and its Affiliates a world-wide, paid-up right and license to use in any way the Targacept Patents, Targacept Know-How and Targacept Research Technology, and Targacept's rights in the Joint Patents and Joint Research Technology, as required to conduct the Research.

(b) Targacept hereby grants to Aventis and its Affiliates a world-wide, royalty-bearing right and license to use in any way the Targacept Patents, Targacept Know-How and Targacept Research Technology, and Targacept's rights in the Joint Patents and Joint Research Technology, as required to research and develop Alliance Development Compounds and Alliance Back-Up Compounds for use in the Field and to make, have made, import, use, sell and offer for sale Alliance Products for use in the Field. For the avoidance of doubt, Aventis' and its Affiliates' right to sell Alliance Products shall include the right to sell such Alliance Products under the foregoing license through distributors.

(c) Targacept hereby grants to Aventis and its Affiliates, free of charge, the right (i) to use and to disclose to Third Parties (provided that any such disclosure to Third Parties is made subject to confidentiality restrictions at least as strict as those set forth in this Agreement) all regulatory and clinical documentation and data with respect to Targacept Development Compounds and Targacept Licensed Products, as reasonably required by Aventis and its Affiliates in connection with the development and commercialization of Alliance Compounds and Alliance Products for use in the Field, and (ii) to reference all such regulatory and clinical documentation and data as reasonably necessary in connection with the development and commercialization of Alliance Compounds and Alliance Products for use in the Field, provided, however, that Aventis shall notify Targacept in writing in advance of each such disclosure or reference.

5.2 Licenses to Targacept. Subject to the other provisions of this Agreement:

(a) Aventis hereby grants to Targacept and its Affiliates a world-wide, paid-up right and license under the Aventis Patents, Aventis Know-How and Aventis Research Technology, and under Aventis' rights in the Joint Patents and Joint Research Technology, to conduct the Research.

(b) Aventis hereby grants to Targacept and its Affiliates, free of charge, the right (i) to use and to disclose to Third Parties (provided that any such disclosure to Third Parties is made subject to confidentiality restrictions at least as strict as those set forth in this Agreement) all regulatory and clinical documentation and data disclosed to Targacept under this Agreement, as reasonably necessary in connection with the development and commercialization of Targacept Development Compounds and Targacept Licensed Products in the Targacept Licensed Field, and (ii) to reference all such regulatory and clinical documentation and data as reasonably necessary in connection with the development and commercialization of pharmaceutical products for use in the Targacept Licensed Field, provided, however, that Targacept shall notify Aventis in writing in advance of each such disclosure or reference.

(c) With respect to each Alliance Terminated Compound that Targacept selects to research and develop as a Targacept Development Compound pursuant to Section 2.2(f) and/or to commercialize as a Targacept Licensed Product, Aventis hereby grants to Targacept an exclusive (including with regard to Aventis), royalty-bearing, world-wide, right and license under the Aventis Patents, Aventis Know-How and Aventis Research Technology, and under Aventis' rights in the Joint Patents and Joint Research Technology, to (x) research, develop, make, have made or use such Alliance Terminated Compound, and (y) make, have made, import, use, market, sell and offer for sale such Targacept Licensed Product in the Targacept Licensed Field (such license to become effective thirty (30) days after written notice of Targacept's selection has been delivered to Aventis), but in the event the Alliance Terminated Compound or the compound contained in a Targacept Licensed Product is licensed by Aventis from a Third Party only to the extent Aventis is entitled to sublicense such compound to a party other than Aventis and its Affiliates under the license agreement with such Third Party. For the avoidance of doubt, Targacept's right to sell Targacept Licensed Products shall include the right to sell through distributors. To the extent that Aventis is entitled under a license agreement with a Third Party to sublicense certain rights to a party other than Aventis and sub-licenses such rights to Targacept under this Section 5.2(c) with respect to any Targacept Development Compound or Targacept Licensed Product, Aventis shall exert all commercially reasonable efforts to keep each such Third Party license (and its right to sublicense the same) valid and in full force and effect throughout the Term and shall notify Targacept immediately upon becoming aware that such Third Party license (or its right to sublicense the same) is or may become no longer valid and in full force and effect.

(d) In addition to the license granted in Section 5.2(c), Aventis agrees to negotiate in good faith with Targacept other royalty-bearing licenses under the Aventis Patents, Aventis Know-How and Aventis Research Technology, and under Aventis' rights in the Joint Patents and Joint Research Technology, that may be useful to Targacept in conducting research and development and commercializing Targacept Development Compounds and Targacept Licensed Products for use in the Targacept Licensed Field.

5.3 Right to Sublicense. Each Party shall have the right to grant to Third Parties sublicenses under the licenses granted hereunder (except pursuant to Section 5.1(a) and Section 5.2(a)). Notwithstanding the foregoing, the grant of any such sublicenses shall not relieve the sublicensing Party of any of its obligations under this Agreement.

5.4 Restrictions. Neither Aventis nor any of its Affiliates shall research, develop, commercialize, or license any Third Party to research, develop or commercialize, any Alliance Development Compound, Alliance Back-Up Compound or Alliance Product, and neither Targacept nor any of its Affiliates shall research, develop, commercialize, or license any Third Party to research, develop or commercialize, any Targacept Development Compound or Targacept Licensed Product, in each case except pursuant to this Agreement.

5.5 Understanding Regarding Exclusivity and Restrictions. The parties agree that, given the high costs and significant risks involved in discovering and developing pharmaceutical products, and given that the parties will be exchanging Confidential Information in order to perform the Research and to conduct the development and commercialization efforts, the restrictions set forth herein represent a fair and efficient means to accomplish their cooperative objectives.

ARTICLE 6

Management of Research, Development and Commercialization

6.1 Creation and Structure of the ARC. As of the Effective Date, the Parties shall create an ARC of **[********]** to facilitate the Research and to manage and monitor the activities conducted by the Parties pursuant to the Research and Development Plan. The ARC shall consist of an equal number of representatives appointed by each Party and shall include senior decision-makers of such Party.

6.2 Responsibilities of the ARC. The ARC shall be the primary vehicle for interaction between the Parties with respect to the Research and development hereunder. Without limiting the foregoing, the ARC shall: (a) confirm the screening program and the criteria to be applied in identifying Nicotinic Compounds as set forth in the Research and Development Plan and propose such compounds to the SRC (or otherwise to Aventis) for nomination as Alliance Compounds; (b) propose those Nicotinic Compounds that have otherwise met the criteria for an Alliance Compound for nomination as an Alliance Compound by the SRC (or otherwise by Aventis); (c) agree on an Alliance Compound optimization program and the criteria to be applied in identifying development candidates; (d) set timelines and monitor progress against timelines and agree on any remedial action required to progress screening and optimization in a timely manner; (e) agree on the number of FTEs to be budgeted for Targacept's obligations in connection with the Research; (f) review and comment all Development Plans and any updates thereto; (g) recommend to the SRC (or otherwise to Aventis) certain Alliance Compounds for development as Alliance Development Compounds (or Alliance Back-Up Compounds); and (h) monitor the progress of the development efforts.

6.3 Composition of the ARC. Within fifteen (15) days after the Effective Date, the Parties shall notify each other in writing of the names of their initial representatives on the ARC. Each Party may replace its ARC representatives at any time upon written notice to the other. A Party's representative on the ARC shall be authorized to act on behalf of such Party until written notice of his or her removal is given to the other Party. A Party's representative on the ARC may resign at any time upon written notice to the Parties. Such resignation shall take effect at the time specified therein, and unless otherwise specified therein, no acceptance of such resignation shall be necessary to make it effective. Upon the resignation of a Party's representative, that Party shall appoint a replacement representative. A chairperson for the ARC shall be selected from among the members of the ARC, who shall serve for a term of one year. The right to select the chairperson shall rotate between Aventis and Targacept. Aventis shall select the first chairperson.

6.4 Duration of the ARC. The ARC shall exist so long as Aventis continues to develop any Alliance Development Compound for any Indication; provided that if Aventis is no longer developing any Alliance Development Compound or if this Agreement is terminated pursuant to Sections 11.2 or 11.3, the ARC shall automatically dissolve, unless Targacept develops a Targacept Development Compound in which case the ARC shall remain in place and the Parties shall mutually adapt the provisions pertaining to the responsibilities of the ARC as required for a collaboration with respect to Targacept Development Compounds (only) as provided for herein.

6.5 Meetings of the ARC. The ARC shall meet at such times as it shall deem reasonably necessary to accomplish its objectives. It is anticipated, but shall not be required, that the meetings of the ARC coincide with the meetings of the Executive Research Committee created under the Original Agreement and that meetings shall alternate between the offices of Targacept and Aventis consistent with the Original Agreement. An ARC member of the Party hosting the meeting shall serve as Secretary of that meeting. The Secretary of the meeting shall use his or her best efforts to prepare and distribute to all members of the ARC minutes of the meeting sufficiently in advance of the next meeting to allow adequate review and comment prior to the meeting. Such minutes shall provide a description in reasonable detail of the discussions had at the meeting and a list of any actions, decisions or determinations approved by the ARC. Minutes of any meeting shall be approved or disapproved, and revised as necessary, at the next meeting. Final minutes of each meeting shall be distributed to the members of the ARC by the Chairperson. Each Party shall disclose to the other proposed agenda items in advance of each meeting of the ARC. The ARC may also convene, or be polled or consulted, from time to time by means of telecommunications, video conferencing or written correspondence, as deemed necessary or appropriate. The ARC shall adopt such other rules as shall be necessary or convenient for its work.

6.6 Decisions of the ARC. All decisions of the ARC shall be made by the unanimous vote of all ARC members participating in the meeting; provided, that at least one representative of each of Targacept and Aventis is then present. In the event that the members of the ARC cannot agree with respect to a particular issue, such issue shall be referred to the President of Targacept and the Senior Vice President responsible for Aventis' research and development activities in France, who shall meet within thirty (30) days in a good faith effort to resolve the dispute. In the event such officers cannot agree on a resolution of the dispute within thirty (30) days, the matter shall be submitted to mediation in accordance with Section 13.10, unless this Agreement specifically directs that such matter is specifically within the discretion or power of one Party or the other, in which case the matter shall be resolved by such Party.

6.7 Project Leaders. Aventis and Targacept shall each appoint one or more persons to coordinate their respective activities under the Research ("Project Leaders"). In advance of each meeting of the ARC, the Project Leaders shall use their best efforts to prepare and distribute to each member of the ARC a written report which shall (i) evaluate the work performed under the Research in relation to the goals of such program, and (ii) state any recommendation of the Project Leaders to modify, alter the resources of or revise the priorities of the Research.

6.8 Expenses. Each Party shall be responsible for all travel and related costs for its representatives to attend meetings of, and otherwise participate on, the ARC.

ARTICLE 7

Payments to Targacept

7.1 Milestone Payments. Aventis shall make non-refundable payments to Targacept within thirty (30) days after the occurrence of each of the events listed below (each, a "Milestone Event"), in the amount provided. For the avoidance of doubt, Aventis will not pay the same milestone more than once for the same Indication.

(a) For each Primary Indication:

	Milestone Event	Payment Amount
1:	[********]	[********]
2:	[********]	[********]
3:	[********]	[********]
4:	[********]	[********]
5:	[********]	[********]

(b) For each other disorder of the central nervous system:

	Milestone Event	Payment Amount
1:	[********]	[********]
2:	[********]	[********]
3:	[********]	[********]
4:	[********]	[********]
5:	[********]	[********]

(c) As used in this Section 7.1, the following definitions apply:

(1) “Initiation,” with respect to a particular phase, means when the first patient has been enrolled for the trials of such phase.

(2) “Filing” means a filing that has been accepted for submission by the relevant regulatory authority.

7.2 Royalty Payments. Subject to the terms and conditions of this Agreement, Aventis shall pay to Targacept royalties in an amount equal to **[********]** of the Net Sales in any country of each Alliance Product during the Royalty Term. The Parties agree that this royalty rate reflects an efficient and reasonable blended allocation of the values of the worldwide Know-How and Patent Rights and Research Technology licensed by Targacept hereunder or, in the case of an Alliance Terminated Compound licensed to Targacept under Section 5.2(c), by Aventis hereunder.

7.3 Term of Royalty Obligation. The “Royalty Term” for a particular Alliance Product in a particular country shall commence with the First Commercial Sale of such Alliance Product in such country and shall terminate upon the later of (a) the expiration of the last-to-expire issued Aventis Patent in such country, if any, for which at least one Valid Claim exists covering the sale of such Alliance Product or its use in the Field or (b) the **[********]** anniversary of the First Commercial Sale of such Alliance Product in such country.

7.4 Timing of Payment of Royalties. Royalties shall be payable on a quarterly basis, within sixty (60) days after the end of each calendar quarter, based upon the Net Sales during each calendar quarter, commencing with the calendar quarter in which the First Commercial Sale of an Alliance Product is made. Royalties shall be calculated in accordance with United States generally accepted accounting principles, consistently applied, and in accordance with the terms of this Agreement.

7.5 Obligation to Pay Royalties. Aventis' obligation to pay royalties to Targacept under this Article 7 is imposed only once with respect to the same unit of Alliance Product regardless of the number of Aventis Patents pertaining thereto.

7.6 Statement of Royalties. Each royalty payment to Targacept hereunder shall be accompanied by a statement showing the amounts of gross sales and Net Sales of each Alliance Product sold by Aventis on a country-by-country basis during such quarter and the amount of royalties due on such Net Sales pursuant to this Agreement.

7.7 Targacept Payments. In consideration for the licenses granted to Targacept under Section 5.2(c), with respect to each such Targacept Development Compound and Targacept Licensed Product pursued by Targacept, Targacept shall make the milestone payments and royalty payments described in Sections 7.1 and 7.2, respectively, to Aventis to the same extent (and at the same times) as Aventis would be obligated to make such payments to Targacept if such Targacept Development Compound and Targacept Licensed Product were an Alliance Development Compound and Alliance Product being developed and commercialized by Aventis. The provisions of this Article 7 shall apply to payments by Targacept with respect to Targacept Development Compounds and Targacept Licensed Products to the same extent as such provisions apply to payments by Aventis with respect to Alliance Development Compounds and Alliance Products.

7.8 Third Party Licenses. If (i) any unexpired Third Party patent(s) claiming a Targacept Development Compound licensed to Targacept under Section 5.2(c) and/or a Targacept Licensed Product, or its manufacture or use, exist(s) in a country where a Targacept Licensed Product is being manufactured, used or sold, (ii) it should prove in Targacept' bona fide, good faith judgment impractical or impossible for it or its Affiliates or Sublicensees to commence or continue the manufacture, use or sale of such Targacept Licensed Product in such country without obtaining a license under such Third Party patent that permits Targacept or its Affiliates or Sublicensees to continue to pursue the discovery, development, manufacture and commercialization of such Targacept Licensed Product (a "Third Party License") and (iii) Aventis neither delivers to Targacept an opinion without material qualifications from nationally recognized patent counsel in such country to the effect that such manufacture, use or sale does not and will not infringe such Third Party patent(s) nor gives written notice to Targacept within ninety (90) days after Targacept delivers notice to Aventis of such unexpired Third Party patent that Aventis will negotiate with the Third Party a Third Party License, Targacept shall have the right to negotiate and obtain a Third Party License on commercially reasonable terms, with the cost of such license (including, without limitation, all license fees, milestone payments and royalties) to be set off against any payments owed in respect of such Targacept Development Compound (or Targacept Licensed Product) by Targacept to Aventis pursuant to Sections 7.1, 7.2 or 7.7. If (i) any unexpired Third Party patent(s) claiming Targacept Know-How or Targacept Research Technology licensed to Aventis under this Agreement exist(s) in a country where an Alliance Product is being manufactured, used or sold, (ii) it should prove in Aventis' bona fide, good faith judgment impractical or impossible for it or its Affiliates or

Sublicensees to commence or continue the manufacture, use or sale of such Alliance Product in such country without obtaining a license under such Third Party patent that permits Aventis or its Affiliates or Sublicensees to continue to pursue the discovery, development, manufacture and commercialization of such Alliance Product (a "Third Party License") and (iii) Targacept does neither deliver to Aventis an opinion without material qualifications from nationally recognized patent counsel in such country to the effect that such manufacture, use or sale does not and will not infringe such Third Party patent(s) nor gives written notice to Aventis within ninety (90) days after Aventis delivers notice to Targacept of such unexpired Third Party patent that Targacept will negotiate with the Third Party a Third Party License, Aventis shall have the right to negotiate and obtain a Third Party License on commercially reasonable terms, with the cost of such license (including, without limitation, all license fees, milestone payments and royalties) to be set off against any payments owed in respect of such Alliance Development Compound or Alliance Product by Aventis to Targacept pursuant to Sections 7.1 and 7.2 hereinabove.

7.9 Mode of Payment. All payments hereunder, except for milestone payments and FTE payments to Targacept hereunder which are to be paid in United States Dollars in accordance with Sections 7.1 and 2.6, respectively, shall be made by wire transfer in Euro in the requisite amount to such bank account as the receiving Party may from time to time designate by written notice to the other Party. Payments shall be free and clear of any taxes (other than withholding and other taxes required to be remitted by the paying Party), fees or charges, to the extent applicable. If Aventis receives revenue from sales of Alliance Products, or if Targacept receives revenue from sales of Targacept Licensed Products, that, in either case, are invoiced in Euro, the Net Sales and the amounts paid by Aventis or Targacept hereunder shall be expressed in Euro. With respect to Net Sales invoiced in currency other than Euro, Net Sales shall be expressed in the domestic currency of the entity making the sale, together with the Euro equivalent, calculated using the arithmetic average of the spot rates on the last business day of each month of the calendar quarter in which the Net Sales were made. The "closing mid-point rates" found in the "Euro spot forward against the Euro" table published by The Financial Times or any other publication agreed by the Parties shall be used as the source of the spot rates to calculate the average set forth in the preceding sentence.

7.10 Records Retention. For three (3) years after each sale of each Alliance Product, and for such longer period as may be required by law, Aventis shall keep (and shall ensure that its Affiliates and Sublicensees shall keep) complete and accurate books and records pertaining to the sale of all Alliance Products in sufficient detail to confirm the accuracy of calculations of payments due to Targacept hereunder.

7.11 Audits.

(a) Upon the written request of Targacept and not more than once in each calendar year, Aventis shall permit an independent certified public accounting firm of nationally recognized standing appointed by Targacept, at Targacept's expense, to have access during normal business hours, and upon reasonable prior written notice, to such of the records of Aventis as may be reasonably necessary to verify the accuracy of the royalty reports hereunder for any calendar year ending not more than thirty-six (36) months prior to the date of such request. The accounting firm shall disclose to Targacept and Aventis whether the royalty reports are correct or incorrect, the basis for its finding and the specific details concerning any discrepancies.

(b) If such accounting firm correctly concludes that additional royalties were owed during such period, Aventis shall pay the additional royalties, with interest from the date originally due at an annual rate equal to the 30-day London Interbank Offered Rate (Libor) plus fifty (50) basis points, within thirty (30) days after the date Targacept delivers to Aventis such accounting firm's written report so correctly concluding. **[********]** In the event that there was an over-payment by Aventis, Targacept shall promptly (but in no event later than thirty (30) days after Targacept's receipt of such accounting firm's written report) return to Aventis the excess amount.

(c) Aventis shall include in each sublicense granted by it pursuant to this Agreement a provision requiring the Sublicensee to make reports to Aventis, to keep and maintain records of sales made pursuant to such sublicense and to grant access to such records by Targacept's independent accountant to the same extent required by Aventis under this Agreement.

(d) Targacept shall treat all information subject to review under this Section 7.10 in accordance with the confidentiality provisions of Article 9 and shall cause its accounting firm to enter into an acceptable confidentiality agreement with Aventis obligating such firm to retain all such financial information in confidence pursuant to such confidentiality agreement; provided, however, that in no event shall such confidentiality agreement prevent the accounting firm from disclosing to Targacept the information contemplated by Section 7.10(a).

7.12 Taxes. The Party receiving royalties and other payments under this Agreement shall pay any and all taxes levied on account of such payment. If any taxes are required to be withheld by the paying Party, it shall (i) deduct such taxes from the remitting payment, (ii) timely pay the taxes to the proper taxing authority, and (iii) send proof of payment to the other Party and certify its receipt by the taxing authority within sixty (60) days following such payment.

ARTICLE 8

Inventions and Patents

8.1 Title to Research Technology. Except as otherwise expressly provided in Article 5 and this Section 8.1:

(a) the Parties shall jointly own all right, title to and interest in all Joint Research Technology and the Patent Rights related to Joint Research Technology;

(b) Targacept shall own all right, title to and interest in all Targacept Research Technology and the Patent Rights related to Targacept Research Technology; and

(c) Aventis shall own all right, title to and interest in all Aventis Research Technology and the Patent Rights related to Aventis Research Technology.

8.2 Patent Prosecution. The Parties expect that patent applications will be filed as required to secure suitable Patent Rights covering Alliance Compounds and inventions that are within the Research Technology or are otherwise applicable to the Field. The Parties agree as follows with respect to the filing and prosecution of such applications.

(a) Aventis shall be responsible for obtaining, prosecuting and/or maintaining throughout the world Patent Rights covering the Aventis Research Technology solely owned by Aventis pursuant to Section 8.1(c) (including, without limitation, any Alliance Terminated Compound licensed to Targacept as provided in Section 5.2(c)) and Joint Research Technology jointly owned by Aventis and Targacept pursuant to Section 8.1(a) and shall bear all of the costs for filing, prosecuting and/or maintaining same; provided that Targacept shall reimburse Aventis for all reasonable costs actually incurred to file, prosecute and/or maintain Patent Rights covering any Alliance Terminated Compound licensed to Targacept as provided in Section 5.2(c) that are incurred after the effective date of Targacept's license thereof. Targacept shall be responsible for obtaining, prosecuting and/or maintaining throughout the world Patent Rights covering Targacept Research Technology solely owned by Targacept pursuant to Section 8.1(b) and shall bear all of the costs for filing, prosecuting and/or maintaining same.

(b) Each Party shall regularly provide the other Party with copies of all patent applications filed hereunder and other material submissions and correspondence with the patent offices, in sufficient time to allow for review and comment by the other Party. In addition, such filing Party shall provide the other Party and its patent counsel with an opportunity to consult with the Party and its patent counsel regarding the filing and contents of any such application, amendment, submission or response, and the advice and suggestions of the other Party and its patent counsel shall be taken into reasonable consideration by such Party and its legal counsel in connection with such filing. Each Party shall also provide the other Party with copies of any patentability search reports made by patent counsel with respect to inventions in the Research Technology, including patents located, a copy of each patent application, and each patent that issues thereon.

(c) If Aventis elects not to pursue obtaining or prosecuting of Patent Rights, or to support the PCT International filing or the continued prosecution or maintenance of any Patent Rights, in a particular country for which it has the initial right or obligation to file pursuant to Section 8.2(a), then it shall notify Targacept promptly in writing and in sufficient time to enable Targacept to meet any applicable deadlines. Without limiting the generality of the foregoing, with respect to any Patent Rights scheduled for international filing with respect to such country, Aventis shall notify Targacept in writing at least ninety (90) days before the date required for the convention year filing of such patent application or any other deadline date by which an action must be taken to establish or preserve patent rights in such country. Targacept shall then have the right, but not the obligation, to pursue the filing or support the continued prosecution or maintenance of such Patent Rights, at its expense, in such country. If Targacept does so elect to pursue such filing or continue such support, then it shall notify Aventis of such election, and Aventis shall (i) reasonably cooperate with Targacept in this regard, and (ii) promptly release or assign, as the case may be, to Targacept, without consideration, all right, title and interest in such Patent Rights in such country.

8.3 Enforcement of Patents.

(a) If either Party considers that any Aventis Patent claiming an Alliance Compound, Alliance Product, Alliance Terminated Compound or Targacept Licensed Product, or the manufacture or use thereof, is being infringed by Third Party's activities in the Field, it shall notify the other Party and provide it with any evidence of such infringement which is reasonably available. Aventis shall have the first opportunity at its own expense to attempt to remove such infringement by commercially appropriate steps, including filing an infringement suit or taking other similar action. In the event that Aventis fails to take commercially appropriate steps with respect to an infringement that is likely to have a material adverse effect on the sale of Alliance Products (or Targacept Licensed Products, as the case may be) within **[********]** following notice of such infringement, Targacept shall have the right to do so at its expense; provided that (i) if Aventis has commenced negotiations with an alleged infringer of the patent for discontinuance of such infringement within such **[********]** period, Aventis shall have an additional **[********]** to conclude its negotiations before Targacept may bring suit for such infringement and (ii) notwithstanding the foregoing, in the case of an Alliance Terminated Compound licensed by Targacept under Section 5.2(c) or a Targacept Licensed Product, Targacept shall have all of the rights of Aventis set forth in this Section 8.3 with respect to such Alliance Terminated Compound or Targacept Licensed Product and Aventis shall have all of the rights of Targacept set forth in this Section 8.3 with respect to such Alliance Terminated Compound or Targacept Licensed Product. If required by law for the prosecuting Party to prosecute any suit referred to in this Section 8.3, the other Party shall join such suit as a party, at the prosecuting Party's expense. In no event shall either Party be required to enforce any Patent Right against more than one entity or in more than one country at any one time.

(b) The Party not enforcing the applicable Patent Rights shall provide commercially reasonable assistance to the other Party, including joining in infringement suits, providing access to relevant documents and other evidence, making employees available and seeking to obtain necessary Third Party consents, subject to the enforcing Party's reimbursement of any out-of-pocket expenses incurred by the non-enforcing Party.

(c) Any amounts recovered pursuant to Section 8.3(a), whether by settlement or judgment, shall be allocated in the following order: (i) to reimburse Aventis and Targacept for their reasonable out-of-pocket expenses in making such recovery (which amounts shall be allocated pro rata if insufficient to cover the totality of such expenses); and (ii) the portion of the award representing lost profits shall be allocated between Aventis and Targacept so that the ratio of Aventis' portion to Targacept's portion is equal to the ratio of Aventis' historic profits on Net Sales in the Indication to Targacept's royalties in the Indication, provided that if the infringement activity on which such recovery is based included actions outside the Field, then the Parties shall reasonably agree on an appropriate allocation of such recovery between activities in the Field and activities outside the Field (which will not bear a royalty). Any amounts recovered by Targacept pursuant to actions under Section 8.3(a) shall be allocated in the following order: (i) to reimburse Targacept and Aventis for their reasonable out-of-pocket expenses in making such recovery (which amounts shall be allocated pro rata if insufficient to cover the totality of such expenses); and (ii) the remainder shall be divided **[********]** to Targacept and **[********]** to Aventis.

(d) Except for Third Party infringement activities within the Field covered by the provisions of Section 8.3(a), each Party shall retain the sole and exclusive right to enforce its Patent Rights against all infringers at its sole cost and expense.

8.4 Third Party Patent Rights. If any warning letter or other notice of infringement is received by a Party, or action, suit or proceeding is brought against a Party, alleging infringement of a Patent Right of any Third Party in the manufacture, use or sale of an Alliance Product or Targacept Licensed Product or in conducting the Research, the Parties shall promptly discuss and decide on an appropriate course of action.

ARTICLE 9

Confidentiality

9.1 Confidentiality Obligations. Each Party agrees that, for the Term and for five (5) years thereafter, such Party shall keep, and shall ensure that its officers, directors, employees and agents keep, completely confidential and shall not publish or otherwise disclose and shall not use for any purpose except as expressly permitted hereunder any Confidential Information furnished to it by the other Party pursuant to this Agreement (including, without limitation, Know-How or Research Technology of the disclosing Party) or any Joint Research Technology. The foregoing obligations shall not apply to any information to the extent that it can be established by such receiving Party that such information:

(a) was already known to the receiving Party or any of its Affiliates, other than under an obligation of confidentiality, at the time of disclosure;

(b) was generally available to the public or otherwise part of the public domain at the time of its disclosure to the receiving Party;

(c) became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the receiving Party or any of its Affiliates in breach of this Agreement;

(d) was subsequently lawfully disclosed to the receiving Party by a Third Party other than in contravention of a confidentiality obligation of such Third Party to the disclosing Party; or

(e) was developed or discovered by employees of the receiving Party or any of its Affiliates who had no access to the Confidential Information of the disclosing Party.

Each Party shall have written agreements from each of its employees, agents, and consultants who perform substantial work on the Research or development, which agreements shall obligate such persons to similar obligations of confidentiality and to assign to such Party all inventions made by such persons during the course of performing the Research. Each Party may disclose the other’s Confidential Information to the extent such disclosure is reasonably necessary in filing or prosecuting patent applications, prosecuting or defending litigation or as otherwise required by legal process, complying with applicable governmental regulations, making a permitted sublicense of its rights hereunder or conducting clinical trials or otherwise in performing its obligations or exercising its rights hereunder; provided, that if a Party is required to make any such disclosure of the other Party’s Confidential Information, it will give reasonable advance notice to such other Party of such disclosure requirement, will cooperate with such other Party in the efforts of such other Party to secure confidential treatment of such Information prior to its disclosure, and, save to the extent inappropriate in the case of patent applications, will use all reasonable efforts to secure confidential treatment of such information prior to its disclosure (whether through protective orders or confidentiality agreements or otherwise). In addition, each Party shall have the right to disclose to its Affiliates Confidential Information of the other Party, provided that such Party shall ensure that its Affiliates maintain the confidentiality of such information in accordance with the provisions of this Section 9.1.

9.2 Publications.

(a) Until completion of Phase I clinical development, either Party may publish or present any information regarding the Research or any results of the Research or development studies carried out on any Alliance Development Compound, Alliance Back-Up Compound or Targacept Development Compound only upon prior written approval of the other Party. Therefore, each Party shall provide to the other Party for review any proposed abstracts, manuscripts or summaries of presentations that cover the results of the Research and/or Phase I clinical development as described hereinbefore. Each Party shall designate a person who shall be responsible for approving such publications. Such designated person shall respond in writing promptly and in no event later than sixty (60) days after receipt of the proposed material with either approval of the proposed material or a specific statement of concern, based upon either the need to seek patent protection or concern regarding competitive disadvantage arising from the proposed publication. In the event of concern, the submitting Party agrees not to submit such publication or to make such presentation that contains such information until these issues are resolved. Furthermore, with respect to any proposed abstracts, manuscripts or summaries of presentations by investigators or other Third Parties, such materials shall be subject to review under this Section 9.2(a) to the same extent as if such abstracts, manuscripts or summaries of presentations were by Aventis or Targacept (as the case may be).

(b) With respect to any information or results regarding any Alliance Development Compound or Alliance Back-Up Compound achieved after completion of Phase I clinical development or any Alliance Product, Aventis shall be entitled to publish such information and results at its sole discretion.

(c) With respect to any information or results regarding any Targacept Development Compound or corresponding back-up compound, achieved after completion of Phase I clinical development of Targacept Licensed Products, Targacept shall be entitled to publish such information and results at its sole discretion.

(d) Notwithstanding the provisions of Sections 9.2(a), (b) and (c), each Party also agrees to delete from any such proposed publication any Confidential Information of the other Party upon its reasonable request. For that purpose, the Party seeking to publish shall provide the other Party at least sixty (60) days prior to any desired publication with a copy of the document to be published. In the event the receiving Party does not notify in writing to the other Party the Confidential Information to be deleted from the text of the desired publication within forty-five (45) days as of receipt of the desired publication, then such Party shall be deemed to have agreed to the desired publication as submitted to it by the other Party.

(e) In any publication permitted under this Section 9.2, each Party shall acknowledge its collaboration with the other Party under this Agreement.

9.3 Press Releases. Except to the extent required by law or as otherwise permitted hereunder, neither Party shall make any public announcements concerning this Agreement or the subject matter hereof without the prior written consent of the other, which shall not be unreasonably withheld. Notwithstanding the foregoing, the Parties agree that each Party may desire or be required to issue press releases relating to the Agreement or activities thereunder, and the Parties agree (i) to consult with each reasonably and in good faith with respect to the text and timing of such press releases and (ii) to provide the other Party with a reasonable opportunity, in the light of the circumstances, to review such press release prior to its being made. Furthermore, each Party shall give the other Party a reasonable opportunity, to the extent practicable, to review all filings with the United States Securities and Exchange Commission describing the terms of this Agreement prior to submission of such filings, and shall give reasonable consideration to any comments received from the non-filing Party relating to such filing, including without limitation the provisions of this Agreement for which confidential treatment should be sought.

ARTICLE 10

Indemnification

10.1 Indemnification by Aventis. Aventis shall indemnify, defend and hold Targacept and its Affiliates and each of their respective agents, employees, officers and directors (collectively, the "Targacept Indemnitees") harmless from and against any and all liability, damage, loss, cost or expense (including reasonable attorneys' fees) in connection with any and all suits, investigations, claims or demands by Third Parties (collectively, the "Losses") arising from or occurring as a result of: (a) any breach by Aventis of this Agreement; (b) Aventis' negligent performance of its obligations under this Agreement; and/or (c) the manufacture, use or sale of any Alliance Compounds or any product containing any Alliance Compound (including, without limitation, Alliance Products) by Aventis or its Affiliates, Sublicensees, distributors or agents; and/or (d) the manufacture, use or sale of any Targacept Development Compound or any product containing any Targacept Development Compound (including, without limitation, Targacept Licensed Products) by Aventis or its Affiliates, Sublicensees, distributors or agents; except, in each case, for those Losses for which Targacept has an obligation to indemnify pursuant to Section 10.2, as to which Losses each Party shall indemnify the other to the extent of their respective liability for the Losses. Notwithstanding any provision hereof to the contrary, Aventis shall have no obligation to indemnify any Targacept Indemnitee against any Losses in connection with any product liability claim arising out of the manufacture, use or sale of any product by Targacept and its Affiliates, Sublicensees, distributors and agents, regardless of whether such claim sounds in tort, contract, strict liability, products liability or any other legal theory.

10.2 Indemnification by Targacept. Targacept shall indemnify, defend and hold Aventis and its Affiliates and each of their respective agents, employees, officers and directors (collectively, the "Aventis Indemnitees") harmless from and against any Losses arising from or occurring as a result of: (a) any breach by Targacept of this Agreement; (b) Targacept's negligent performance of its obligations under this Agreement; (c) the manufacture, use or sale of any Targacept Development Compound or any product containing any Targacept Development

Compound (including, without limitation, Targacept Licensed Products) by Targacept or its Affiliates, Sublicensees, distributors or agents; and/or (d) the manufacture, use or sale of any Alliance Compounds or any product containing any Alliance Compound (including, without limitation, Alliance Products) by Targacept or its Affiliates, Sublicensees, distributors or agents; except, in each case, for those Losses for which Aventis has an obligation to indemnify Targacept pursuant to Section 10.1, as to which Losses each Party shall indemnify the other to the extent of their respective liability for the Losses. Notwithstanding any provision hereof to the contrary, Targacept shall have no obligation to indemnify any Aventis Indemnitee against any Losses in connection with any product liability claim arising out of the manufacture, use or sale of any product by Aventis and its Affiliates, Sublicensees, distributors and agents, regardless of whether such claim sounds in tort, contract, strict liability, products liability or any other legal theory.

10.3 Notification of Claims; Conditions to Indemnification Obligations. As a condition to a Party's right to receive indemnification under this Article 10, it shall: (a) promptly notify the other Party as soon as it becomes aware of a claim or action for which indemnification may be sought pursuant hereto (provided that the failure of an indemnified Party to notify the indemnifying Party on a timely basis will not relieve the indemnifying Party of any liability that it may have to the indemnified Party unless the indemnifying Party demonstrates that the defense of such action is materially prejudiced by the indemnified Party's failure to give such notice); (b) cooperate with the indemnifying Party in the defense of such claim or suit; and (c) permit the indemnifying Party to control the defense of such claim or suit, including without limitation the right to select defense counsel. In no event, however, may the indemnifying party compromise or settle any claim or suit in a manner which admits fault or negligence on the part of the indemnified Party without the prior written consent of the indemnified party. The indemnifying Party shall have no liability under this Article 10 with respect to claims or suits settled or compromised without its prior written consent.

ARTICLE 11

Termination and Expiration

11.1 Term and Termination. This Agreement shall commence upon the Effective Date and, unless earlier terminated as provided herein, shall expire upon the last day of the Term. The obligation of Aventis (and, in the case of Targacept Licensed Products, Targacept) to pay royalties shall expire on a product-by-product and country-by-country basis as provided in Section 7.3. Upon expiration of all royalty obligations with respect to a particular Alliance Product, the licenses granted to Aventis under Section 5.1(b) shall expire, and Aventis shall automatically thereafter be granted a nonexclusive, fully paid-up license to continue to use the Targacept Know- How and Targacept Research Technology, and Targacept's rights in Joint Research Technology, to make, have made, use, import, sell and offer for sale such Alliance Product worldwide. Upon expiration of all royalty obligations with respect to a particular Targacept Licensed Product, the licenses granted to Targacept under Section 5.2(c) with respect to such Targacept Licensed Product shall expire, and Targacept shall automatically thereafter be granted a nonexclusive, fully paid-up license to continue to use the Aventis Know-How and Aventis Research Technology, and Aventis' rights in Joint Research Technology, to make, have made, use, import, sell and offer for sale such Targacept Licensed Product worldwide.

11.2 Termination of the Agreement upon Material Breach.

(a) Failure by a Party to comply in any material respect with any of its material obligations contained herein to be satisfied after the Research Term shall entitle the Party not in default to give to the Party in default notice specifying the nature of the default, requiring it to make good or otherwise cure such default, and stating its intention to terminate if such default is not cured. If such default is not cured within sixty (60) days after the receipt of such notice (or, if such default cannot be cured within such sixty (60) day period, if the Party in default does not commence and diligently continue actions to cure such default), the Party not in default shall be entitled, without prejudice to any of its other rights conferred on it by this Agreement, and in addition to any other remedies available to it by law or in equity, to terminate this Agreement (subject to Sections 11.2(c) and 11.2(d)); provided, however, that such right to terminate shall be stayed in the event that, during such sixty (60) day period, the Party alleged to have been in default shall have initiated dispute resolution in accordance with Section 13.10 with respect to the alleged default, which stay shall last so long as the initiating Party diligently and in good faith cooperates in the prompt resolution of such dispute resolution proceedings.

(b) The right of a Party to terminate this Agreement shall not be affected in any way by its waiver or failure to take action with respect to any prior default.

(c) In the event that Aventis is developing or commercializing one or more Alliance Development Compound(s) and/or Alliance Product(s) for use in the Field, and (i) Aventis fails to comply in any material respect with any of its material obligations contained in this Agreement in connection with a particular Alliance Development Compound or Alliance Product, then Targacept shall be entitled to terminate this Agreement only with respect to that particular Alliance Development Compound or Alliance Product, in which case such Alliance Development Compound or Alliance Product shall become an Alliance Terminated Compound hereunder, or (ii) Targacept fails to comply in any material respect with any of its material obligations contained in this Agreement in connection with a particular Alliance Development Compound or Alliance Product, then Aventis shall be entitled to terminate this Agreement only with respect to that particular Alliance Development Compound or Alliance Product. This Section 11.2(c) is expressly subject to the cure period set forth in Section 11.2(a).

(d) In the event that Targacept is developing or commercializing one or more Targacept Development Compound(s) and/or Targacept Licensed Product(s) for use in the Targacept Licensed Field, and (i) Targacept fails to comply in any material respect with any of its material obligations contained in this Agreement in connection with a particular Targacept Development Compound or Targacept Licensed Product, then Aventis shall be entitled to terminate this Agreement only with respect to that particular Targacept Development Compound or Targacept Licensed Product, or (ii) Aventis fails to comply in any material respect with any of its material obligations contained in this Agreement in connection with a particular Targacept Development Compound or Targacept Licensed Product, then Targacept shall be entitled to terminate this Agreement only with respect to that particular Targacept Development Compound or Targacept Licensed Product. This Section 11.2(d) is expressly subject to the cure period set forth in Section 11.2(a).

11.3 Termination of the Agreement by Aventis or Targacept. Each of Aventis and Targacept may terminate this Agreement in its entirety upon thirty (30) days prior written notice given to the other Party within thirty (30) days after the end of the Research Term if, and only if, the SRC (or Aventis) has not nominated any Alliance Compounds.

11.4 Consequences of Termination.

(a) Upon termination of this Agreement (but not upon expiration of the Term), in case of partial termination of this Agreement with respect to the compound(s) and/or product(s) subject to such termination and in case of termination of this Agreement as a whole with respect to all compounds and products being subject to this Agreement, the following shall apply with respect to the compounds and/or products with respect to which the Agreement is being terminated: (i) each Party shall promptly return all relevant records and materials in its possession or control containing or comprising the other Party's Know-How and Confidential Information and to which the former Party does not retain rights hereunder; (ii) all licenses granted by each Party to the other under Article 5 shall terminate except as expressly provided in Section 11.5(b) or otherwise herein; (iii) each Party shall provide the other Party with copies of all reports and data, including preclinical data and reports, obtained by such Party pursuant to this Agreement that relate to Alliance Compounds or Targacept Development Compounds and that have not otherwise been provided to such Party, within sixty (60) days after such termination; provided, however, that a Party shall not be obligated to provide the foregoing copies in the case where such Party terminates this Agreement in its entirety under Section 2.8 or Section 11.2 and provided further that the provision to a Party of the foregoing copies shall not be deemed to create any additional rights or licenses in any such copies or the intellectual property embodied therein, and such Party's rights to use or exploit such information and rights shall be solely as expressly granted elsewhere in this Agreement and, with respect to Joint Research Technology and Joint Patents, those rights of such Party as a joint owner); and (iv) any and all claims and payment obligations that accrued prior to the date of such termination shall survive such termination.

(b) Notwithstanding the provisions of Section 11.5(b), in the event that Targacept terminates this Agreement in its entirety pursuant to Section 2.8 or Section 11.2, then the restrictions imposed upon it pursuant to, and its obligations under, Sections 2.11 and 5.4 shall terminate.

(c) Notwithstanding the provisions of Section 11.5(b), in the event that Aventis terminates this Agreement in its entirety pursuant to Section 2.8 or Section 11.2, then the restrictions imposed upon it pursuant to, and its obligations under, Sections 2.11 and 5.4 shall terminate.

(d) In addition to the provisions of Section 11.5(b), in the event that both (1) Aventis terminates this Agreement pursuant to Section 11.3 and (2) a "Collaboration Compound" (as defined under the Original Agreement) is being pursued for development and commercialization under the Original Agreement, (i) all of the provisions of Article 7 shall survive such termination and (ii) for purposes of determining amounts owed by Aventis to Targacept hereunder, (A) any Nicotinic Compound or New Nicotinic Compound thereafter developed or commercialized by Aventis or its Affiliates or Sublicensees for use in the Field shall automatically be an Alliance Development Compound and (B) any product or formulation thereof that contains or is comprised of a Nicotinic Compound or New Nicotinic Compound shall automatically be an Alliance Product. Notwithstanding the foregoing, with respect to New Nicotinic Compounds, this Section 11.4(d) shall apply only to the extent the New Nicotinic Compound is being developed for, or the Alliance Product containing or comprised of the New Nicotinic Compound is being commercialized for, a Primary Indication.

(e) Termination of this Agreement, for whatever reason, shall not affect the continued effectiveness of the Original Agreement, which shall continue in effect until it expires or terminates in accordance with its terms.

11.5 Accrued Rights; No Breach; Surviving Obligations.

(a) Termination of this Agreement in part with respect to a certain compound(s) and/or product(s), termination of this Agreement as a whole, relinquishment or expiration of this Agreement for any reason shall be without prejudice to any rights that shall have accrued to the benefit of a Party prior to such termination, relinquishment or expiration. Such termination, relinquishment or expiration shall not relieve a Party from obligations that are expressly indicated to survive termination or expiration of this Agreement. **No conduct or activity validly undertaken by either Party under the Original Agreement shall be deemed to breach or violate this Agreement.**

(b) Without limiting the foregoing, and in addition to the provisions of Section 11.4(d), the following provisions of this Agreement shall survive and continue to apply in full force and effect in the event of expiration or termination of this Agreement for any reason: Sections 2.6(b), 2.7(b), 2.8, 2.9, 2.10, 2.14, 4.1(b), 4.1(c), 4.2, 7.9, 7.10, 7.11, 7.12, 13.3, 13.5, 13.6, 13.9, 13.10, 13.11, 13.12, 13.13 and 13.14 and Articles 1 (including, solely for purposes of interpreting a particular definition set forth therein, all provisions referenced in such definition), 8, 9, 10, and 11 of this Agreement; provided that, in the event of a partial termination of this Agreement pursuant to Section 11.2(c) or 11.2(d), (i) the foregoing provisions shall survive and continue to apply in full force and effect with respect to the compound(s) and or product(s) subject to the partial termination and (ii) all of the provisions of this Agreement, including without limitation the foregoing provisions, shall continue to apply in full force and effect in all other respects (including, without limitation, to all compound(s) and/or product(s) that are not subject to the partial termination).

(c) Upon any termination of this Agreement with respect to any particular Alliance Product or Targacept Licensed Product, either Party shall be entitled, during the six (6) month period following the effective date of such termination, to finish any work-in-progress and to sell any inventory of the Alliance Product or Targacept Licensed Product, as the case may be, which remains on hand as of the date of the termination, so long as such Party pays to the other the royalties applicable to said subsequent sales in accordance with the terms and conditions set forth in this Agreement.

11.6 Rights in Bankruptcy. All rights and licenses granted under or pursuant to this Agreement by Aventis or Targacept are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the U.S. Bankruptcy Code, licenses of right to “intellectual property” as defined under Section 101 of the U.S. Bankruptcy Code. The Parties agree that the Parties, as licensees of such rights under this Agreement, shall retain and may fully exercise all of their rights and elections under the U.S. Bankruptcy Code. The Parties further agree that, in the event of the commencement of a bankruptcy proceeding by or against either Party under the U.S. Bankruptcy Code, the Party that is not a party to such proceeding shall be entitled to a complete duplicate of (or complete access to, as appropriate) any such intellectual property and all embodiments of such intellectual property, and same, if not already in their possession, shall be promptly delivered to them (i) upon any such commencement of a bankruptcy proceeding upon their written request therefor, unless the Party subject to such proceeding elects to continue to perform all of its obligations under this Agreement or (ii) if not delivered under clause (i), following the rejection of this Agreement by or on behalf of the Party subject to such proceeding upon written request therefor by an non-subject Party.

ARTICLE 12

Representations and Warranties

12.1 Representations and Warranties. Targacept represents and warrants to Aventis, and Aventis represents and warrants to Targacept, as applicable, that, as of the Effective Date:

(a) Such Party is duly organized and validly existing under the laws of the state of its incorporation and has full corporate power and authority to enter into this Agreement and to carry out its obligations hereunder;

(b) Such Party has taken all corporate action necessary to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder;

(c) This Agreement is a legal and valid obligation of such Party, binding upon such Party and enforceable against such Party in accordance with the terms hereof. The execution, delivery and performance of this Agreement by such Party does not conflict with any agreement, instrument or understanding, oral or written, to which such Party is a party or by which such Party may be bound, and does not violate any law or regulation of any court, governmental body or administrative or other agency having authority over such Party. All consents, approvals and authorizations from all governmental authorities or other Third Parties required to be obtained by such Party in connection with this Agreement have been obtained;

(d) It has the full and exclusive right, power and authority to enter into this Agreement, to perform the Research and to grant the licenses granted under Article 5;

(e) With respect to any Materials provided by it to the other Party, it has the full right to provide such Materials and has no reason to believe that the other Party’s use of such Materials in accordance herewith will infringe the intellectual property rights of any Third Party;

(f) As of the Effective Date, there are no agreements between such Party and any Third Parties which would preclude or otherwise limit such Party’s ability to conduct its tasks and obligations under the Research and Development Plan or otherwise fulfill its obligations under this Agreement;

(g) As of the Effective Date, Aventis has not granted any license to any Third Party, either express or implied, or any option to license, to utilize any intellectual property owned or Controlled by Aventis (including under option) to discover, identify, research, develop or market any Nicotinic Compounds; and

(h) During the Term, Aventis will use its best efforts not to encumber or diminish the rights granted to Targacept hereunder, including without limitation, by not committing any acts or permitting the occurrence of any omissions which would cause the breach or termination of any Third Party License. Aventis will promptly provide Targacept notice of any alleged breach of any Third Party License.

ARTICLE 13

Miscellaneous Provisions

13.1 Relationship of the Parties. Nothing in this Agreement is intended or shall be deemed to constitute a partnership, agency or employer-employee relationship between the Parties. Neither Party shall incur any debts or make any commitments for the other.

13.2 Assignments. Except as expressly provided herein, neither this Agreement nor any interest hereunder shall be assignable, nor any other obligation delegable, by a Party without the prior written consent of the other; provided, however, that a Party may assign this Agreement to any Affiliate or to any successor-in-interest by way of merger, sale of all or substantially all of its assets or any comparable transaction in a manner such that the assignor shall remain liable and responsible for the performance and observance of all such Party's duties and obligations hereunder. This Agreement shall be binding upon the successors and permitted assigns of the Parties. Any assignment not in accordance with this Section 13.2 shall be void.

13.3 Disclaimer of Warranties. EXCEPT TO THE EXTENT SET FORTH IN SECTION 12.1, THE PARTIES EXPRESSLY DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF THIRD PARTY RIGHTS, UNLESS OTHERWISE EXPRESSLY PROVIDED IN THIS AGREEMENT.

13.4 Further Actions. Each Party agrees to execute, acknowledge and deliver such further instruments and to do all such other acts as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

13.5 Force Majeure. Neither Party shall be liable to the other for failure or delay in the performance of any of its obligations under this Agreement for the time and to the extent such failure or delay is caused by earthquake, riot, civil commotion, war, strike, flood, governmental acts or restrictions or any other reason which is beyond the control of the respective Party. The Party affected by force majeure shall provide the other Party with full particulars thereof as soon as it becomes aware of the same (including its best estimate of the likely extent and duration of the interference with its activities), and will use commercially reasonable efforts to overcome the difficulties created thereby and to resume performance of its obligations as soon as practicable. If the performance of any obligation under this Agreement is delayed owing to a force majeure for any continuous period of more than six (6) months, the parties hereto shall consult with respect to an equitable solution, including the possibility of the mutual termination of this Agreement.

13.6 No Trademark Rights. No right, express or implied, is granted by this Agreement to a Party to use in any manner the name or any other trade name or trademark of a Party in connection with the performance of this Agreement.

13.7 Entire Agreement of the Parties; Amendments. This Agreement and the exhibits hereto constitute and contain the entire understanding and agreement of the Parties respecting the subject matter hereof and cancel and supersede any and all prior negotiations, correspondence, understandings and agreements between the Parties, whether oral or written, regarding such subject matter, except that the Parties expressly acknowledge and agree that the Original Agreement shall continue in full force and effect in accordance with its terms. No waiver, modification or amendment of any provision of this Agreement shall be valid or effective unless made in writing and signed by a duly authorized officer of each Party.

13.8 Captions. The captions to this Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement.

13.9 Applicable Law. This Agreement shall be governed by and interpreted in accordance with the laws of the State of Delaware, USA applicable to contracts entered into and to be performed wholly within the State of Delaware, excluding conflict of laws principles.

13.10 Disputes. In the event of any controversy or claim arising out of, relating to or in connection with any provision of this Agreement, or the rights or obligations of the Parties hereunder, the Parties shall try to settle their differences amicably between themselves. Either Party may initiate such informal dispute resolution by sending written notice of the dispute to the other Party, and within ten (10) days after such notice appropriate representatives of the Parties shall meet for attempted resolution by good faith negotiations. If such representatives are unable to resolve promptly such disputed matter, it shall be referred to the President of Targacept and such member of Aventis' Executive Committee as Aventis shall designate for discussion and resolution. If such personnel are unable to resolve such dispute within thirty (30) days of initiating such negotiations, the parties agree first to try in good faith to settle the dispute by mediation under the Commercial Mediation Rules of the American Arbitration Association, before resorting to litigation.

13.11 Notices and Deliveries. Any notice, request, delivery, approval or consent required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been sufficiently given if delivered in person, transmitted by telecopier (with confirmed receipt) or by express courier service (signature required) or five (5) days after it was sent by registered letter, return receipt requested (or its equivalent), to the Party to which it is directed at its address shown below or such other address or facsimile number as such party shall have last given by notice to the other Parties.

If to Aventis, addressed to:

Aventis Pharma SA
20, avenue Raymond Aron,
92160 Antony, France
Telecopier: (++33) 1 5571 3348
Attn.: Marie Christine Dubroeucq

With a copy to:

Aventis Pharma SA
20, avenue Raymond Aron,
92160 Antony, France
Telecopier: (++33) 1 5571 6431
Attn.: General Counsel

If to Targacept, addressed to:

Targacept, Inc.

Postal Mail Address:
P.O. Box 1487
Winston-Salem, NC 27102-1487

Street Address:
950 Reynolds Boulevard
Winston-Salem, NC 27105
Telecopier: (336) 741-1773
Attn: President

13.12 No Consequential Damages. SUBJECT TO SECTIONS 10.1 AND 10.2, IN NO EVENT SHALL EITHER PARTY OR ANY OF ITS RESPECTIVE AFFILIATES BE LIABLE TO THE OTHER PARTY OR ANY OF ITS AFFILIATES FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUE, OR CLAIMS OF CUSTOMERS OF ANY OF THEM OR OTHER THIRD PARTIES FOR SUCH OR OTHER DAMAGES.

13.13 Waiver. A waiver by either Party of any of the terms and conditions of this Agreement in any instance shall not be deemed or construed to be a waiver of such term or condition for the future, or of any subsequent breach hereof. All rights, remedies, undertakings, obligations and agreements contained in this Agreement shall be cumulative and none of them shall be in limitation of any other remedy, right, undertaking, obligation or agreement of either party.

13.14 Severability. When possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of this Agreement. The parties shall make a good faith effort to replace the invalid or unenforceable provision with a valid one that in its economic effect is most consistent with the invalid or unenforceable provision.

13.15 Counterparts. This Agreement may be executed simultaneously in two counterparts, each of which shall constitute an original and both of which taken together shall constitute one and the same agreement.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized officers as of the day and year first above written.

Targacept, Inc.	**Aventis Pharma SA**
By: /s/ J. Donald deBethizy	By: /s/ E. Canet
J. Donald deBethizy	Name: Emmanuel Canet
President & CEO	Title: SVP DIA France

Exhibit A

Research & Development Plan

[********]

[Entire page has been redacted.]

Exhibit B

Indications of Targacept Licensed Field

[********]

[Entire page has been redacted.]

Exhibit C

First Semi-Annual Research Plan

[********]

[Entire four-page table has been redacted.]

Exhibit 10.13(b)

[********] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

AMENDED AND RESTATED
COLLABORATIVE RESEARCH AND LICENSE AGREEMENT

between

TARGACEPT, INC.

and

AVENTIS PHARMA SA

TABLE OF CONTENTS

AMENDED AND RESTATED
COLLABORATIVE RESEARCH AND LICENSE AGREEMENT

This Amended and Restated Collaborative Research and License Agreement (this "Agreement") is made and entered into as of January 21, 2002, by and between **Targacept, Inc.**, a Delaware corporation having its principal place of business at 950 Reynolds Boulevard, Winston-Salem, North Carolina 27105 ("Targacept"), and **Aventis Pharma SA**, a corporation organized and existing under the laws of France having its principal place of business at 20, avenue Raymond Aron, 92160 Antony, France ("APSA") (each of Targacept and APSA a "Party" and collectively, the "Parties").

Recitals

Whereas, Targacept possesses proprietary technology and know-how related to the discovery, identification and/or synthesis of nicotinic agonists and has identified and applied for patents on certain nicotinic agonist compounds; and

Whereas, APSA is engaged in the research, development and marketing of products for the treatment of, among other things, central nervous system diseases and disorders; and

Whereas, Targacept and Aventis Pharmaceuticals Inc. (formerly known as Rhône-Poulenc Rorer Pharmaceuticals Inc. and Aventis Pharmaceutical Products Inc.), an Affiliate of APSA ("API"), are parties to a Collaborative Research and License Agreement dated December 30, 1998 (the "Original Agreement") under which they collaborate in the discovery, development and commercialization of certain nicotinic compounds for specified indications; and

Whereas, API desires to assign its rights and obligations under the Original Agreement to APSA with effect as of the date hereof, and Targacept is willing to consent to such assignment as contemplated by Section 14.2 of the Original Agreement; and

Whereas, Targacept and APSA have, as of the date hereof, entered into the Second Collaboration Agreement (as defined herein) under which they will collaborate in the discovery, development and commercialization of nicotinic compounds included in, or derived from, the Aventis Compound Library (as defined in the Second Collaboration Agreement) for specified indications; and

Whereas, in connection with the Second Collaboration Agreement, Targacept and APSA desire to amend and restate the Original Agreement in its entirety as provided herein.

Now, therefore, in consideration of the various promises and undertakings set forth herein, the Parties agree as follows:

ARTICLE 1

Definitions

Unless otherwise specifically provided herein, the following terms shall have the following meanings:

1.1 “Affiliate” means any Person that Controls, is Controlled by or is under common Control with a Party.

1.2 “Agreement” shall have the meaning assigned to such term in the preamble.

1.3 “APSA” shall have the meaning assigned to such term in the preamble.

1.3A “APSA Competitor” means a company (or affiliate thereof) that has total annual worldwide sales of pharmaceutical products exceeding $500 million, and that APSA regards in good faith as a competitor of APSA.

1.4 “APSA Indemnitees” shall have the meaning assigned to such term in Section 10.2.

1.5 “APSA Know-How” means all know-how, trade secrets, techniques, methods, developments, materials, compositions, inventions or data of any kind necessary or useful for the identification, pharmacological development, synthesis, characterization, optimization, assaying, formulation and/or use of Collaboration Compounds or Licensed Products that is Controlled by APSA or an Affiliate of APSA at any time during the Research Term or the Follow-Up Period (but excluding the APSA Patents, the Joint Patents, the Research Technology and any information that APSA is restricted from disclosing due to confidentiality obligations to a Third Party).

1.6 “APSA Patents” means all Patent Rights Controlled by APSA or an Affiliate of APSA that claim methods or materials used for discovering, identifying, assaying, characterizing or optimizing any Collaboration Compounds to the extent that such Patent Rights claim inventions made (x) prior to or during the Research Term or (y) during the Follow-Up Period.

1.6A “APSA Research Technology” means the Research Technology made, developed or discovered solely by employees or agents of APSA and/or its Affiliates, but excluding Targacept Technology.

1.7 “Back-Up Compound” means any Collaboration Compound that has been selected as such hereunder, or any salt, solvate, prodrug form, inclusion complex or metabolite thereof.

1.8 “Blocking Claim” shall have the meaning assigned to such term in Section 2.8(c).

1.9 “Blocking Patent” shall have the meaning assigned to such term in Section 2.8(c).

1.10 “Collaboration Compound” means any Targacept Compound, or any salt, solvate, prodrug form, inclusion complex or metabolite thereof.

For the avoidance of doubt, all Development Compounds and Back-Up Compounds shall be deemed to be Collaboration Compounds.

1.11 “Confidential Information” means (a) all information and data supplied by a Party under this Agreement, which, if disclosed in written, graphic or electronic form, is marked or otherwise designated as “confidential” or “proprietary” and, if disclosed orally, is summarized and designated as “confidential” or “proprietary” in a writing provided to the receiving Party not later than sixty (60) days after such disclosure; and (b) all other information expressly classified as **“Confidential Information”** hereunder.

1.12 “Control” means: (a) with respect to an item of information or an intellectual property right, possession of the ability, whether by ownership or license, to grant a license or sublicense as provided for herein with respect to such item or right without violating the terms of any agreement or other arrangements with any Third Party; and (b) with respect to a Person, (i) the possession, directly or indirectly, of the power to direct the management or policies of such Person, whether through the ownership of voting securities, by contract or otherwise, or (ii) the ownership, directly or indirectly, of more than 50% of the voting securities or other ownership interests of such Person.

1.12A “Derivative” means with respect to any compound, a derivative or other improvement of such compound.

1.13 “Development Committee” or **“DC”** means that committee to be formed pursuant to Section 6.15.

1.14 “Development Compound” means any Collaboration Compound that has been selected as such hereunder, or any salt, solvate, prodrug form, inclusion complex or metabolite thereof.

1.15 “Development Plan” shall have the meaning assigned to such term in Section 3.1.

1.16 “Effective Date” means December 30, 1998.

1.16A “Estimated Amount” shall have the meaning assigned to such term in Section 2.6(c).

1.17 [Intentionally Omitted]

1.18 [Intentionally Omitted]

1.19 “Executive Research Committee” or **“ERC”** means that committee to be formed pursuant to Section 6.1.

1.20 [Intentionally Omitted]

1.21 "FDA" means the United States Food and Drug Administration, or the successor federal agency thereto.

1.22 "Field" means the treatment or prevention in Humans of one or more Indications.

1.23 "First Commercial Sale" means, with respect to any Licensed Product in any country, the first sale for use or consumption by the general public of such Licensed Product in such country after all Regulatory Approvals have been obtained in such country.

1.23A "Follow-Up Period" means the period commencing immediately after the Research Term and ending: (a) with respect to activities conducted pursuant to Section 5.1(a)(i) after the Research Term, six (6) months after the Research Term; and (b) with respect to activities conducted pursuant to Section 5.1(a)(ii) after the Research Term, two (2) years after the Research Term. However, by written agreement the Parties may extend the Follow-Up Period with respect to specified joint endeavors in connection with this Agreement.

1.24 "FTE" means a full-time Targacept scientist or laboratory technician or any other employee of Targacept or its Affiliates specifically approved as an FTE by APSA, who is dedicated to the Research or support thereof, or in the case of a less than full-time dedicated person, a full-time, equivalent person year, based upon a total of forty-seven (47) weeks (*i.e.*, one thousand eight hundred eighty (1,880) hours) per year of scientific work on or directly related to the Research. Work on or directly related to the Research to be performed by such employees may include, without limitation, experimental laboratory work, recording and writing up results, reviewing literature and references, holding scientific discussions, and any other activities assigned to Targacept under the Research Plan.

1.24A "Full Royalty Term" shall have the meaning assigned to it in Section 7.3.

1.25 "IND" means an Investigational New Drug Application filed pursuant to the requirements of the FDA for approval to commence human clinical trials, and any equivalent application filed with any analogous regulatory authority in other countries or regulatory jurisdictions.

1.26 "Indication" means either of the following indications:

(a) Alzheimer's Disease (based upon ante mortem diagnostic evaluations in use as of the Effective Date); or

(b) Parkinson's Disease.

1.27 "Joint Patents" means all Patent Rights that claim or cover inventions within the Joint Research Technology.

1.28 "Joint Research Technology" means all Research Technology that is made, developed or discovered jointly by employees or agents of Targacept or its Affiliates and by employees or agents of APSA or its Affiliates, (a) prior to or during the Research Term or (b) during the Follow-Up Period, but excluding Targacept Technology.

1.29 "Key Employees" means J. Donald deBethizy; Merouane Bencherif; William S. Caldwell; and Patrick M. Lippiello.

1.30 “Know-How” means Targacept Know-How or APSA Know-How, as the case may be.

1.31 “Licensed Product” means any product, including any formulation thereof, containing or comprising a Development Compound.

1.32 “Losses” shall have the meaning assigned to such term in Section 10.1.

1.33 “Major Country” means each of France, Germany, Italy, Japan, Spain, the United Kingdom and the United States.

1.34 “Major Pharmaceutical Market” means each of the United States, the European Union (as it may be constituted from time to time) and Japan.

1.34A “Material Unexpected Technical Problem” shall have the meaning assigned to such term in Section 2.6(a).

1.35 “Materials” shall have the meaning assigned to such term in Section 2.9.

1.36 “Merger” shall have the meaning assigned to such term in Section 14.2.

1.37 “Milestone Event” shall have the meaning assigned to such term in Section 7.2.

1.38 “NDA” means a New Drug Application filed pursuant to the requirements of the FDA, as more fully defined in 21 C.F.R. § 314.50 *et seq*, and any equivalent application filed with any analogous regulatory authority in a Major Country (or, in the case of the centralized application process in the European Union, the European Medicines Evaluation Agency).

1.39 “Net Sales” means [********].

1.40 “Nicotinic Compound” means a chemical compound showing binding affinity for [********] receptors [********].

1.41 “Non-Filing Party” shall have the meaning assigned to it in Section 8.2(e).

1.41A “Non-Nicotinic Compound” means a compound having a binding affinity [********] to the [********] receptor [********].

1.41B “Other Metanicotine Compounds” means those compounds listed under the heading “Other Metanicotine Compounds” on Exhibit B.

1.41 [Intentionally Omitted]

1.41C “Partial Royalty Term” shall have the meaning assigned to it in Section 7.4

1.42 “Party” and **“Parties”** shall have the meaning assigned to such terms in the preamble.

1.43 “Patent Right” means rights under (a) any issued and existing letters patent, including any extensions, supplemental protection certificates, registration, confirmation, reissue, reexamination or renewal thereof, (b) pending applications, including any continuation, divisional, continuation-in-part application thereof, for any of the foregoing, and (c) all counterparts to any of the foregoing issued by or filed in any country or other jurisdiction.

1.43A “PCT” means the Patent Cooperation Treaty.

1.44 “Pentad Patents” means all Patent Rights Controlled by Targacept or an Affiliate of Targacept that claim the Pentad Technology.

1.45 “Pentad Technology” means proprietary know-how of Targacept and its Affiliates concerning structure activity, relationships of Nicotinic Compounds and nicotinic receptors, pharmacophore mapping of nicotinic receptors and computational and quantum mechanical methods for use in the design, synthesis and evaluation of pharmacologically active agents, including but not limited to Nicotinic Compounds.

1.46 “Person” means any natural person, corporation, firm, business trust, joint venture, association, organization, company, partnership or other business entity, or any government or agency or political subdivision thereof.

1.47 “Phase I” means that portion of the clinical development program which generally provides for the first introduction into humans of a product with the primary purpose of determining safety, metabolism and pharmacokinetic properties and clinical pharmacology of the product.

1.48 “Phase II” means that portion of the clinical development program which provides for small scale clinical trials primarily to determine efficacy of a product and certain other factors, such as dosing range.

1.49 “Phase III” means that portion of the clinical development program which provides for the pivotal trials of a product in sufficient numbers of patients to establish the safety and efficacy of a product for the desired label claims and indications.

1.50 “Phase Transition Criteria” shall have the meaning assigned to it in Exhibit A.

1.51 “Primary Screening” means conducting an assay, screen or other test on a Collaboration Compound under the Research to determine physical chemical profiles and *in vitro* pharmacological and toxicological profiles.

1.52 “Project Leaders” shall have the meaning ascribed to it in Section 6.14.

1.53 “Qualifying Offering” shall have the meaning ascribed to it in Section 13.1.

1.54 [Intentionally Omitted]

1.55 [Intentionally Omitted]

1.56 “Regulatory Approval” means any and all approvals (including price and reimbursement approvals), licenses, registrations, or authorizations of any federal, national, state, provincial or local regulatory agency, department, bureau or other government entity, necessary for the manufacture, use, storage, import, transport and sale of a Licensed Product in a country.

1.57 “Research” means the collaborative research program undertaken by the Parties pursuant to this Agreement to characterize, optimize and conduct research and development activities regarding Collaboration Compounds for use in the Field, in accordance with the Research and Development Plan.

1.58 “Research and Development Plan” shall have the meaning provided such term in Section 2.3.

1.59 “Research Technology” means all tangible and intangible know-how, trade secrets, inventions (whether or not patentable), discoveries, developments, data, clinical and preclinical results, information, and physical, chemical or biological material, compounds, and any replication of or any part of any of the foregoing, made by employees or agents of Targacept or its Affiliates or APSA or its Affiliates, either alone or jointly, (a) during the Research Term or (b) during the Follow-Up Period.

1.60 “Research Term” means the period during which the Parties shall conduct the Research, commencing on January 1, 1999 and terminating on December 31, 2002 or such later date as the Parties may mutually agree in writing.

1.61 “Screening Criteria” shall have the meaning assigned to such term in the Research and Development Plan.

1.61A “Second Collaboration Agreement” means the Collaborative Research and License Agreement between Targacept and APSA dated as of the date of this Agreement.

1.62 “Secondary Screening” means conducting any assay, screen or other test on a Collaboration Compound after the Primary Screening of such Collaboration Compound, for the purpose of confirming the results of the Primary Screening or determining additional physical chemical, pharmaceutical and process profiles and *in vivo* pharmacological and toxicological profiles.

1.62A “Semi-Annual Research Plan” shall have the meaning ascribed to it in Section 2.4.

1.63 “1734 Series” means those compounds listed under the heading “1734 Series” on Exhibit B.

1.64 “1767 Series” means those compounds listed under the heading “1767 Series” on Exhibit B.

1.65 “1768 Series” means those compounds listed under the heading “1768 Series” on Exhibit B.

1.65A “[********].

1.66 "Sublicensee" means any Third Party to which APSA has granted sublicense rights under the licenses granted APSA hereunder, which rights include at least the rights to make and sell Licensed Products. Third Parties that are permitted only to distribute and resell finished Licensed Products or that manufacture or finish Licensed Products for supply to APSA or its Affiliates are not "Sublicensees."

1.67 "Targacept" shall have the meaning assigned to such term in the preamble.

1.68 [Intentionally Omitted]

1.69 "Targacept Compounds" means (a) any compound from the 1734 Series, the 2429 Series, the 2563 Series, the 1767 Series or the 1768 Series, (b) any Other Metanicotine Compound, (c) as of the UK License Date, any UK Compound, and (d) any compound identified by Targacept or its Affiliates prior to the end of the Research Term and believed by Targacept to operate through the a4ß4 receptor, in each case together with any salt, solvate, prodrug form, inclusion complex, metabolite or Derivative thereof. No other compound, including without limitation RJR Compound No. 2403, shall be considered a Targacept Compound.

1.70 [Intentionally Omitted]

1.71 "Targacept Indemnitees" shall have the meaning assigned to such term in Section 10.1.

1.72 "Targacept Know-How" means all know-how, trade secrets, techniques, methods, developments, materials, compositions, inventions or data of any kind necessary or useful for the identification, pharmacological development, synthesis, characterization, optimization, assaying, formulation, manufacture and/or use of Collaboration Compounds or Licensed Products that is Controlled by Targacept or an Affiliate of Targacept at any time during the Research Term or the Follow-Up Period, but excluding the Pentad Technology, the Pentad Patents, the Targacept Patents, the Joint Patents, the Research Technology and any information that Targacept is restricted from disclosing due to confidentiality obligations to a Third Party.

1.73 "Targacept Patents" means all Patent Rights that are Controlled by Targacept or its Affiliates that claim (a) any Collaboration Compounds or Licensed Products (or pharmaceutical preparations containing the same), (b) the manufacture or use of any Collaboration Compounds or Licensed Products, (c) methods or materials used for discovering, identifying, assaying, characterizing or optimizing any Collaboration Compounds or (d) Targacept Compounds within the Research Technology, to the extent that such Patent Rights claim inventions made (x) prior to or during the Research Term or (y) during the Follow-Up Period.

1.73A "Targacept Research Technology" means both (i) the Research Technology made, developed or discovered solely by employees or agents of Targacept and/or its Affiliates and (ii) the Targacept Technology.

1.73B "Targacept Technology" means any Targacept Compounds (including, without limitation, Collaboration Compounds, Development Compounds, Back-Up Compounds, Terminated Compounds and Licensed Products) within the Research Technology made by employees or agents of (i) APSA and/or its Affiliates, (ii) Targacept and/or its Affiliates or (iii) APSA and/or its Affiliates and Targacept and/or its Affiliates, jointly.

1.74 "Terminated Compound" means a Collaboration Compound that, pursuant to any provision of this Agreement, ceases to be a Collaboration Compound or a Licensed Product.

1.75 "Third Party" means a Person other than Targacept, APSA and Affiliates of either.

1.76 "Third Party License" shall have the meaning assigned to such term in Section 2.8(c).

1.76A "Threshold EU Market" means at any time any set of countries within the European Union which constituted during the prior calendar year at least 50% in dollar amount of all central nervous system related pharmaceutical sales in the European Union.

1.77 "2429 Series" means those compounds listed under the heading "2429 Series" on Exhibit B.

1.78 "2563 Series" means those compounds listed under the heading "2563 Series" on Exhibit B.

1.79 "UK Compounds" means those compounds listed under the heading "UK Compounds" on Exhibit B.

1.79A "UK License Date" shall have the meaning assigned to such term in Section 12.2(i).

1.79B "Valid Claim" means a claim of an issued and unexpired patent which has not been revoked or held unenforceable or invalid by a decision of a court or governmental agency of competent jurisdiction from which no appeal can be taken or, after mutual consultation and agreement between the Parties, an appeal is not taken within the time allowed for appeal, and which has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue or disclaimer or otherwise.

ARTICLE 2

Research

2.1 Collaborative Research. Commencing on the Effective Date, the Parties shall conduct the Research pursuant to the Research and Development Plan, with the goals of: (a) identifying and selecting those Collaboration Compounds that may be suitable for further scientific evaluation (immediately or at some future time during the Research Term) and those Collaboration Compounds that clearly do not warrant such further scientific evaluation and should instead be classified as Terminated Compounds; (b) further evaluating Collaboration Compounds; (c) identifying and selecting certain Collaboration Compounds for further development as Development Compounds; and (d) identifying and selecting certain Collaboration Compounds as Back-Up Compounds to the

Development Compounds. The Parties shall conduct the Research in accordance with this Agreement, the Research and Development Plan (as it may be amended hereunder from time to time), the Semi-Annual Research Plans established pursuant to the provisions of this Article 2 and the Phase Transition Criteria.

2.2 Screening of Collaboration Compounds and Selection of Development Compounds and Back-Up Compounds.

(a) *Primary and Secondary Screening of Collaboration Compounds.* Targacept and APSA shall conduct Primary Screening and Secondary Screening of Collaboration Compounds during the Research Term, as set forth in the Research and Development Plan and the Semi-Annual Research Plans, and shall inform the ERC of the progress and results thereof.

(b) *Rejection of Collaboration Compounds.* The ERC shall review the results of the Primary Screening and Secondary Screening of the Collaboration Compounds provided by the Parties pursuant to Section 2.2(a). Based upon the standards set forth in the Research and Development Plan and such other appropriate factors as the Parties mutually agree, the ERC shall determine whether any Collaboration Compounds clearly do not warrant further scientific evaluation and should instead be classified as Terminated Compounds. If a Collaboration Compound is classified as a Terminated Compound or is not selected as a Development Compound or Back-Up Compound within the time frames established hereunder, it shall automatically cease to be a Collaboration Compound and thereafter shall not be subject to research, development or commercialization by APSA or its Affiliates or Sublicensees pursuant to this Agreement.

(c) *Selection of Development Compounds and Back-Up Compounds; Rejection of Collaboration Compounds.*

(1) From time to time, the ERC shall review data relating to the Collaboration Compounds that is generated by the Research. Based upon standards set forth in the Research and Development Plan and such other appropriate factors as the ERC deems appropriate, the ERC (and after its term, the DC) shall identify and select the Development Compounds (and the Back-Up Compounds) for development (or potential development) in accordance with the Research and Development Plan. Up to **[********]** Collaboration Compounds may be classified at any time as Development Compounds and Back-Up Compounds for each Indication.

(2) If a Collaboration Compound (a) is classified as a Terminated Compound under Section 2.2(b), (b) is a UK Compound and does not undergo Primary Screening within six (6) months after the later of UK License Date or the date such compound is

available for screening, (c) is an Other Metanicotine Compound and does not undergo Primary Screening within nine (9) months after the date such compound is available for screening, (d) does not undergo Primary Screening prior to the expiration of the Research Term, (e) undergoes Primary Screening prior to the expiration of the Research Term but does not meet the Screening Criteria set forth in the Research and Development Plan or (f) is not selected as a Development Compound or a Back-up Compound under Section 2.2(c)(i) within six (6) months after the end of the Research Term, it shall automatically cease to be a Collaboration Compound and thereafter shall not be subject to research, development or commercialization by APSA or its Affiliates or Sublicensees pursuant to this Agreement.

2.3 Research and Development Plan. Attached hereto as Exhibit C is the initial version of the Research and Development Plan (as it may be modified from time to time, the "Research and Development Plan") that sets forth the plan for the Research activities expected to be performed by each Party pursuant to this Agreement. The Research and Development Plan may be amended by the ERC from time to time in accordance with the provisions of Article 6.

2.4 Semi-Annual Research Plans. On a semi-annual basis, the Parties shall establish a detailed research plan and budget, as may be modified from time to time (each a "Semi-Annual Research Plan") for the activities to be performed by APSA and Targacept as part of the Research during the following six (6) month period starting January 1 or July 1, as the case may be (or such longer period as may be set forth for certain tasks in the Semi-Annual Research Plan). Each Semi-Annual Research Plan may be amended by the ERC from time to time in accordance with the provisions of Article 6. Each Semi-Annual Research Plan shall be in accord with the Research and Development Plan and shall specify in reasonable detail:

(a) the objectives of the Research for the ensuing period(s);

(b) the specific research and other activities to be performed by APSA and Targacept during such period;

(c) the specific deliverables expected to be provided by APSA and Targacept, and the projected dates by which such deliverables will be provided;

(d) the FTEs to be devoted by Targacept to its tasks under the Semi-Annual Research Plan; and

(e) the total funding expected to be provided to Targacept for the ensuing six-month period to support Targacept's Research activities (which funding will be subject to adjustment as provided in Section 2.6).

2.5 Preparation and Approval of Semi-Annual Research Plans. Attached hereto as Exhibit D is the Semi-Annual Research Plan for the initial period of the Research Term. The ERC shall meet at the earliest reasonably practicable time to establish, by mutual agreement of the

Parties, the priority for performing the Primary Screening and Secondary Screening of the Collaboration Compounds and to amend the initial Semi-Annual Research Plan as required to reflect such agreement. It is intended that the Semi-Annual Research Plan for each subsequent period during the Research Term shall be approved by the ERC by May 1 and December 1 of each calendar year during the Research Term.

2.6 Targacept Research Efforts.

(a) Targacept agrees to commit such resources of Targacept and its Affiliates as are specified in the Semi-Annual Research Plans to perform its obligations set forth therein. Targacept agrees to commit such further resources as are reasonably necessary to perform its obligations set forth in each Semi-Annual Research Plan, ***provided, however***, that Targacept shall have the right to notify the ERC promptly upon becoming aware of an unanticipated scientific or technical problem which makes it likely to preclude Targacept from fulfilling any obligation set forth in a Semi-Annual Research Plan with the FTEs **[********]** budgeted to the performance of such obligation (a "Material Unexpected Technical Problem"). As part of such notification, Targacept shall provide the ERC with a reasonably detailed description of such Material Unexpected Technical Problem, together with its good faith estimate of the number of additional FTEs and time which will be required to perform such obligation in light of such Material Unexpected Technical Problem. Upon receipt of such notification, the ERC shall then meet to determine whether to modify the Semi-Annual Research Plan as it applies to such obligation to (i) refocus the remaining unused FTE resources allocated to such obligation to other obligations under the Plan, (ii) increase the funding to be provided by APSA to Targacept for such obligation, subject to the agreement of both Parties on the amount of such increased funding, (iii) terminate any further Targacept activities relating to such obligation, (iv) provide additional non-financial resources from APSA to support Targacept's activities, or (v) take such other action as may be mutually agreeable to the parties; ***provided, however,*** that, following notification of a Material Unexpected Technical Problem, Targacept shall not be required to perform activities related to an obligation after such notification unless and until the ERC acts to provide additional funding. In connection with the performance by Targacept of its obligations hereunder, Targacept shall maintain (or cause its Affiliates to maintain) and utilize such scientific staff, laboratories, offices and other facilities as are reasonably designed for such purposes. Targacept shall use personnel with such skills and experience as are reasonably designed to accomplish efficiently and expeditiously the objectives of the Research as set forth in the Research and Development Plan and each Semi-Annual Research Plan in good scientific manner and in compliance in all material respects with all applicable laws, rules, regulations, and all other requirements of applicable good laboratory practices; ***provided, however,*** that except as otherwise required by law, Targacept shall be required to comply only with general good laboratory practices as practiced by like companies in the biotechnology industry in performing similar research and not with the requirements for Good Laboratory Practices prescribed by the FDA.

(b) APSA shall reimburse Targacept for all fully documented expenses incurred by Targacept in performing its obligations under the Semi-Annual Research Plans in accordance with the following procedures:

(c) Promptly following the commencement of the first calendar quarter covered by each Semi-Annual Research Plan, Targacept shall furnish APSA with an invoice in the amount of **[********]** of the product of (A) **[********]** (on an annualized basis) and (B) the total number of FTEs specified in such Semi-Annual Research Plan pursuant to Section 2.4(d). APSA shall advance Targacept such amount (the “Estimated Amount”) within forty-five days after receipt of such invoice.

(1) No later than July 31 or February 28, as the case may be, immediately following the end of the six-month period covered by such Semi-Annual Research Plan, Targacept shall furnish APSA with a statement detailing the number of FTEs actually dedicated to the performance of each Research obligation set forth in such Semi-Annual Research Plan. However, for any obligation of Targacept set forth in such Semi-Annual Research Plan (as it may be amended from time to time pursuant to this Agreement), such statement (A) shall not state a number of FTEs less than **[********]** of the budgeted FTEs allocated to such obligation even if the number of FTEs actually dedicated to such performance was less than **[********]** of such budgeted amount; (B) shall not state a number of FTEs more than **[********]** of the budgeted FTEs allocated to such obligation even if the number of FTEs actually dedicated to such performance was more than **[********]** of such budgeted amount; and (C) absent authorization from the ERC, shall not include or request payment for any FTEs for any work performed on any obligation after the occurrence of a Material Unexpected Technical Problem related to such obligation.

(2) Within forty-five (45) days after the receipt of such statement from Targacept, APSA shall pay Targacept an amount equal to the difference between (A) the product of (I) **[********]** (on an annualized basis) and (II) the total number of FTEs properly set forth in such statement, and (B) the Estimated Amount for such Semi-Annual Research Plan paid to Targacept pursuant to subparagraph (i) above.

(3) Targacept shall keep complete and accurate books and financial records pertaining to its costs and expenses of performing the Research (in accordance with generally accepted accounting principles consistently applied), which books and financial

records shall be retained by Targacept until three (3) years after the end of the period to which such books and records pertain. APSA shall have the right, at its expense, to have certified public accountants, who shall be reasonably acceptable to Targacept, audit the books and financial records of Targacept relating to its costs and expenses during one or more six-month periods; ***provided, however,*** that APSA shall not have the right to audit a six-month period more than two (2) years after the end of such period, to conduct more than one such audit in any twelve-month period, or to audit any six-month period more than once.

2.7 APSA Research Efforts.

(a) APSA agrees to commit such resources as are specified in the Semi-Annual Research Plans to perform its obligations set forth in each Semi-Annual Research Plan. APSA agrees to commit such further resources as are reasonably necessary to perform its obligations set forth in each Semi-Annual Research Plan, provided that APSA shall have the right to notify the ERC promptly upon becoming aware of an unanticipated scientific or technical problem that would be likely to preclude APSA from completing an obligation set forth in a Semi-Annual Research Plan for a manpower expenditure **[********]** and shall be permitted to discontinue work on such obligation if the ERC does not modify the Semi-Annual Research Plan with respect to such obligation in a manner reasonably acceptable to APSA. In the performance of its obligations, APSA shall maintain and utilize such scientific staff, laboratories, offices and other facilities as are reasonably designed for such purposes. APSA shall use personnel with such skills and experience as are reasonably designed to accomplish efficiently and expeditiously the objectives of the Research as set forth in the Research and Development Plan and each Semi-Annual Research Plan in good scientific manner and in compliance in all material respects with all applicable laws, rules, regulations, and all other requirements of applicable good laboratory practices; ***provided, however,*** that except as otherwise required by law, APSA shall be required to comply only with general good laboratory practices as practiced by like companies in the pharmaceutical industry in performing similar research and not with the requirements for Good Laboratory Practices prescribed by the FDA.

(b) APSA shall be solely responsible for bearing the costs of any and all activities performed by APSA in connection with the Research.

2.8 Termination of Agreement During Research Term.

(a) *Termination for Material Breach of Research Obligations by Targacept or for Specified Change in Control.* In the event that Targacept materially fails to perform its obligations with respect to the Research, APSA may give notice to Targacept specifying the nature of the default, requiring it to cure such default and stating APSA's intention to terminate Targacept's participation in the Research if such default is not cured within the period set forth below. If (i) such default is not cured within sixty (60) days after the receipt of such notice; or (ii) such default is not curable within such period and Targacept has not commenced reasonable actions to cure such default or does not diligently continue to perform such actions; APSA may elect (x) to terminate all, but not less than all, of those provisions of this Agreement that create any continuing right or obligation of Targacept to perform the Research or any obligation of APSA to fund any such activity by Targacept in the future and to disband the ERC and the DC and (y) to assume all rights and powers of the ERC and the DC, without prejudice to any other rights and obligations of the Parties under this Agreement, which election shall be effected by giving written notice to Targacept and shall be effective immediately upon delivery of such notice. In addition, if any APSA Competitor becomes an Affiliate of Targacept, APSA shall have the right to make the election described in the immediately preceding sentence. Upon the election of APSA described in either of the two preceding sentences, Targacept shall promptly transfer to APSA copies of all data, reports, records and other materials under Targacept's Control that relate to the Research and furnish to APSA all Materials developed or Controlled by Targacept that are used or useful in connection with the Research.

(b) *Termination for Material Breach of Research Obligations by APSA.* In the event that APSA materially fails to perform its obligations with respect to the Research, Targacept shall have the right to terminate this Agreement in accordance with Section 11.2(a) hereof.

(c) *Termination Due to Issuance of Third Party Patent Rights.* In the event that, prior to the end of the Research Term, (i) a Patent Right owned by a Third Party is either granted or published in a Major Pharmaceutical Market; (ii) such Patent Right (a "Blocking Patent") claims (A) methods of treating one of the Indications using Nicotinic Compounds, or (B) the composition of matter of a significant portion of the Collaboration Compounds identified by Targacept as of the Effective Date (each, a "Blocking Claim"); and (iii) in the opinion of patent counsel selected by APSA, (A) with respect to a published Blocking Patent, it is likely that enforceable letters patent will issue with at least one of such Blocking Claims covering the United States, Japan or a Threshold EU Market and (B) it is unlikely that the Parties will be able to avoid infringing such claims, then:

(x) if the Blocking Patent is held by **[********]**, then Targacept shall have the right, for a period of six (6) months, to use commercially reasonable, good faith efforts to negotiate and obtain a license under such Blocking Patent on commercially reasonable terms (for royalties not exceeding **[********]**% of

Net Sales or such higher amount agreed to by the Parties) that permits APSA, Targacept and their respective Affiliates (and, in the case of APSA, its Sublicensees) to continue to pursue the discovery, development, manufacture and commercialization of Licensed Products for use in the Field as provided hereunder (a "Third Party License") and thereafter APSA shall have the right to use commercially reasonable, good faith efforts to negotiate and obtain such Third Party License on commercially reasonable terms, in either case with the cost of such license (including without limitation license fees, milestone payments and royalties) to be set off against any payments owed to Targacept by APSA pursuant to Section 7.2 or Section 7.3; ***provided, however,*** that in no event shall the aggregate amount set off in any calendar quarter against royalties payable pursuant to Section 7.3 in such calendar quarter exceed **[********]** thereof;

(y) if the Blocking Patent is held by any Third Party other than **[********]**, APSA shall use commercially reasonable, good faith efforts to negotiate and obtain a Third Party License on commercially reasonable terms, except where APSA in good faith believes that such negotiation would be futile because such Third Party is an APSA Competitor, with the cost of such license (including without limitation license fees, milestone payments and royalties) to be borne equally by APSA and Targacept, with Targacept's share of such costs to be set off against any payments owed to Targacept by APSA pursuant to Section 7.2 or Section 7.3; ***provided, however,*** that in no event shall the aggregate amount set off in any calendar quarter against royalties payable under Section 7.3 in such calendar quarter exceed **[********]** thereof;

(z) If the Parties do not obtain a Third Party License from **[********]** or if APSA is unable, after commercially reasonable, good faith efforts, to obtain a Third Party License from any other Third Party holding a Blocking Patent or if APSA does not seek such a Third Party License because APSA in good faith believes that such negotiation would be futile because such Third Party is an APSA Competitor, then APSA shall have the right to terminate this Agreement pursuant to Section 11.3.

2.9 Material Transfer. In order to facilitate the Research, either Party may provide to the other Party certain biological materials or chemical compounds including, but not limited to Collaboration Compounds, receptors, reagents and screens (collectively, "Materials") owned by or licensed to the supplying Party (other than under this Agreement) for use by the other Party in furtherance of the Research, subject to a separate global Material Transfer Agreement if desired by the supplying Party, in a form to be mutually agreed by the Parties. Except as otherwise provided under this Agreement, all such Materials delivered to the other Party shall remain the sole property of the supplying Party, shall be used only in furtherance of the Research and solely under the control of the other Party, shall not be used or delivered to or for the benefit of any Third Party (or in the case of APSA, any Sublicensee) without the prior written consent of the supplying Party, and shall not be used in research or testing involving human subjects. The Materials supplied under this Section 2.9 shall be used with prudence and appropriate caution in any experimental work, since not all of their characteristics may be known. SUBJECT TO SECTIONS 12.1 AND 12.2 HEREOF, THE MATERIALS ARE PROVIDED “AS IS” AND WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY WARRANTY THAT THE USE OF THE MATERIALS WILL NOT INFRINGE OR VIOLATE ANY PATENT OR OTHER PROPRIETARY RIGHTS OF ANY THIRD PARTY.

2.10 Liability. Except as otherwise set forth in Section 10.1, in connection with the conduct of the Research, each Party shall be responsible for, and hereby assumes, any and all risks of personal injury or property damage attributable to the negligent acts or omissions of that Party or its Affiliates, and their respective directors, officers, employees and agents.

2.11 Exclusivity of Research. During the Research Term, each Party agrees not to, and agrees to cause its Affiliates not to, (a) conduct any activity, either on its own, or for the benefit of, sponsored by, or pursuant to any type of corporate partnership with, any Third Party, that has as its goal or intent discovering, identifying, researching, developing or marketing Nicotinic Compounds (including without limitation any Collaboration Compounds) for use in the Field, except pursuant to this Agreement or the Second Collaboration Agreement, or (b) grant any license, either express or implied, or any option to license, to any Third Party to utilize any intellectual property Controlled by such Party or its Affiliates for the purpose of discovering, identifying, researching, developing or marketing Nicotinic Compounds for use in the Field, except to the extent expressly permitted by this Agreement or the Second Collaboration Agreement***; provided, however,*** that a Party may terminate the foregoing covenant as it applies to such Party, as one of its remedies and not to the exclusion of any other remedy such Party may have, if the other Party materially violates its obligations under the foregoing covenant.

2.12 Subcontractors. Either Party may subcontract to Affiliates or Third Parties portions of the Research to be performed by it, subject to the provisions of this Section 2.12. Any subcontractor shall enter into a confidentiality agreement with the contracting party, and shall be in compliance in all material respects with all requirements of applicable laws and regulations, together with all applicable good laboratory practices and good manufacturing practices. The contracting Party shall at all times be responsible for the performance of such subcontractor. Upon the reasonable request of the other Party, a Party shall provide a written list of all subcontractors other than Affiliates with whom such Party has subcontracted under this Section 2.12.

2.13 No Warranty of Success. Nothing contained in this Agreement shall be construed as a warranty on the part of either Party that any results will be achieved by such Party, or that any particular Patent Rights or Know-How developed during the Research will be commercially exploitable.

2.14 No Solicitation of Employees. During the Research Term and for a period of two (2) years thereafter, each Party agrees not to, and agrees to cause its Affiliates not to, without the consent of the other Party, solicit the employment of any person who during the course of employment with such other Party or any of such other Party’s Affiliates was involved with activities related to or conducted in furtherance of the Research. For purposes of this Section 2.14, "solicit" shall not be deemed to cover general solicitations of employment not specifically targeted at employees of the other party or any of its Affiliates. This provision shall not preclude either Party from soliciting the employment of any person whose employment with the other Party has terminated or any person who has announced his or her impending resignation or retirement from the other Party.

ARTICLE 3

Development and Commercialization

3.1 Development Plans. Within sixty (60) days after a Development Compound is selected for development in accordance with Section 2.2(c), APSA shall prepare a reasonably detailed plan for the initial development of such Development Compound in each Major Pharmaceutical Market for review and approval by the DC (each, a "Development Plan"). On a semi-annual basis, APSA shall apprise the DC of progress under each Development Plan and shall submit revisions to existing Development Plans to the DC for review and approval by the DC.

3.2 Development Responsibilities of APSA; Diligence. APSA shall be solely responsible for and shall have the sole right to develop the Development Compounds through preclinical development and all phases of clinical trials, and to make all applications for and obtain all Regulatory Approvals on a worldwide basis. For each Development Compound, APSA shall use commercially reasonable efforts, which efforts shall not be less than those used by APSA with respect to the development of its own compounds of comparable commercial significance, to develop such compound for the relevant Indication in each Major Pharmaceutical Market, subject to Section 3.3. For the purpose of assessing the commercial reasonableness of such efforts, the effect on other competitive products of APSA and its Affiliates of diverting resources to the development of the Development Compound shall not be considered. APSA shall be solely responsible for bearing all costs and expenses in connection with the development of each Development Compound.

3.3 Termination of Development of a Development Compound. APSA may terminate the development of any Development Compound at any time upon prior notice to the DC and may at that time designate such compound as a Back-Up Compound. If APSA terminates the development of any Development Compound and does not designate such compound as a Back-Up Compound, or if APSA does not act in accordance with the diligence obligations set forth in Section 3.2 with respect to a Development Compound, such compound shall be deemed to be a Terminated Compound. So long as APSA (or its Affiliates or Sublicensees) continues to act in accordance with the diligence obligations set forth in Section 3.2 to pursue the preclinical and clinical development of at least one Development Compound for use in an Indication (or so long as APSA has produced a Licensed Product for such Indication) APSA's cessation of development efforts with respect to one or more other Development Compounds or Back-Up Compounds in such Indication shall not be deemed to be a breach of APSA's diligence obligations hereunder with respect to such Indication. Further, if after the end of the Research Term, APSA has conducted development with respect to one or more Development Compounds in an Indication in accordance with the diligence obligations set forth in Section 3.2 and there is no reasonable additional preclinical or clinical work or investigation to pursue on any Development Compounds or Back-Up Compounds for such Indication, or alternatively APSA determines that it no longer desires to continue working on the Development Compounds in such Indication, then APSA may cease further work on the Development Compounds and Back-Up

Compounds in such Indication, without there being a breach of such diligence obligations, so long as APSA has produced a Licensed Product for such Indication or so long as APSA terminates the Agreement with respect to such Indication pursuant to Section 11.3 within sixty (60) days of ceasing such work.

3.4 Termination of Development of all Development Compounds. If after the Research Term APSA and its Affiliates or Sublicensees fail to use commercially reasonable efforts to pursue the preclinical and clinical development of at least one Development Compound for use in an Indication in the Major Pharmaceutical Markets and have not produced a Licensed Product for such Indication, and do not initiate and continue using such efforts within sixty (60) days after written notice from Targacept specifying such failure and the nature of such failure, then Targacept may terminate this Agreement under Section 11.2 as it applies to such Indication.

3.5 Breach of Development Diligence Obligations. If at any time Targacept determines that APSA is not meeting the standards set forth in Section 3.2, before taking any action with respect to such determination Targacept shall provide APSA with written notice specifying the basis for such determination and any underlying facts in support thereof, and APSA shall have the same cure rights (whether such failure applies to one or more Development Compounds or one or both Indications) that it would have for a default under Section 11.2(a).

3.6 Development Information and Reporting. From and after the commencement of the first Phase I trial covering a Development Compound, APSA shall prepare and maintain complete and accurate information regarding the worldwide clinical development of Development Compounds and shall make such information available to the DC in the form of reasonably detailed reports provided to the DC at least on a semi-annual basis. Such reports shall reasonably and accurately summarize the status and results of such development efforts. APSA also shall respond to reasonable requests by the DC for additional information regarding the development of Development Compounds. The DC shall provide comments to APSA regarding such development efforts, and APSA shall reasonably consider such comments.

3.7 [Intentionally Omitted]

3.8 Commercialization Responsibilities of APSA; Diligence. APSA shall be solely responsible for and shall have the sole right to commercialize each Licensed Product for each Indication. With respect to each Licensed Product, after receipt of Regulatory Approval APSA shall use commercially reasonable efforts, which efforts shall not be less than those used by APSA with respect to the commercialization of its own products of comparable commercial significance, to commercialize such Licensed Product for the relevant Indication in each Major Pharmaceutical Market. For the purpose of assessing the commercial reasonableness of such efforts, the effect on other competitive products of APSA and its Affiliates of diverting resources to the commercialization of the Licensed Product shall not be considered. APSA shall be solely responsible for bearing all costs and expenses in connection with such commercialization efforts.

3.9 Termination of Commercialization of a Licensed Product. APSA may terminate the commercialization of any Licensed Product at any time upon prior notice to the DC. If APSA terminates the commercialization of any Licensed Product containing a certain Collaboration Compound without undertaking the commercialization of another Licensed Product containing that same Collaboration Compound, then such Collaboration Compound shall be deemed to be a Terminated Compound.

3.10 Termination of Commercialization of all Licensed Products. If APSA and its Affiliates or Sublicensees fail to act in accordance with the diligence obligations imposed by Section 3.8 in commercializing a particular Licensed Product for an Indication in any of the Major Pharmaceutical Markets, then Targacept shall be entitled to terminate the license granted to APSA pursuant to Section 5.1(b) regarding such Licensed Product for such Indication in such Major Pharmaceutical Market. In the event that APSA is not acting in accordance with the diligence obligations imposed by Section 3.8 to commercialize at least one Licensed Product in a Major Pharmaceutical Market for a particular Indication, then Targacept shall be entitled to terminate the license granted to APSA pursuant to Section 5.1(b) with respect to such Indication in such Major Pharmaceutical Market. In the event that, with respect to an Indication, such license is terminated with respect to all Major Pharmaceutical Markets, then such Indication shall no longer be deemed to be part of the Field.

3.11 Breach of Commercialization Diligence Obligations. If at any time Targacept determines that APSA is not meeting the standards set forth in Section 3.8, before taking any action with respect to such determination Targacept shall provide APSA with written notice specifying the basis for such determination and any underlying facts in support thereof and APSA shall have the same cure rights (whether such failure applies to one or more Licensed Products or one or both Indications) that it would have for a default under Section 11.2(a).

3.12 Commercialization Information and Reporting. From and after the First Commercial Sale of a Licensed Product, APSA shall provide to Targacept on a semi-annual basis reasonably detailed reports regarding the worldwide commercialization of such Licensed Product. APSA also shall respond to reasonable requests by Targacept for additional information regarding the commercialization of Licensed Products.

ARTICLE 4

Information Exchange

4.1 Disclosure of Enabling Technology; Maintenance of Records Regarding Research and Inventions.

(a) During the Research Term, each Party shall disclose to the other the Know-How and Patent Rights of such Party for which letters patent have not yet been issued as the other Party reasonably needs to perform its obligations and assigned tasks under the Research and Development Plan; ***provided, however***, that in no event shall Targacept be required to disclose the Pentad Technology and ***provided, further,*** that all such disclosed Know-How and Patent Rights shall be considered Confidential Information.

(b) All work conducted by each Party in the course of the Research shall be thoroughly and accurately recorded, in detail and in good scientific manner and, to the extent reasonably practicable, in separate laboratory notebooks distinct from other work being conducted by such Party. On reasonable notice, and at reasonable intervals, each Party shall have the right to inspect and copy all such records maintained by the other Party reflecting Research Technology or work done under the Research and Development Plan, to the extent reasonably required to carry out its obligations and to exercise its rights hereunder. Notwithstanding Section 1.11, all such records shall constitute Confidential Information and shall be deemed the property of the Party creating such records.

(c) In order to protect the Parties' patent rights under U.S. law in any inventions conceived or reduced to practice during or as a result of the Research, each Party agrees to establish and support a policy which requires its employees to record and maintain all data and information developed in performing the Research in such a manner as to enable the parties to use such records to establish the earliest date of invention and/or diligence to reduction to practice. At a minimum, the policy shall require such individuals to record all inventions generated by them in standard laboratory notebooks which are dated and corroborated by non-inventors on a regular, contemporaneous basis.

4.2 Information and Reports. Each Party shall disclose to the other Party from time to time during the Research Term any Know-How or Research Technology learned, acquired, discovered, invented or made by such Party, to the extent reasonably required by the other Party to carry out its obligations and to exercise its rights hereunder; *provided*, *however*, that in no event shall Targacept be required to disclose the Pentad Technology. Such Know-How and Research Technology will be promptly disclosed to the other Party, with meaningful discoveries or advances being communicated as promptly as practicable after such information is obtained or its significance is appreciated. Each Party will provide the other with copies of the raw data generated in the course of the Research, if reasonably necessary to the other Party's work under the Research.

ARTICLE 5

Licenses

5.1 Licenses to APSA.

(a) *Research License.* Subject to the other provisions of this Agreement, Targacept hereby grants to APSA and its Affiliates (i) during the Research Term (and for an additional six (6) months for those Collaboration Compounds that undergo Primary Screening prior to the end of the Research Term and meet the Screening Criteria set forth in the Research and Development Plan) an exclusive (except with regard to Targacept) world-wide, paid-up right and license under the Targacept Patents, the Targacept Know-How and Targacept Research Technology and under Targacept's rights in the Joint Patents and Joint Research Technology solely to conduct the Research and to characterize, optimize and develop and, in connection with the Research, make and use Collaboration Compounds for use in the Field; and (ii) effective as of the end of the Research Term and for a period of two (2) years thereafter, a non-exclusive, world-wide, paid-up right and license under the Targacept Patents and Targacept Know-How to make Derivatives of Development Compounds and Back-Up Compounds, and to use such Derivatives solely to conduct research in order to determine whether to designate such Derivatives as Development Compounds or Back-Up Compounds.

(b) *Commercialization License.* Subject to the other provisions of this Agreement (including Section 5.1(a) hereof), Targacept hereby grants to APSA and its Affiliates an exclusive (including with regard to Targacept), world-wide, royalty-bearing right and license under the Targacept Patents, the Targacept Know-How and Targacept Research Technology, and under Targacept's rights in the Joint Research Technology and Joint Patents, to research and develop, and to make, have made and use Back-Up Compounds and Development Compounds for use in the Field and to make, have made, import, use, sell and offer for sale Licensed Products for use in the Field. For the avoidance of doubt, it is understood that APSA's and its Affiliates' right to sell Licensed Products shall include the right to sell such Licensed Products under the foregoing license through distributors.

5.2 License to Targacept. Subject to the other provisions of this Agreement:

(a) APSA hereby grants to Targacept and its Affiliates an exclusive (except with regard to APSA), world-wide, paid-up right and license under the APSA Patents, the APSA Know-How and APSA Research Technology and under APSA's rights in the Joint Patents and Joint Research Technology, to conduct the Research;

(b) APSA hereby grants to Targacept and its Affiliates the right to use, but not the right to disclose to Third Parties (except as provided in the immediately following sentence), free of charge, all regulatory and clinical documentation and data disclosed to Targacept under this Agreement, as reasonably necessary in connection with the development and commercialization of pharmaceutical products outside the Field. Further, upon Targacept's request, APSA shall grant to Targacept and its Affiliates the right to reference all such regulatory and clinical documentation and data as reasonably necessary in connection with the development and commercialization of pharmaceutical products outside the Field except for use in regulatory submissions for pharmaceutical products that would compete with a product commercialized or under clinical development by APSA or any Affiliate for use in the same indication.

(c) APSA hereby grants to Targacept and its Affiliates an exclusive (including with regard to APSA), world-wide, paid-up right and license under the APSA Patents, the APSA Research Technology and the APSA Know-How and APSA's rights in the Joint Patents and Joint Research Technology, covering the composition of matter or the use of the Terminated Compounds, solely to research, develop, make, have made, import, use, sell and offer for sale the Terminated Compounds outside the Field, and APSA agrees to negotiate in good faith with Targacept and its Affiliates other royalty-bearing licenses under the APSA Patents, APSA Research Technology and the APSA Know-How and under APSA's rights in the Joint Patents and Joint Research Technology that may be useful to Targacept and its Affiliates in conducting research and development and commercializing the Terminated Compounds for use outside the Field. For the avoidance of doubt, it is understood that Targacept's and its Affiliates' right to sell Terminated Compounds shall include the right to sell such Terminated Compounds under the foregoing license through distributors.

5.3 Right to Sublicense. Each Party shall have the right to grant to Third Parties sublicenses under the licenses granted hereunder (except pursuant to Section 5.1(a) and Section 5.2(a)). Notwithstanding the foregoing, the grant of any such sublicenses shall not relieve the sublicensing Party of any of its obligations under this Agreement.

5.4 Negative Covenants and License Limitations.

(a) *Mutual Covenants.* Each Party covenants to the other Party that:

(i) It shall not practice, exercise or use any intellectual property rights licensed to it by the other Party under this Agreement, except as permitted expressly by the terms hereof; ***provided, however***, that this Section 5.4(a)(i) shall preclude a Party from practicing, exercising or using any intellectual property rights of the other Party only to the extent such practice, exercise or use would violate the intellectual property rights of the other Party.

(ii) APSA, Targacept and their respective Affiliates shall not during or after the term of this Agreement, research, develop, commercialize or license any Third Party to research, develop or commercialize, for use in or outside of the Field, any Collaboration Compound that the APSA designees to the ERC recommended for selection as a Development Compound or Back-Up Compound but that could not be so selected due to objection of the Targacept designees to the ERC.

(b) *Additional Negative Covenants of Targacept.* Targacept further covenants to APSA that:

(i) During the Research Term **[********]**, Targacept and its Affiliates shall not research, develop, commercialize, or license any Third Party to research, develop or commercialize, any Collaboration Compound other than a Terminated Compound for use outside the Field.

(ii) Targacept and its Affiliates shall not research, develop, commercialize, or license any Third Party to research, develop or commercialize, any Development Compound, Back-Up Compound or Licensed Product except pursuant to this Agreement.

(iii) During the term of this Agreement, Targacept and its Affiliates shall not, other than pursuant to this Agreement or the Second Collaboration Agreement, (A) conduct any activity, either on their own, or with, for the benefit of, or sponsored by any Third Party, that has as its goal or intent discovering, identifying, researching, developing or commercializing Nicotinic Compounds for use in the Field, or (B) grant any license or other rights to any Third Party to utilize any intellectual property Controlled by Targacept or its Affiliates, including without limitation, any Collaboration Compounds (or Derivatives thereof), Targacept Patents, Joint Patents, Pentad Patents, Targacept Research Technology, Joint Research Technology, Pentad Technology and Targacept Know-How , for the express purpose of discovering, identifying, researching, developing or commercializing Nicotinic Compounds for use in the Field. During the term of this Agreement, in conducting any activity with, for the benefit of, or sponsored by any Third Party with respect to Nicotinic Compounds, Targacept and its Affiliates shall require the Third Party to agree in writing that (x) it will not make use of any intellectual property Controlled by Targacept or its Affiliates, including without limitation, any Collaboration Compounds (or Derivatives thereof), Targacept Patents, Joint Patents, Pentad Patents, Targacept Research Technology, Joint Research Technology, Pentad Technology and Targacept Know-How, with respect to any activity that has as its goal or intent discovering, identifying, researching, developing, marketing, commercializing or selling Nicotinic Compounds for use in the Field; and (y) APSA and its Affiliates shall be third party beneficiaries of such agreement.

(c) *Additional Negative Covenants of APSA.* APSA further covenants to Targacept that:

(i) During the term of this Agreement, APSA and its Affiliates shall not conduct any clinical development work, or license any Third Party to conduct any clinical development work, on any Nicotinic Compound (including without limitation any Collaboration Compound or Derivative thereof) for use in the Field unless and until such Nicotinic Compound has been selected as a Development Compound or a Back-Up Compound under this Agreement or as an “Alliance Development Compound” or “Alliance Back-Up Compound” (both as defined in the Second Collaboration Agreement) under the Second Collaboration Agreement, as applicable.

(ii) During the term of this Agreement, APSA and its Affiliates shall not commercialize, or sub-license any Third Party to commercialize, any Nicotinic Compound (including without limitation any Development Compound, Back-Up Compound or Derivative thereof) for use in the Field unless and until such Nicotinic Compound has been selected as a Licensed Product under this Agreement or as an "Alliance Product" (as defined in the Second Collaboration Agreement) under the Second Collaboration Agreement, as applicable.

(iii) During the term of this Agreement, APSA and its Affiliates shall not, other than pursuant to this Agreement, (A) conduct any activity, either on their own, or with, for the benefit of, or sponsored by any Third Party, that has as its goal or intent discovering, identifying, researching, developing or commercializing any Collaboration Compounds; or (B) grant any license or other rights to any Third Party to utilize any intellectual property Controlled by APSA or its Affiliates (including without limitation any APSA Patents, APSA Know-How, Joint Patents or Joint Research Technology) for the express purpose of discovering, identifying, researching, developing or commercializing any Collaboration Compounds for use in or outside of the Field.

(iv) APSA and its Affiliates will not during or after the term of this Agreement, research, develop, commercialize or license any Third Party to research, develop or commercialize, any Terminated Compound for use in or outside of the Field.

5.5 Understanding Regarding Exclusivity and Negative Covenants. The parties agree that, given the high costs and significant risks involved in discovering and developing pharmaceutical products, and given that the parties will be exchanging Confidential Information in order to perform the Research and to conduct the development and commercialization efforts, the exclusive relationship between them regarding the Research, development, commercialization and the Field, which is reflected herein, is a fair and efficient means to reach a satisfactory conclusion from their cooperative efforts.

ARTICLE 6

Management of Research, Development and Commercialization

6.1 Creation and Structure of the ERC. As of the Effective Date, the Parties shall create an Executive Research Committee of **[********]** to facilitate the Research and to manage and monitor the activities conducted by the Parties pursuant to the Research and Development Plan. The ERC shall consist of an equal number of representatives appointed by each Party, who shall include senior decision-makers of such Party.

6.2 Responsibilities of the ERC. The ERC shall be the primary vehicle for interaction between the Parties with respect to the Research. Without limiting the foregoing, the ERC shall: (a) formulate and review Research objectives; (b) manage and monitor progress in implementing the Research and Development Plan; (c) prepare and approve changes to the Research and Development Plan; (d) prepare and approve Semi-Annual Research Plans and modifications thereof; (e) approve the designation of Collaboration Compounds as Terminated Compounds, Development Compounds and Back-Up Compounds; and (f) maintain a current and complete list of Terminated Compounds.

6.3 Composition of the ERC. Within fifteen (15) days after the Effective Date, the Parties shall notify each other in writing of the names of their initial representatives on the ERC. Each Party may replace its ERC representatives at any time upon written notice to the other. A Party's representative on the ERC shall be authorized to act on behalf of such Party until written notice of the removal of such representative is received by the other Party. A Party's representative on the ERC may resign at any time upon written notice to the Parties. Such resignation shall take effect at the time specified therein, and unless otherwise specified therein, no acceptance of such resignation shall be necessary to make it effective. Upon the resignation of a Party's representative, that Party shall appoint a replacement representative. A chairperson for the ERC shall be selected from among the members of the ERC, who shall serve for a term of one year. The right to select the chairperson shall rotate between APSA and Targacept. Targacept shall select the first chairperson.

6.4 Duration of the ERC. The ERC shall exist until the termination of the Research Term.

6.5 Meetings of the ERC. During its existence, the ERC shall meet in person on scheduled dates three (3) times per year and upon thirty (30) days advance written notice from either Party to the other Party. Meetings shall alternate between the offices of Targacept and APSA. A quorum of the ERC shall exist whenever there is present at a meeting members appointed by each Party. An ERC member of the Party hosting the meeting shall serve as Secretary of that meeting. The Secretary of the meeting shall prepare and distribute to all members of the ERC minutes of the meeting sufficiently in advance of the next meeting to allow adequate review and comment prior to the meeting. Such minutes shall provide a description in reasonable detail of the discussions had at the meeting and a list of any actions, decisions or determinations approved by the ERC. Minutes of any meeting shall be approved or disapproved, and revised as necessary, at the next meeting. Final minutes of each meeting shall be distributed to the members of the ERC by the Chairperson. Each Party shall disclose to the other proposed agenda items in advance of each meeting of the ERC. The ERC may also convene, or be polled or consulted, from time to time by means of telecommunications, video conferencing or written correspondence, as deemed necessary or appropriate. Members of the ERC may be represented at any meeting by a designee appointed by such member for such meeting. The ERC may invite other representatives of the parties with special skills to attend meetings where appropriate. The ERC shall adopt such other rules as shall be necessary or convenient for its work.

6.6 Decisions of the ERC. All decisions of the ERC shall be made by the unanimous vote of all ERC members participating in the meeting. In the event that the members of the ERC cannot agree with respect to a particular issue, such issue shall be referred to the President of Targacept and the Senior Vice President, Research of APSA, who shall meet within thirty (30) days in a good faith effort to resolve the dispute. In the event such officers cannot agree on a resolution of the dispute within thirty (30) days: **[********]**; (f) if the dispute relates to APSA's request to select a Collaboration Compound (other than a Collaboration Compound that has already been designated as a

Back-Up Compound) as a Development Compound or Back-Up Compound and Targacept's opposition to such request, the Collaboration Compound in question shall be subject to Section 5.4(a)(ii); **[********]**.

6.7 [Intentionally Omitted]

6.8 [Intentionally Omitted]

6.9 [Intentionally Omitted]

6.10 [Intentionally Omitted]

6.11 [Intentionally Omitted]

6.12 [Intentionally Omitted]

6.13 Subcommittees and Working Groups of the ERC. From time to time, the ERC may establish one or more subcommittees or working groups to oversee particular projects or activities, and such subcommittees or working groups will be constituted as the ERC agrees.

6.14 Project Leaders. APSA and Targacept shall each appoint one or more persons to coordinate their respective activities under the Research ("Project Leaders"). In advance of each meeting of the ERC, the Project Leaders shall prepare and distribute to each member of the ERC a written report which shall (a) evaluate the work performed under the Research in relation to the goals of such program, and (b) state any recommendation of the Project Leaders to modify, alter the resources of, or revise the priorities of, the Research.

6.15 Creation and Structure of the DC. Upon the earlier of (a) the expiration of the Research Term and (b) the initiation by APSA of clinical development of any Development Compound, the Parties shall create a Development Committee of **[********]**. The DC shall consist of an equal number of representatives nominated by each Party.

6.16 Responsibilities of the DC. The DC shall serve as the primary vehicle for interaction between the Parties with respect to the development of Development Compounds. Without limiting the generality of the foregoing, the DC shall be responsible for: (a) reviewing and approving all Development Plans, and any updates thereto; (b) monitoring the progress of the development efforts; and (c) identifying and selecting Development Compounds and Back-up Compounds from among the Collaboration Compounds in accordance with Section 2.2(c), after the dissolution of the ERC).

6.17 Composition of the DC. Within fifteen (15) days of the creation of the DC, the Parties shall notify each other in writing of the names of their initial representatives on the DC. Each party may replace its DC representatives at any time upon written notice to the other. A Party's representative on the DC is authorized to act on behalf of such Party until written notice of the removal of such representative is received by the other Party. A Party's representative on the DC may resign at any time upon written notice to the Parties. Such resignation shall take effect at the time specified therein, and unless otherwise specified therein, no acceptance of such resignation shall be necessary to make it effective. Upon the resignation of a Party's representative, that Party shall appoint a replacement representative. APSA shall select a chairperson for the DC from among its representatives on the DC.

6.18 Duration of the DC. The DC shall remain in existence so long as APSA continues to develop any Development Compound for any Indication, after which the DC shall dissolve, except that the DC shall automatically dissolve in the event that (a) APSA terminates the Agreement pursuant to Sections 11.2 or 11.3, or (b) Targacept terminates the Agreement pursuant to Section 11.2.

6.19 Meetings of the DC. During its existence, the DC shall meet in person on scheduled dates two (2) times per year and upon thirty (30) days advance written notice from either Party to the other Party. Meetings shall alternate between the offices of Targacept and APSA. A quorum of the DC shall exist whenever there is present at a meeting members appointed by each Party. A DC member of the Party hosting the meeting shall serve as Secretary of that meeting. The Secretary of the meeting shall prepare and distribute to all members of the DC minutes of the meeting sufficiently in advance of the next meeting to allow adequate review and comment prior to the meeting. Such minutes shall provide a description in reasonable detail of the discussions had at the meeting and a list of any actions, decisions or determinations approved by the DC. Minutes of any meeting shall be approved or disapproved, and revised as necessary, at the next meeting. Final minutes of each meeting shall be distributed to the members of the DC by the Chairperson. Each Party shall disclose to the other proposed agenda items in advance of each meeting of the DC. The DC may also convene, or be polled or consulted, from time to time by means of telecommunications, video conferencing or written correspondence, as deemed necessary or appropriate. Members of the DC may be represented at any meeting by a designee appointed by such member for such meeting. The DC may invite other representatives of the parties with special skills to attend meetings where appropriate. The DC shall adopt such other rules as shall be necessary or convenient for its work.

6.20 Decisions of the DC. All decisions of the DC shall be made by the unanimous vote of all DC members participating in the meeting. In the event that the members of the DC cannot agree with respect to a particular issue, such issue shall be referred to the President of Targacept and the Vice President, Clinical Research of APSA for resolution. In the event that such officers cannot agree on a resolution of the dispute within thirty (30) days, APSA’s decision shall control.

6.21 Subcommittees of the DC. From time to time, the DC may establish one or more subcommittees to oversee particular projects or activities, and such subcommittees will be constituted as the DC agrees.

6.22 Expenses. Each Party shall be responsible for all travel and related costs for its representatives to attend meetings of, and otherwise participate on, the ERC and the DC.

ARTICLE 7

Payments to Targacept

7.1 License Fees. In consideration of the rights granted hereunder, APSA shall pay Targacept a non-refundable, non-creditable license fee of Two Million U.S. Dollars ($2,000,000) within ten (10) days after the Effective Date of this Agreement.

7.2 Milestone Payments. Subject to Sections 2.8(c) and 7.9, APSA shall make non-refundable payments to Targacept within thirty (30) days after the occurrence of each of the events listed below (each, a "Milestone Event"), in the amount provided:

(a) With respect to the Alzheimer's Disease Indication:

	Milestone Event	Payment Amount
1:	[********]	[********]
2:	[********]	[********]
3:	[********]	[********]
4:	[********]	[********]
5:	[********]	[********]
6:	[********]	[********]

For clarity, each Milestone Event, with the exception of Milestone Events 5 and 6, shall be payable only for the first Development Compound for the Alzheimer's Disease Indication to achieve the specified Milestone Event. Payment for Milestone Events 5 and 6 shall be made for each Development Compound that achieves such Milestone Event for the Alzheimer's Disease Indication.

(b) With respect to the Parkinson's Disease Indication:

	Milestone Event	Payment Amount
1:	[********]	[********]
2:	[********]	[********]
3:	[********]	[********]
4:	[********]	[********]
5:	[********]	[********]
6:	[********]	[********]

[********]

(c) As used in this Section 7.2, the following definitions apply:

(1) "Initiation", and its derivative forms, with respect to a particular phase, means when the first patient has been enrolled for the trials of such phase.

(2) “Completion”, and its derivative forms, with respect to a particular phase, means when all case report forms for all patients in the phase trials have been collected, and all queries have been resolved and the database for the phase trials has been locked.

(3) “Filing of NDA” means when the filing has been accepted for submission by the relevant regulatory authority.

7.3 Royalty Payments. Subject to the terms and conditions of this Agreement, APSA shall pay to Targacept royalties in an amount equal to **[********]** of the Net Sales of such Licensed Product during the Full Royalty Term in any country and **[********]** of the Net Sales of such Licensed Product during the Partial Royalty Term in any country. The Parties agree that the above royalty rates reflect an efficient and reasonable blended allocation of the values of the worldwide Know-How and Patent Rights licensed by Targacept hereunder.

7.4 Term of Royalty Obligation. The “Full Royalty Term” for a particular Licensed Product in a particular country shall commence with the First Commercial Sale of such Licensed Product in such country and shall terminate upon the later of (a) the expiration of the last-to-expire of (i) issued Targacept Patent Rights, (ii) issued APSA Patent Rights covering the composition of the Development Compound constituting or included in the Licensed Product, (iii) issued APSA Patent Rights covering inventions during the Research Term or (iv) Joint Patent Rights covering inventions during the Research Term, for which at least one Valid Claim exists covering the sale of such Licensed Product or its use in the Field, in such country, or (b) the **[********]** anniversary of the First Commercial Sale of such Licensed Product in such country. The “Partial Royalty Term” (if any) for a particular Licensed Product in a particular country shall commence immediately after the Full Royalty Term of such Licensed Product in such country and shall terminate upon the **[********]** anniversary of the First Commercial Sale of such Licensed Product in such country.

7.5 Timing of Payment of Royalties. Running royalties shall be payable on a quarterly basis, within sixty (60) days after the end of each calendar quarter, based upon the Net Sales during each calendar quarter, commencing with the calendar quarter in which the First Commercial Sale of a Licensed Product is made. Royalties shall be calculated in accordance with U.S. generally accepted accounting principles consistently applied and with the terms of this Agreement.

7.6 Obligation to Pay Royalties. APSA’s obligation to pay royalties to Targacept under this Article 7 is imposed only once with respect to the same unit of Licensed Product regardless of the number of Targacept Patents, APSA Patents or Joint Patents pertaining thereto.

7.7 Statement of Royalties. Each royalty payment to Targacept hereunder shall be accompanied by a statement showing the amounts of gross sales and Net Sales and the number of units of each Licensed Product sold by APSA on a country-by-country basis during such quarter and the amount of royalties due on such Net Sales.

7.8 Compulsory Licenses. If a court or a governmental agency in a particular country requires a Party (or its Affiliate) to grant a compulsory license to a Third Party permitting such Third Party to make and sell a Licensed Product in such country, and such compulsory license contains a royalty rate lower than the rates provided in Section 7.3 with respect to the sale of such Licensed Product, then the royalty rate to be paid by APSA based upon Net Sales of the Licensed Product in such country shall automatically be reduced to the royalty rate under such compulsory license, during the time period when such compulsory license is in effect and being exercised.

7.9 Third Party Licenses. If any unexpired Third Party patent(s) claiming a Collaboration Compound or its manufacture or use in the Field exist(s) in a country where a Licensed Product including such Collaboration Compound is being manufactured, used or sold, and if it should prove in APSA's bona fide, good faith judgment impractical or impossible for it or its Affiliates or Sublicensees to commence or continue the manufacture, use or sale of such Licensed Product in such country without obtaining a Third Party License under such patent and if Targacept does not deliver to APSA an opinion without material qualifications from nationally recognized patent counsel in such country to the effect that such manufacture, use or sale does not and will not infringe such Third Party patent(s):

(a) if the Third Party patent is held by **[********]**, then Targacept shall have the right, for a period of six (6) months, to use commercially reasonable, good faith efforts to negotiate and obtain a Third Party License on commercially reasonable terms (for royalties not exceeding **[********]** of Net Sales or such higher amount agreed to by the Parties) and thereafter APSA shall have the right to use commercially reasonable, good faith efforts to negotiate and obtain such Third Party License on commercially reasonable terms, in either case with the cost of such license (including without limitation license fees, milestone payments and royalties) to be set off against any payments owed to Targacept by APSA pursuant to Section 7.2 or Section 7.3; ***provided, however,*** that in no event shall the aggregate amount set off in any calendar quarter against royalties payable pursuant to Section 7.3 in such calendar quarter exceed **[********]**;

(b) if the Third Party patent is held by any Third Party other than **[********]**, APSA shall have the right to use commercially reasonable, good faith efforts to negotiate and obtain a Third Party License on commercially reasonable terms, with the cost of such license (including without limitation license fees, milestone payments and royalties) to be borne equally by APSA and Targacept, with Targacept's share of such costs to be set off against any payments owed to Targacept by APSA pursuant to Section 7.2 or Section 7.3; ***provided, however,*** that in no event shall the aggregate amount set off in any calendar quarter against royalties payable under Section 7.3 in such calendar quarter exceed **[********]**;

(c) if such Third Party License cannot be obtained on terms reasonably acceptable to APSA, APSA may terminate its license rights hereunder with respect to such Licensed Product in such country upon sixty (60) days written notice to Targacept, whereupon APSA, its Affiliates and Sublicensees shall have no further license rights in such country regarding such Licensed Product.

7.10 Mode of Payment. All payments to Targacept hereunder shall be made by deposit of United States Dollars in the requisite amount to such bank account as Targacept may from time to time designate by notice to APSA. Payments shall be free and clear of any taxes (other than withholding and other taxes imposed on Targacept), fees or charges, to the extent applicable. With respect to sales outside the United States, payments shall be calculated based on currency exchange rates for the last calendar quarter for which remittance is made for royalties. For each quarter and each currency, such exchange rate shall equal the arithmetic average of the daily exchange rates during the calendar quarter obtained from the *Reuters Daily Rate Report* or, if such exchange rates are not available on any day, *The Wall Street Journal*, Eastern U.S. Edition, or, if such exchange rates are not available on any day, as otherwise agreed by the Parties.

7.11 Records Retention. For three (3) years after each sale of each Licensed Product, and for such longer period as may be required by law, APSA shall keep (and shall ensure that its Affiliates and Sublicensees shall keep) complete and accurate books and records pertaining to the sale of all Licensed Products in sufficient detail to confirm the accuracy of calculations of payments due to Targacept hereunder.

7.12 Audits.

(a) Upon the written request of Targacept and not more than once in each calendar year, APSA shall permit an independent certified public accounting firm of nationally recognized standing appointed by Targacept, at Targacept's expense, to have access during normal business hours, and upon reasonable prior written notice, to such of the records of APSA as may be reasonably necessary to verify the accuracy of the royalty reports hereunder for any calendar year ending not more than thirty-six (36) months prior to the date of such request. The accounting firm shall disclose to Targacept and APSA whether the royalty reports are correct or incorrect, the basis for its finding and the specific details concerning any discrepancies.

(b) If such accounting firm correctly concludes that additional royalties were owed during such period, APSA shall pay the additional royalties, with interest from the date originally due at the prime rate, as published in *The Wall Street Journal* (Eastern U.S. Edition) on the last business day preceding such date, within thirty (30) days after the date Targacept delivers to APSA such accounting firm's written report so correctly concluding. [********].

(c) APSA shall include in each sublicense granted by it pursuant to this Agreement a provision requiring the Sublicensee to make reports to APSA, to keep and maintain records of sales made pursuant to such sublicense and to grant access to such records by Targacept's independent accountant to the same extent required by APSA under this Agreement.

(d) Targacept shall treat all information subject to review under this Section 7.12 in accordance with the confidentiality provisions of Article 9 of this Agreement, and shall cause its accounting firm to enter into an acceptable confidentiality agreement with APSA obligating such firm to retain all such financial information in confidence pursuant to such confidentiality agreement; ***provided, however,*** that in no event shall such confidentiality agreement prevent the accounting firm from disclosing to Targacept the information contemplated by Section 7.12(a).

7.13 Taxes. The Party receiving royalties and other payments under this Agreement shall pay any and all taxes levied on account of such payment. If any taxes are required to be withheld by the paying Party, it shall (a) deduct such taxes from the remitting payment, (b) timely pay the taxes to the proper taxing authority, and (c) send proof of payment to the other Party and certify its receipt by the taxing authority within sixty (60) days following such payment.

ARTICLE 8

Inventions and Patents

8.1 Title to Inventions and Documentation. Except as otherwise expressly provided in Article 5 and this Section 8.1:

(a) the Parties shall jointly own all right, title to and interest in all Joint Research Technology and the Patent Rights related to Joint Research Technology;

(b) Targacept shall own all right, title to and interest in all Targacept Research Technology and the Patent Rights related to Targacept Research Technology; and

(c) APSA shall own all right, title to and interest in all APSA Research Technology and the Patent Rights related to APSA Research Technology.

8.2 Patent Prosecution. The Parties expect that patent applications will be filed as required to secure suitable Patent Rights covering Collaboration Compounds and inventions that are within the Research Technology or are otherwise applicable to the Field. The Parties agree as follows with respect to the filing and prosecution of such applications.

(a) *Targacept Patents.* Subject to the provisions of this Section 8.2: Targacept shall be responsible for obtaining, prosecuting and/or maintaining throughout the world the Targacept Patents, including Patent Rights covering Targacept Research Technology solely owned by Targacept. In this regard, Targacept shall file, prosecute and/or maintain patent applications in the United States to secure Patent Rights for the Collaboration Compounds and any Research Technology solely owned by Targacept and other inventions claimed in the Targacept Patents. Within one year of filing any such United States patent application, Targacept shall file a counterpart International Application under the PCT designating all member countries and any additional counterpart national patent applications in non-PCT member countries as the parties shall mutually agree upon (subject to the provisions of

Subsection 8.3(e)). Targacept shall bear all costs for filing, prosecuting and/or maintaining Targacept Patents. Notwithstanding the foregoing, APSA shall reimburse Targacept for (i) **[********]** of the out-of-pocket costs incurred by Targacept for the filing, prosecuting and/or maintaining Targacept Patents which claim a Development Compound or a Back-Up Compound (or its manufacture or use); (ii) upon the designation of any Development Compound or Back-Up Compound as a Licensed Product, an additional **[********]** of such costs previously incurred for any Targacept Patents that claim such Development Compound or Back-Up Compound and (iii) thereafter, **[********]** of the out-of-pocket costs incurred by Targacept for the filing, prosecuting and/or maintaining Targacept Patents which claim such Licensed Product (or its manufacture or use); ***provided, however,*** that APSA may decline to pay costs for filing, prosecuting and/or maintaining any such Targacept Patent in one or more countries, in which case Targacept may elect to exclude such Targacept Patent from the licenses granted to APSA under Section 5.1 hereof in such countries.

(b) *APSA Patents.* APSA shall be responsible for obtaining, prosecuting and/or maintaining throughout the world Patent Rights covering APSA Research Technology solely owned by APSA. APSA shall bear all costs for filing, prosecuting and/or maintaining APSA Patents throughout the world.

(c) *Joint Patents.* Targacept shall be initially responsible for obtaining, prosecuting and/or maintaining throughout the world Patent Rights in the name of Targacept and APSA covering Joint Research Technology pertaining solely and directly to Nicotinic Compounds and APSA shall be initially responsible for obtaining, prosecuting and/or maintaining throughout the world Patent Rights in the name of Targacept and APSA covering all other Joint Research Technology. APSA and Targacept shall share equally the costs for filing, prosecuting and/or maintaining such Joint Patents. Notwithstanding the above, either Party may decline to pay its share of the costs for filing, prosecuting and/or maintaining any Joint Patent(s) in a particular country(ies), in which case the declining Party shall assign to the other Party all its right, title and interest to any such Joint Patent(s) in the relevant country and upon such assignment such Joint Patent(s) shall become a APSA Patent(s) or a Targacept Patent(s), as the case may be.

(d) *Cooperation.* Each Party shall regularly provide the other Party with copies of all patent applications filed hereunder and other material submissions and correspondence with the patent offices, in sufficient time to allow for review and comment by the other Party. In addition, such filing Party shall provide the other Party and its patent counsel with an opportunity to consult with the Party and its patent counsel regarding the filing and contents of any such application, amendment, submission or response, and the advice and suggestions of the other

Party and its patent counsel shall be taken into reasonable consideration by such Party and its legal counsel in connection with such filing; ***provided, however,*** that with respect to the prosecution of Targacept Patents, Targacept shall give all due consideration to reasonable requests by APSA regarding the prosecution of such Patent Rights and ***provided further*** that with respect to the Joint Patents, the prosecuting Party shall give consideration to reasonable requests of the other Party regarding the prosecution of such Joint Patents. Each Party shall also provide the other Party with copies of any patentability search reports made by patent counsel with respect to inventions in the Research Technology, including patents located, a copy of each patent application, and each patent that issues thereon.

(e) *Election not to Prosecute*. If a Party elects not to pursue the initial filing of a potential Targacept Patent, APSA Patent or Joint Patent, as the case may be, or to support the PCT International filing or the continued prosecution or maintenance of any Targacept Patent, APSA Patent or Joint Patent, as the case may be, in a particular country for which it has the initial right or obligation to file pursuant to Section 8.2(a), (b) or (c) (such Party being referred to herein as the "Non-Filing Party"), then it shall notify the other Party promptly in writing and in good time to enable the other Party to meet any applicable deadlines. With respect to Targacept Patents, APSA Patents or Joint Patents scheduled for international filing with respect to such country, the Non-Filing Party shall notify the other Party in writing at least ninety (90) days before the date required for the convention year filing of such Targacept Patent, APSA Patent or Joint Patent application or within a reasonable time before any other deadline date by which an action must be taken to establish or preserve a Targacept Patent, APSA Patent or Joint Patent right in such country. The other Party shall then have the right, but not the obligation, to pursue the filing or support the continued prosecution or maintenance of such Targacept Patent, APSA Patent or Joint Patent, at its expense in such country. If the other Party does so elect to pursue such filing or continue such support, then it shall notify the Non-Filing Party of such election, and the Non-Filing Party shall (i) reasonably cooperate with the other Party in this regard, and (ii) promptly release or assign, as the case may be, to the other Party, without consideration, all right, title and interest in such Targacept Patent, APSA Patent or Joint Patent in such country. For the avoidance of doubt, in the event that the other Party supports a patent application that the Non-Filing Party declines to support, then such patent applications and patents that may result therefrom shall be considered a Targacept Patent (in the case APSA is the Non-Filing Party) or an APSA Patent (in the case Targacept is the Non-Filing Party), as applicable, for purposes of this Agreement.

8.3 Enforcement of Patents.

(a) If either Party considers that any Targacept Patent, APSA Patent or Joint Patent claiming a Collaboration Compound or Licensed Product, or the manufacture or use thereof, is being infringed by a Third Party's activities in the Field, it shall notify the other Party and provide it with any evidence of such infringement which is reasonably available. APSA shall have the first opportunity at its own expense to attempt to remove such infringement by commercially appropriate steps, including filing an infringement suit or taking other similar action. In the event that APSA fails to take commercially appropriate steps with respect to an infringement that is likely to have a material adverse effect on the sale of Licensed Products within **[********]** following notice of such infringement, Targacept shall have the right to do so at its expense; provided that if APSA has commenced negotiations with an alleged infringer of the patent for discontinuance of such infringement within such **[********]** period, APSA shall have an additional **[********]** to conclude its negotiations before the other Party may bring suit for such infringement. If required by law for the prosecuting Party to prosecute any suit referred to in this Section 8.3, the other Party shall join such suit as a party, at the prosecuting Party's expense. In no event shall either Party be required to enforce any Patent Right against more than one entity or in more than one country at any one time.

(b) The Party not enforcing the applicable Patent Rights shall provide commercially reasonable assistance to the other Party, including joining in infringement suits, providing access to relevant documents and other evidence, making employees available and seeking to obtain necessary Third Party consents, subject to the enforcing Party's reimbursement of any out-of-pocket expenses incurred by the non-enforcing Party.

(c) Any amounts recovered by APSA pursuant to Section 8.3(a), whether by settlement or judgment, shall be allocated in the following order: (i) to reimburse APSA and Targacept for their reasonable out-of-pocket expenses in making such recovery (which amounts shall be allocated pro rata if insufficient to cover the totality of such expenses); and (ii) the portion of the award representing lost profits shall be allocated between APSA and Targacept so that the ratio of APSA's portion to Targacept's portion is equal to the ratio of APSA's historic profits on Net Sales in the Indication to Targacept's royalties in the Indication (or **[********]** of such royalties during the Partial Royalty Term), provided that if the infringement activity on which such recovery is based included actions outside the Field, then the Parties shall reasonably agree on an appropriate allocation of such recovery between activities in the Field and activities outside the Field (which will not bear a royalty). Any amounts recovered by Targacept pursuant to actions under Section 8.3(a) shall be allocated in the following order: (i) to reimburse Targacept and APSA for their reasonable out-of-pocket expenses in making such recovery (which amounts shall be allocated pro rata if insufficient to cover the totality of such expenses); and (ii) the remainder shall be divided **[********]** to Targacept and **[********]** to APSA.

(d) Except for Third Party infringement activities within the Field covered by the provisions of Section 8.3(a), each Party shall retain the sole and exclusive right to enforce its Patent Rights against all infringers at its sole cost and expense.

8.4 Third Party Patent Rights. If any warning letter or other notice of infringement is received by a Party, or action, suit or proceeding is brought against a Party, alleging infringement of a Patent Right of any Third Party in the manufacture, use or sale of a Licensed Product or in conducting the Research, the Parties shall promptly discuss and decide the best way to respond.

ARTICLE 9

Confidentiality

9.1 Confidentiality Obligations. Each Party agrees that, for the term of this Agreement and for five (5) years thereafter, such Party shall keep, and shall ensure that its officers, directors, employees and agents keep, completely confidential and shall not publish or otherwise disclose and shall not use for any purpose except as expressly permitted hereunder any Confidential Information furnished to it by the other Party pursuant to this Agreement (including, without limitation, Know-How or Research Technology of the disclosing Party) or any Joint Research Technology. The foregoing obligations shall not apply to any information to the extent that it can be established by such receiving Party that such information:

(a) was already known to the receiving Party, other than under an obligation of confidentiality, at the time of disclosure;

(b) was generally available to the public or otherwise part of the public domain at the time of its disclosure to the receiving Party;

(c) became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the receiving Party in breach of this Agreement;

(d) was subsequently lawfully disclosed to the receiving Party by a Third Party other than in contravention of a confidentiality obligation of such Third Party to the disclosing Party; or

(e) was developed or discovered by employees of the receiving Party or its Affiliates who had no access to the Confidential Information of the disclosing Party.

Each Party shall have, shall obtain or shall have assigned to it written agreements from each of its employees, agents, and consultants who perform substantial work on the Research or development, which agreements shall obligate such persons to similar obligations of confidentiality and to assign to such Party all inventions made by such persons during the course of performing the Research. Each

Party may disclose the other's Confidential Information to the extent such disclosure is reasonably necessary in filing or prosecuting patent applications, prosecuting or defending litigation or as otherwise required by legal process, complying with applicable governmental regulations, making a permitted sublicense of its rights hereunder or conducting clinical trials or otherwise in performing its obligations or exercising its rights hereunder, *provided that* if a Party is required to make any such disclosure of the other Party's Confidential Information, it will give reasonable advance notice to such other Party of such disclosure requirement, will cooperate with such other Party in the efforts of such other Party to secure confidential treatment of such Information prior to its disclosure, and, save to the extent inappropriate in the case of patent applications, will use all reasonable efforts to secure confidential treatment of such information prior to its disclosure (whether through protective orders or confidentiality agreements or otherwise). In addition, each Party shall have the right to disclose to its Affiliates Confidential Information of the other Party, provided that such Party shall ensure that its Affiliates maintain the confidentiality of such information in accordance with the provisions of this Section 9.1.

9.2 Publications.

(a) Neither Party shall publish or present the results of the Research or development studies carried out on any Development Compound or Back-Up Compound until after completion of Phase I clinical development with respect thereto. Subject to the foregoing and the restrictions provided below, either Party may publish or present the results of the Research or of development studies carried out by it on such Development Compound, subject to the prior review by the other Party for patentability and protection of such other Party's Confidential Information. Each Party shall provide to the other Party the opportunity to review any proposed abstracts, manuscripts or summaries of presentations which cover the results of the Research or of pre-Phase III clinical development of such Development Compound. Each party shall designate a person who shall be responsible for approving such publications. Such designated person shall respond in writing promptly and in no event later than sixty (60) days after receipt of the proposed material with either approval of the proposed material or a specific statement of concern, based upon either the need to seek patent protection or concern regarding competitive disadvantage arising from the proposal. In the event of concern, the submitting Party agrees not to submit such publication or to make such presentation that contains such information until the other Party is given a reasonable period of time (not to exceed ninety (90) days) to seek patent protection for any material in such publication or presentation which it believes is patentable or to resolve any other issues. This Section 9.2(a) shall cease to apply with respect to any Development Compound upon the commercial launch of a Licensed Product containing such Development Compound as an active ingredient. Furthermore, with respect to any proposed abstracts, manuscripts or summaries of presentations by investigators or other Third Parties, such materials shall be subject to review under this Section 9.2(a) to the extent that APSA or Targacept (as the case may be) has the right to do so.

(b) Each Party also agrees to delete from any such proposed publication any Confidential Information of the other Party upon its reasonable request.

(c) In any publication permitted under this Section 9.2, each Party shall acknowledge its collaboration with the other Party under this Agreement.

9.3 Press Releases. Except to the extent required by law or as otherwise permitted in accordance with this Section 9.3, neither Party shall make any public announcements concerning this Agreement or the subject matter hereof without the prior written consent of the other, which shall not be unreasonably withheld. Notwithstanding the foregoing, the Parties agree that each Party may desire or be required to issue press releases relating to the Agreement or activities thereunder, and the Parties agree to consult with each reasonably and in good faith with respect to the text and timing of such press releases prior to the issuance thereof, provided that a Party may not unreasonably withhold consent to such releases, and that either Party may issue such press releases as it determines, based on advice of counsel, are reasonably necessary to comply with laws or regulations or for appropriate market disclosure. The principles to be observed by Targacept and APSA in public disclosures with respect to this Agreement shall be: accuracy, compliance with applicable legal requirements, the requirements of confidentiality under this Article 9 and normal business practice in the pharmaceutical and biotechnology industries for disclosures by companies comparable to Targacept and APSA. In the event of a public announcement, the Party making such public announcement shall provide the other Party with a reasonable opportunity, judged in the light of the circumstances, and the right to approve the content of such announcement prior to its being made, which approval shall not be delayed or unreasonably withheld. Furthermore, each Party shall give the other Party a reasonable opportunity, to the extent practicable, to review all filings with the United States Securities and Exchange Commission describing the terms of this Agreement prior to submission of such filings, and shall give reasonable consideration to any comments received from the non-filing Party relating to such filing, including without limitation the provisions of this Agreement for which confidential treatment should be sought.

ARTICLE 10

Indemnification

10.1 Indemnification by APSA. APSA shall indemnify, defend and hold Targacept and its Affiliates and each of their respective agents, employees, officers and directors (the “Targacept Indemnitees”) harmless from and against any and all liability, damage, loss, cost or expense (including reasonable attorney’s fees) in connection with any and all suits, investigations, claims or demands by Third Parties (collectively, the “Losses”) arising from or occurring as a result of (a) any breach by APSA of this Agreement or (b) APSA’s performance of its obligations under this Agreement and/or (c) the manufacture, use or sale of any Collaboration Compound or any product containing a Collaboration Compound by APSA and its Affiliates, Sublicensees, distributors and agents, except for those Losses for which Targacept has an obligation to indemnify APSA pursuant to Section 10.2, as to which Losses each party shall indemnify the other to the extent of their respective liability for the Losses. Notwithstanding any provision hereof to the contrary, APSA shall have no obligation to indemnify any Targacept Indemnitee against any Losses in connection with any product liability claim arising out of the manufacture, use or sale of any product by Targacept and its Affiliates, Sublicensees, distributors and agents, regardless of whether such claim sounds in tort, contract, strict liability, products liability or any other legal theory.

10.2 Indemnification by Targacept. Targacept shall indemnify, defend and hold APSA and its Affiliates and each of their respective agents, employees, officers and directors (the “APSA Indemnitees”) harmless from and against any Losses arising from or occurring as a result of (a) any breach by Targacept of this Agreement, (b) Targacept’s performance of its obligations under this Agreement and/or (c) the manufacture, use or sale of any Collaboration Compound or any product containing a Collaboration Compound by Targacept and its Affiliates, Sublicensees, distributors and agents, except for those Losses for which APSA has an obligation to indemnify Targacept pursuant to Section 10.1, as to which Losses each Party shall indemnify the other to the extent of their respective liability for the Losses. Notwithstanding any provision hereof to the contrary, Targacept shall have no obligation to indemnify any APSA Indemnitee against any Losses in connection with any product liability claim arising out of the manufacture, use or sale of any Licensed Product by APSA and its Affiliates, Sublicensees, distributors and agents, regardless of whether such claim sounds in tort, contract, strict liability, products liability or any other legal theory.

10.3 Notification of Claims; Conditions to Indemnification Obligations. As a condition to a Party’s right to receive indemnification under this Article 10, it shall (a) promptly notify the other Party as soon as it becomes aware of a claim or action for which indemnification may be sought pursuant hereto, (b) cooperate with the indemnifying Party in the defense of such claim or suit, and (c) permit the indemnifying Party to control the defense of such claim or suit, including without limitation the right to select defense counsel. In no event, however, may the indemnifying party compromise or settle any claim or suit in a manner which admits fault or negligence on the part of the indemnified Party without the prior written consent of the indemnified party. The indemnifying Party shall have no liability under this Article 10 with respect to claims or suits settled or compromised without its prior written consent.

ARTICLE 11

Termination and Expiration

11.1 Term and Termination. This Agreement shall commence upon the Effective Date and, unless earlier terminated as provided herein, shall expire on the expiration of all royalty and other payment obligations hereunder. The obligation of APSA to pay royalties shall expire on a country-by-country basis as provided in Section 7.4. Upon expiration of all royalty obligations with respect to a particular Licensed Product, the licenses granted to APSA under Section 5.1(b) shall expire, and APSA shall automatically thereafter be granted a non exclusive, fully paid up license to make, have made, use, import, sell and offer for sale such Licensed Product worldwide. For the avoidance of doubt, if no Development Compound is selected prior to six months after the Research Term, the term of this Agreement shall terminate six months after the Research Term, unless earlier terminated in accordance with this Agreement or unless the parties otherwise agree in writing.

11.2 Termination of the Agreement upon Material Breach.

(a) Failure by a Party to comply with any of its material obligations contained herein shall entitle the Party not in default to give to the Party in default notice specifying the nature of the default, requiring it to make good or otherwise cure such default, and stating its intention to terminate if such default is not cured. If such default is not cured within sixty (60) days after the receipt of such notice (or, if such default cannot be cured within such sixty (60) day period, if the Party in default does not commence and diligently continue actions to cure such default), the Party not in default shall be entitled, without prejudice to any of its other rights conferred on it by this Agreement, and in addition to any other remedies available to it by law or in equity, to terminate this Agreement; ***provided, however,*** that such right to terminate shall be stayed in the event that, during such sixty (60) day period, the Party alleged to have been in default shall have initiated dispute resolution in accordance with Section 14.10 with respect to the alleged default, which stay shall last so long as the initiating Party diligently and in good faith cooperates in the prompt resolution of such dispute resolution proceedings.

(b) The right of a Party to terminate this Agreement, as herein above provided, shall not be affected in any way by its waiver or failure to take action with respect to any prior default.

(c) In the event that APSA is developing or commercializing more than one Development Compound and/or Licensed Product for use in the Field, and APSA breaches this Agreement in connection with a particular Development Compound or Licensed Product, then Targacept shall be entitled to terminate this Agreement only with respect to such particular Development Compound or Licensed Product. Furthermore, in the event a breach relating to a particular Development Compound or Licensed Product is limited to a particular Major Pharmaceutical Market, then Targacept shall be entitled to terminate this Agreement only with respect to such Major Pharmaceutical Market.

11.3 Termination of the Agreement by APSA. APSA may terminate this Agreement in its entirety upon thirty (30) days prior written notice on or after the end of the Research Term, or as specified in Section 2.8; ***provided, however,*** that APSA shall not be discharged of its liability to Targacept under any previously approved Semi-Annual Research Plan.

11.4 Consequences of Termination.

(a) Upon termination of this Agreement (but not upon expiration of its term under Section 11.1), in case of partial termination of this Agreement with respect to the compound(s) and/or product(s) subject to such termination and in case of termination of this Agreement as a whole with respect to all compounds and products being subject to this Agreement, the following shall apply with respect to the compounds and/or products with respect to which the Agreement is being terminated: (i) each Party shall promptly return all relevant records and materials in its possession or control containing or comprising the other Party’s Know-How and Confidential Information and to which the former Party does not retain rights hereunder (except one copy of which may be retained in a Party's confidential files for archival purposes); (ii) all licenses granted by each Party to the other under Article 5 shall terminate except as expressly provided otherwise herein; (iii) each Party shall provide the other Party with copies of all reports and data, including preclinical data and reports, obtained by the former Party pursuant to this Agreement that relate to Collaboration Compounds and that have not otherwise been provided to such Party, within sixty (60) days after such termination; ***provided, however,*** that a Party shall not be obligated to provide the foregoing copies in the case where such Party terminates under Section 11.2 and that Targacept shall not be obligated to do so in the case where APSA terminates under Section 11.3 and ***provided further*** that the provision to a Party of the foregoing copies shall not be deemed to create any additional rights or licenses in any such copies or the intellectual property embodied therein, and such Party's rights to use or exploit such information and rights shall be solely as expressly granted elsewhere in this Agreement and, with respect to Joint Research Technology or Joint Patents, those rights of such Party as a joint owner); and (iv) any and all claims and payment obligations that accrued prior to the date of such termination shall survive such termination.

(b) In the event APSA terminates the Agreement under Section 11.3, APSA shall grant Targacept an exclusive, paid-up, worldwide license, with the right to sublicense, under (i) any Patent Rights Controlled by APSA which claim a Development Compound, Back-Up Compound or Licensed Product (or its manufacture or use in the Field), and (ii) any Know-How Controlled by APSA which is necessary to make and use Development Compounds, Back-Up Compounds or Licensed Products in the Field, solely to make, have made, import, use, sell and offer for sale Development Compounds, Back-Up Compounds and Licensed Products for use in the Field. APSA agrees to negotiate in good faith with Targacept any further royalty-bearing licenses under such other APSA Patents, APSA Know-How and APSA rights in the Joint Patents and Joint Research Technology as may be useful to Targacept in conducting research and development and commercializing such Compounds for use in the Field.

(c) In the event Targacept terminates the Agreement under Section 11.2, APSA shall grant Targacept an exclusive, paid-up, worldwide license, with the right to sublicense, under (i) any Patent Rights Controlled by APSA which claim a Development Compound, Back-Up Compound or Licensed Product (or its manufacture or use in the Field), and (ii) any Know-How Controlled by APSA which is necessary to make and use Development Compounds, Back-Up Compounds or Licensed Products in the Field, solely to make, have made, import, use, sell and offer for sale Development Compounds, Back-Up Compounds and Licensed Products for use in the Field. APSA agrees to negotiate in good faith with Targacept any further royalty-bearing licenses under such other APSA Patents, APSA Know-How and APSA rights in the Joint Patents and Joint Research Technology as may be useful to Targacept in conducting research and development and commercializing such Compounds for use in the Field.

(d) In connection with the grant of a license pursuant to Section 11.4(b) or 11.4(c), APSA shall assign to Targacept any and all regulatory filings (including applications for Regulatory Approval) made by APSA covering Development Compounds, Back-Up Compounds and Licensed Products, and APSA shall provide appropriate notification of such assignment to applicable regulatory authorities within thirty (30) days after the request of Targacept.

(e) Notwithstanding the provisions of Section 11.5(b) hereof, in the event that Targacept terminates this Agreement pursuant to Section 11.2, then the restrictions imposed upon it pursuant to, and its obligations under, Sections 2.11 and 5.4 (other than Section 5.4(a)) shall terminate.

(f) Notwithstanding the provisions of Section 11.5(b) hereof, in the event that APSA terminates this Agreement pursuant to Section 11.2, then the restrictions imposed upon it pursuant to, and its obligations under, Sections 2.11 and 5.4 (other than Section 5.4(a)) shall terminate.

11.5 Accrued Rights; Surviving Obligations.

(a) Termination, relinquishment or expiration of this Agreement for any reason shall be without prejudice to any rights which shall have accrued to the benefit of a Party prior to such termination, or expiration. Such termination, relinquishment or expiration shall not relieve a Party from obligations which are expressly indicated to survive termination or expiration of this Agreement.

(b) Without limiting the foregoing, Sections 2.6(b), 2.6(c), 2.8(a), 2.9, 2.10, 2.14, 4.1(b), 4.1(c), 5.1(b) (in the event of expiration), 5.2(b) and (c) (unless APSA terminates this Agreement under Section 11.2), 5.3, 5.4(a), 5.4(b)(ii) (in the event of termination by APSA under Section 11.2), 5.4(c)(iv), 7.9, 7.10, 7.11, 7.12, 7.13, 14.3, 14.9, 14.10, 14.11 and 14.12 and Articles 1 (including, solely for purposes of interpreting a particular definition set forth therein, all provisions referenced in such definition), 8, 9, 10, and 11 of this Agreement shall survive the expiration or termination of this Agreement for any reason; provided that, in the event of a partial termination of this Agreement pursuant to Section 11.2(c), (i) the foregoing provisions shall survive and continue to apply in full force and effect with respect to the compound(s) and or product(s) subject to the partial termination and (ii) all of the provisions of this Agreement, including without limitation the foregoing provisions, shall continue to apply in full force and effect in all other respects (including, without limitation, to all compound(s) and/or product(s) that are not subject to the partial termination).

(c) Upon any termination of this Agreement as regards any particular Licensed Product, APSA shall be entitled, during the six (6) month period following the effective date of such termination, to finish any work-in-progress and to sell any inventory of the Licensed Product which remains on hand as of the date of the termination, so long as APSA pays to Targacept the royalties applicable to said subsequent sales in accordance with the terms and conditions set forth in this Agreement.

11.6 Rights in Bankruptcy. All rights and licenses granted under or pursuant to this Agreement by APSA or Targacept are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the U.S. Bankruptcy Code, licenses of right to "intellectual property" as defined under Section 101 of the U.S. Bankruptcy Code. The Parties agree that the Parties, as licensees of such rights under this Agreement, shall retain and may fully exercise all of their rights and elections under the U.S. Bankruptcy Code. The Parties further agree that, in the event of the commencement of a bankruptcy proceeding by or against either Party under the U.S. Bankruptcy Code, the Party hereto which is not a party to such proceeding shall be entitled to a complete duplicate of (or complete access to, as appropriate) any such intellectual property and all embodiments of such intellectual property, and same, if not already in their possession, shall be promptly delivered to them (i) upon any such commencement of a bankruptcy proceeding upon their written request therefor, unless the Party subject to such proceeding elects to continue to perform all of its obligations under this Agreement or (ii) if not delivered under (i) above, following the rejection of this Agreement by or on behalf of the Party subject to such proceeding upon written request therefor by an non-subject Party.

ARTICLE 12

Representations and Warranties

12.1 Representations and Warranties. As of the Effective Date, each Party represented and warranted to the other Party that:

(a) Such Party is duly organized and validly existing under the laws of the state of its incorporation and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof;

(b) Such Party has taken all corporate action necessary to authorize the execution and delivery of this Agreement and the performance of its obligations under this Agreement;

(c) This Agreement is a legal and valid obligation of such Party, binding upon such Party and enforceable against such Party in accordance with the terms of this Agreement. The execution, delivery and performance of this Agreement by such Party does not conflict with any agreement, instrument or understanding, oral or written, to which such Party is a party or by which such Party may be bound, and does not violate any law or regulation of any court, governmental body or administrative or other agency having authority over such Party. All consents, approvals and authorizations from all governmental authorities or other Third

Parties required to be obtained by such Party in connection with this Agreement have been obtained;

(d) It has the full and exclusive right, power and authority to enter into this Agreement, to perform the Research and to grant the licenses granted under Article 5 hereof;

(e) All individuals who perform any activities on behalf of a Party or its Affiliates in connection with the Research will have assigned to such Party, directly or indirectly by assignment of another Person, the whole of their rights in any intellectual property conceived or reduced to practice by them as a result of the Research. No Third Party (other than a Sublicensee) will have any rights to any intellectual property which is conceived or developed by any individual who will perform any activities by or on behalf of a Party or its Affiliates in connection with the Research; and

(f) With respect to any Materials provided by it to the other Party, it has the full right to provide such Materials and has no reason to believe that the other Party's use of such Materials in accordance with this Agreement will infringe the intellectual property rights of any Third Party.

12.2 Additional Representations and Warranties of Targacept. As of the Effective Date, Targacept represented and warranted that:

(a) To the best knowledge of Targacept, the Targacept Patents or Targacept Know-How existing as of the Effective Date are not invalid or unenforceable, in whole or in part.

(b) To the best knowledge of Targacept, the inception, development and reduction to practice of the Targacept Patents and Targacept Know-How existing as of the Effective Date has not constituted or involved the misappropriation of trade secrets or other rights or property of any Third Party and APSA's practice of the Targacept Patents and Targacept Know-How as permitted herein will not infringe any intellectual property rights of any Third Party.

(c) As of the Effective Date, there are no agreements between Targacept and any Third Parties which would preclude or otherwise limit Targacept's ability to conduct its tasks and obligations under the Research and Development Plan or otherwise fulfill its obligations under this Agreement;

(d) As of the Effective Date, Targacept has not granted any license to any Third Party, either express or implied, or any option to license, to utilize any intellectual property owned or Controlled by Targacept (including under option) to discover, identify, research, develop or market any Nicotinic Compounds;

(e) As of the Effective Date, Targacept is the exclusive owner or assignee of the Patent Rights listed on Exhibit E(1) attached hereto. Such Patent Rights constitute all of the Patent Rights that Targacept and its Affiliates own, have under license or have a right to acquire (by option or otherwise) that are useful for the manufacture, use or sale of Targacept Compounds, other than the UK Compounds, in the Field. During the term of this Agreement, Targacept will use its best efforts not to encumber or diminish the rights granted to APSA hereunder, including without limitation, by not committing any acts or permitting the occurrence of any omissions which would cause the breach or termination of any Third Party License. Targacept will promptly provide APSA notice of any alleged breach of any Third Party License. As of the Effective Date, Targacept was not in breach of any Third Party License.

(f) As of the Effective Date, no Key Employee has given notice of any desire to retire, resign or otherwise terminate his employment and neither Targacept nor any Affiliate has given any notice of or has any intent of terminating the employment of any Key Employee.

(g) As of the Effective Date, Targacept's Affiliates have effectively transferred, assigned and licensed to Targacept all their right, title and interest in and to (i) the Targacept Compounds, (ii) the Targacept Patents, (iii) the Targacept Know-How, (iv) the Pentad Patents, (v) the Pentad Technology, (vi) the license agreements covering or relating to any of the foregoing and (vii) confidentiality and assignment of invention agreements. As of the Effective Date and, with respect to the UK Compounds, as of the UK License Date, Targacept has exclusive rights in the Field to the foregoing.

(h) To the best of Targacept's scientific judgment, the Targacept Compounds include all of the Nicotinic Compounds (other than the UK Compounds), created or developed at any time solely or jointly by Targacept or any Affiliate thereof, that show significant potential for development as a pharmaceutical product for use in the Field.

(i) Targacept shall obtain a license granting Targacept exclusive rights in the Field to the UK Compounds within ninety (90) days after the Effective Date (which date of license grant shall be referred to herein as the "UK License Date"). As of the UK License Date, Targacept shall be the exclusive licensee to the Patent Rights listed on Exhibit E(2) attached hereto and such Patent Rights shall constitute all of the Patent Rights that Targacept and its Affiliates own, have under license or have a right to acquire (by option or otherwise) that are useful for the manufacture, use or sale of the UK Compounds in the Field. During the term of this Agreement, Targacept will use its best efforts not to encumber or diminish the rights granted to Targacept under the UK License, including without limitation, by not committing any acts or permitting the occurrence of any omissions which would cause the breach or termination of the UK License. Targacept will promptly provide APSA notice of any alleged breach of the UK License.

ARTICLE 13

[Reserved]

ARTICLE 14

Miscellaneous Provisions

14.1 Relationship of the Parties. Nothing in this Agreement is intended or shall be deemed to constitute a partnership, agency or employer-employee relationship between the Parties. Neither Party shall incur any debts or make any commitments for the other.

14.2 Assignments. Except as expressly provided herein, neither this Agreement nor any interest hereunder shall be assignable, nor any other obligation delegable, by a Party without the prior written consent of the other; ***provided, however,*** that (i) a Party may assign this Agreement to any Affiliate or to any successor in interest by way of merger or sale of all or substantially all of its assets in a manner such that the assignor shall remain liable and responsible for the performance and observance of all such Party's duties and obligations hereunder and (ii) API hereby assigns the Original Agreement, superseded by this Agreement as of the date hereof, to APSA and Targacept hereby consents to such assignment. This Agreement shall be binding upon the successors and permitted assigns of the Parties. Any assignment not in accordance with this Section 14.2 shall be void.

14.3 Disclaimer of Warranties. SUBJECT TO SECTIONS 12.1 AND 12.2, THE PARTIES EXPRESSLY DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF THIRD PARTY RIGHTS, UNLESS OTHERWISE EXPRESSLY PROVIDED IN THIS AGREEMENT.

14.4 Further Actions. Each Party agrees to execute, acknowledge and deliver such further instruments and to do all such other acts as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

14.5 Force Majeure. Neither Party shall be liable to the other for failure or delay in the performance of any of its obligations under this Agreement for the time and to the extent such failure or delay is caused by earthquake, riot, civil commotion, war, strike, flood, governmental acts or restrictions or any other reason which is beyond the control of the respective Party. The Party affected by force majeure shall provide the other Party with full particulars thereof as soon as it becomes aware of the same (including its best estimate of the likely extent and duration of the interference with its activities), and will use commercially reasonable efforts to overcome the difficulties created thereby and to resume performance of its obligations as soon as practicable. If the performance of any obligation under this Agreement is delayed owing to a force majeure for any continuous period of more than six (6) months, the parties hereto shall consult with respect to an equitable solution, including the possibility of the mutual termination of this Agreement.

14.6 No Trademark Rights. No right, express or implied, is granted by this Agreement to a Party to use in any manner the name or any other trade name or trademark of a Party in connection with the performance of this Agreement.

14.7 Entire Agreement of the Parties; Amendments. This Agreement and the exhibits hereto constitute and contain the entire understanding and agreement of the Parties respecting the subject matter hereof and cancel and supersede any and all prior negotiations, correspondence, understandings and agreements between the Parties, whether oral or written, regarding such subject matter, including without limitation the Original Agreement. No waiver, modification or amendment of any provision of this Agreement shall be valid or effective unless made in writing and signed by a duly authorized officer of each Party.

14.8 Captions. The captions to this Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement.

14.9 Applicable Law. This Agreement shall be governed by and interpreted in accordance with the laws of the State of New York, USA, applicable to contracts entered into and to be performed wholly within the State of New York, excluding conflict of laws principles.

14.10 Disputes. In the event of any controversy or claim arising out of, relating to or in connection with any provision of this Agreement, or the rights or obligations of the Parties hereunder, the Parties shall try to settle their differences amicably between themselves. Either Party may initiate such informal dispute resolution by sending written notice of the dispute to the other Party, and within ten (10) days after such notice appropriate representatives of the Parties shall meet for attempted resolution by good faith negotiations. If such representatives are unable to resolve promptly such disputed matter, it shall be referred to the President of Targacept and such member of APSA's Executive Committee as APSA shall designate for discussion and resolution. If such personnel are unable to resolve such dispute within thirty (30) days of initiating such negotiations, the parties agree first to try in good faith to settle the dispute by mediation under the Commercial Mediation Rules of the American Arbitration Association, before resorting to litigation.

14.11 Notices and Deliveries. Any notice, request, delivery, approval or consent required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been sufficiently given if delivered in person, transmitted by telecopier (receipt verified) or by express courier service (signature required) or five (5) days after it was sent by registered letter, return receipt requested (or its equivalent), to the Party to which it is directed at its address shown below or such other address or facsimile number as such party shall have last given by notice to the other Parties.

If to APSA, addressed to:

Aventis Pharma SA
20, avenue Raymond Aron
92160 Antony, France
Telecopier: (++33) 1 5571 3348
Attn.: Marie Christine Dubroeucq

With a copy to:

Aventis Pharma SA
20, avenue Raymond Aron,
92160 Antony, France
Telecopier: (++33) 1 5571 6431
Attn.: General Counsel

If to Targacept, addressed to:

Targacept, Inc.
Postal Mail Address:
P.O. Box 1487
Winston-Salem, NC 27102-1487
Street Address:
950 Reynolds Boulevard
Winston-Salem, NC 27105
Telecopier: (336) 741-2638
Attn.: President

14.12 No Consequential Damages. SUBJECT TO SECTIONS 10.1 AND 10.2, IN NO EVENT SHALL EITHER PARTY OR ANY OF ITS RESPECTIVE AFFILIATES BE LIABLE TO THE OTHER PARTY OR ANY OF ITS AFFILIATES FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUE, OR CLAIMS OF CUSTOMERS OF ANY OF THEM OR OTHER THIRD PARTIES FOR SUCH OR OTHER DAMAGES.

14.13 Waiver. A waiver by either Party of any of the terms and conditions of this Agreement in any instance shall not be deemed or construed to be a waiver of such term or condition for the future, or of any subsequent breach hereof. All rights, remedies, undertakings, obligations and agreements contained in this Agreement shall be cumulative and none of them shall be in limitation of any other remedy, right, undertaking, obligation or agreement of either party.

14.14 Severability. When possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of this Agreement. The parties shall make a good faith effort to replace the invalid or unenforceable provision with a valid one which in its economic effect is most consistent with the invalid or unenforceable provision.

14.15 Counterparts. This Agreement may be executed simultaneously in any number of counterparts, any one of which need not contain the signature of more than one Party but all such counterparts taken together shall constitute one and the same agreement, each copy of which shall for all purposes be deemed to be an original.

14.16 Patent Due Diligence. Targacept shall make available all reasonably necessary records and employees of Targacept and its Affiliates and otherwise cooperate fully in all reasonable inquiries, investigations and due diligence conducted by APSA after the Effective Date concerning the intellectual property status of the Collaboration Compounds, and APSA shall have a period of ninety (90) days after the Effective Date unilaterally to classify any Collaboration Compound as a Terminated Compound if APSA is not satisfied in its discretion with the intellectual property status or protection of such Collaboration Compound.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized officers as of the day and year first above written.

Targacept, Inc.

By: /s/ J. Donald deBethizy
J. Donald deBethizy
President and CEO

Aventis Pharma SA

By: /s/ E. Canet
Emmanuel Canet
Senior Vice President DIA France

Executing this Agreement solely to effect the assignment of its rights and obligations to Aventis Pharma SA:

Aventis Pharmaceuticals Inc.

By: /s/ Charles D. Dalton
Vice President, Legal Corporate Development

Exhibit A: Phase Transition Criteria

[********]

[Entire 16-page document has been redacted.]

Exhibit B: Targacept Compounds

[********]

[Entire table has been redacted.]

Exhibit C: Research and Development Plan

[********]

[Entire eight-page document has been redacted.]

Exhibit D: First Semi-Annual Research Plan

[********]

[Entire table has been redacted.]

Exhibit E(1): Patent Rights

[********]

[Entire table has been redacted.]

Exhibit E(2): UK Compound Patent Rights

[********]

J. Donald deBethizy, Ph.D.

President and CEO

[LOGO APPEARS HERE]

March 18, 2003

Aventis Pharma SA
20, avenue Raymond Aron
92160 Antony, France
Attn.: Marie Christine Dubroeucq
Attn.: General Counsel

Ladies and Gentlemen:

Reference is hereby made to that certain: (a) Amended and Restated Collaborative Research and License Agreement made and entered into as of January 21, 2002 (the "First Agreement") by and between Targacept, Inc. ("Targacept") and Aventis Pharma SA ("Aventis") and (b) Collaborative Research and License Agreement made and entered into as of January 21,2002 by and between Targacept and Aventis (the "Second Agreement" and, together with the First Agreement, the "Agreements").

Under each Agreement, Targacept and Aventis have agreed to collaborate in the discovery, development and commercialization of certain compounds for specified indications, including Parkinson's Disease. Each of Targacept and Aventis desires to execute and deliver this letter (the "Amendment Letter") to amend both of the Agreements to remove Parkinson's Disease as a specified indication with retroactive effect as of January 1, 2003.

Accordingly, each of Targacept and Aventis hereby:

(1) represents and warrants to the other that (a) it has taken all corporate action necessary to authorize its undersigned representative to execute and deliver this Amendment Letter, and (b) this Amendment Letter constitutes its legal, binding and valid obligation, enforceable against it in accordance with its terms; and

(2) agrees with the other that the First Agreement shall be amended by:

(a) deleting Section 1.26 in its entirety and replacing it with the following:

"1.26 "Indication" means Alzheimer's Disease (based upon ante mortem diagnostic evaluations in use as of the Effective Date).";

(b) deleting Section 7.2(b) in its entirety and replacing it with "Reserved."; and

(c) deleting each reference to "each Indication," "one of the Indications," "one or both of the Indications," "one or both Indications," "one or more Indications," "the relevant Indication," "an Indication," "such Indication," "a particular Indication," "any Indication" or "the "Alzheimer's Disease Indication" and replacing it with a reference to "the Indication";

(3) agrees with the other that the Second Agreement shall be amended by:

(a) deleting Section 1.29 in its entirety and replacing it with the following:

"1.29 "Indication" means any of the following indications:

(a) Alzheimer's Disease (based upon ante mortem diagnostic evaluations in use as of the Effective Date); or

(b) any other disorder of the central nervous system. For the avoidance of doubt, each disorder of the central nervous system shall be a separate Indication for all purposes, including without limitation milestone payments pursuant to Section 7.1.";

(b) deleting Section 1.54 in its entirety and replacing it with the following:

"1.54 "Primary Indication" means Alzheimer's Disease (based upon ante mortem diagnostic evaluations in use as of the Effective Date).";

(c) deleting each reference to "the Primary Indications," "a Primary Indication" or "each Primary Indication" and replacing it with a reference to "the Primary Indication"; and

(d) adding "Parkinson's Disease" to Exhibit B thereto; and

(4) agrees with the other that:

(a) it is the intent of this Amendment Letter that the First Agreement has only one "Indication" (as defined therein) and that, if the First Agreement is terminated as to such Indication, it shall be terminated in its entirety;

(b) it is the intent of this Amendment Letter that the Second Agreement have only one "Primary Indication" (as defined therein); and

(c) except as expressly amended in this Amendment Letter, each of the Agreements shall continue in full force and effect in accordance with its terms.

(d) Targacept and Aventis will consider and reflect the removal of Parkinson's Disease as a specified indication in the Agreements in any negotiations on and modifications to the Research and Development Plan, Semi-Annual Research Plan and Development Plan under each of the Agreements.

(5) agrees with the other that the amendments to the Agreements described in this Amendment Letter shall come into force with retroactive effect as of January 1, 2003.

Please indicate your acceptance and agreement with the terms of this Amendment Letter by signing the enclosed duplicate and returning it to me.

Sincerely,

Targacept, Inc.

By: /s/ J. Donald deBethizy
Dr. J. Donald deBethizy
President and Chief Executive Officer

Accepted and agreed:

Aventis Pharma SA

By: /s/ Francois Ballet
Name: Francois Ballet M.D., Ph.D.
Title: Vice President Paris D.I.A. Operations

ASSET PURCHASE AGREEMENT

THIS ASSET PURCHASE AGREEMENT is executed as of the 28th day of June, 2002, by and between LAYTON BIOSCIENCE, INC., a Delaware corporation with its headquarters at 709 East Evelyn Avenue, Sunnyvale, CA 94086 (“Layton”), and TARGACEPT, INC., a Delaware corporation with its headquarters at 200 East First Street, Suite 300, Winston-Salem, North Carolina 27101-4165 (“Targacept”).

ARTICLE I - DEFINITIONS

The following terms as used in this Agreement shall have the meanings set forth below:

SECTION 1.1 “Acquired Assets” means: (i) the Intellectual Property; (ii) the Documentation; (iii) the Regulatory Documentation; (iv) the Contracts; and (v) the Inventory.

SECTION 1.2 “Affiliate” means, as to any Person: (i) any other Person of which more than fifty percent (50%) of the voting stock or other equity interest is owned, directly or indirectly, by such Person; (ii) any other Person that, directly or indirectly, owns more than fifty percent (50%) of the voting stock or other equity interest of such Person; or (iii) any other Person under the direct or indirect control of a Person described in clause (i) or clause (ii).

SECTION 1.3 “Agreement” means this Asset Purchase Agreement, as may be amended from time to time, including all Schedules hereto.

SECTION 1.4 “Assumed Liabilities” means: (i) all obligations of Layton under the Contracts that accrue for, or are attributable to, periods after the Closing Date; and (ii) all liabilities arising out of the research, development, manufacture, production, sales, marketing, distribution, license, exploitation and/or commercialization of the Product by Targacept after the Closing Date (except as provided in Section 8.2).

SECTION 1.5 “Closing Date” means the date on which the “Closing” (as defined in Section 3.1) occurs.

SECTION 1.6 “Contracts” means all contracts, commitments, agreements, licenses, understandings and obligations, whether written or oral, to which Layton is party and that relate to the research, development, manufacture, production, sales, marketing, distribution, license, exploitation and/or commercialization of the Product or by which any of Acquired Assets is bound or affected.

SECTION 1.7 “Documentation” means all records, asset ledgers, books of account, inventory records, customer and supplier lists, sales literature and advertising and promotional materials relating to the Product or any of the Acquired Assets.

SECTION 1.8 “Excluded Assets” means all assets, properties, rights and interests of Layton other than the Acquired Assets.

SECTION 1.9 “Excluded Liabilities” means all liabilities, obligations, commitments and debts of Layton that are not Assumed Liabilities. Without limiting the generality of the foregoing and by way of example only, all liabilities, obligations, commitments or debts: (i) under the Contracts that accrue for, or are attributable to, periods prior to the Closing Date; (ii) related to the Acquired Assets and incurred prior to, or attributable to periods occurring prior to, the Closing Date; or (iii) arising out of the research, development, manufacture, production, sales, marketing, distribution, license, exploitation and/or commercialization of the Product on or prior to the Closing Date (including, without limitation, liabilities for returns made at any time within six (6) months after the Closing Date of Product sold prior to the Closing Date, not to exceed $100,000) or the consumption, use or sale of Product sold or otherwise transferred by Layton after the Closing Date to Persons other than Targacept are Excluded Liabilities.

SECTION 1.10 "FDA" means the United States Food and Drug Administration.

SECTION 1.11 "IND" means the Investigative New Drug Application (reference no. 58,680) for the Product previously filed with the FDA for neuropsychiatric indications included in the Regulatory Documentation, together with any supplements thereto, and all legal rights and privileges belonging or accruing to the owner or holder thereof.

SECTION 1.12 "Intellectual Property" means all of the intellectual properties and property rights that are owned, leased or licensed by Layton as of the Closing Date and used in or related to the research, development, manufacture, production, sales, marketing, distribution, license, exploitation and/or commercialization of the Product, including without limitation: (i) the trademarks listed on Schedule 4.11 and all United States, foreign and state registrations and applications for registration relating thereto; and (ii) the United States and foreign patents and applications for patent relating thereto listed on Schedule 4.11 (together with all continuations, continuations-in-part, divisions, patents of addition, reissues, renewals or extensions thereof and all SPCs with respect thereto, the "Patents").

SECTION 1.13 "Inventory" means all supplies and quantities of Layton as of the Closing Date, wherever located, of: (i) the chemical compound mecamylamine hydrochloride; (ii) the formulated tablet containing mecamylamine hydrochloride as marketed by Layton in the United States under the trademark INVERSINE®; (iii) the materials and supplies to be used or consumed in the production of the chemical compound mecamylamine hydrochloride or the formulated tablet containing mecamylamine hydrochloride; and (iv) all packaging materials related to any of the foregoing.

SECTION 1.14 "Know-how" means any and all confidential technical information and know-how which relates to the Product and is in the possession of Layton as of the Closing Date, including, without limitation, biological, chemical, pharmacological, toxicological, clinical, assay, control, sales and manufacturing data.

SECTION 1.15 "Liens" means mortgages, liens, pledges, charges, security interests or encumbrances of any kind whatsoever.

SECTION 1.16 "NDA" means the application(s) previously filed with the FDA for marketing authorization of the Product within the United States included in the Regulatory Documentation, together with any supplements thereto, and all legal rights and privileges belonging or accruing to the owner or holder thereof.

SECTION 1.17 “Person” means an individual, a corporation, a partnership, a limited liability company, an association, a trust, or other entity or organization, including a government or political subdivision or an agency or instrumentality thereof.

SECTION 1.18 “Product” means: (i) the chemical compound mecamylamine hydrochloride (including, but not limited to, any stereoisomers, either separated or combined, any hydrates, any solvates and any crystal forms); (ii) as of the Closing Date, the formulated tablet containing mecamylamine hydrochloride as heretofore marketed by Layton in the United States under the trademark INVERSINE®; and/or (iii) as of the Closing Date, any tablet or other formulation of mecamylamine hydrochloride (including, but not limited to, any stereoisomers, either separated or combined, any hydrates, any solvates and any crystal forms).

SECTION 1.19 “Recorded Information” means information or data that is physically recorded or stored in a readable or retrievable form (e.g., writing, microfiche, computer disk, etc.).

SECTION 1.20 “Regulatory Documentation” means all regulatory filings, submissions, notices (of approval and otherwise), correspondence and supporting materials and safety data for the Product owned by Layton or to which Layton has rights as of the Closing Date, including without limitation (i) all NDAs, the IND and all applications regarding the “Orphan Drug” classification of mecamylamine hydrochloride and all approvals thereof, all of which in existence as of the date hereof and as of the Closing Date are set forth on Schedule 1.20, and (ii) all clinical data contained or related to any of the foregoing, and all legal rights and privileges belonging or accruing to the owner or holder thereof.

SECTION 1.21 “Required Notice” means notification to the FDA of the transfer of the NDA, IND and Orphan Drug classification of mecamylamine hydrochloride.

SECTION 1.22 “SPC” means a right based upon a patent to exclude others from making, using or selling the Product, such as a Supplementary Protection Certificate.

SECTION 1.23 “Specified Consents” means the written consents of Merck & Co., Inc., the University of South Florida Research Foundation and the University of South Florida to the sale, transfer, assignment and conveyance of the Acquired Assets to Targacept.

SECTION 1.24 “Technical Package” means Recorded Information relating to the manufacture and sale of the product by Layton prior to the date of this Agreement, which shall contain such items bulk drug specifications and finished product specifications.

SECTION 1.25 “Territory” means all the countries and territories of the world.

SECTION 1.26 “Third Party” means any Person other than a party to this Agreement or an Affiliate of either party.

ARTICLE II - PURCHASE AND SALE

SECTION 2.1 Purchase and Sale. Subject to the terms and conditions set forth in this Agreement, Layton agrees to sell, convey, assign and transfer to Targacept, and Targacept agrees to purchase, on the Closing Date, all of the Acquired Assets. Layton shall retain the Excluded Assets.

SECTION 2.2 Assumption of Liabilities. Subject to the terms and conditions of this Agreement, Targacept agrees to assume the Assumed Liabilities. Layton expressly understands and agrees that Targacept does not assume, and shall not be liable for, any Excluded Liabilities and that Layton shall retain all Excluded Liabilities.

SECTION 2.3 Purchase Price.

(a) Targacept shall pay, in consideration for the Acquired Assets, the following amounts:

(i) on the Closing Date, the sum of One Million Three Hundred Thousand Dollars ($1,300,000) to Layton (the "Initial Layton Payment"), and the sum of One Million Seven Hundred Thousand Dollars ($1,700,000) to a Layton escrow account for payment of payables relating to the Acquired Assets (the "Escrow Payment" and, together with the Initial Layton Payment, the "Closing Payments"); and

(ii) within two (2) business days after Targacept receives written notice that Layton has submitted the Required Notice to FDA, the sum of Five Hundred Thousand Dollars ($500,000) to Layton (the "Final Layton Payment").

(b) The Closing Payments and the Final Layton Payment will be tendered by Targacept to Layton by Federal wire of funds to:

(i) with respect to the Initial Layton Payment and the Final Layton Payment,

Chase Manhattan Bank, routing # 021-000-021
Account #066296390, for further credit to account #AQX951591; and

(ii) with respect to the Escrow Payment,

Bank of America, routing #121-000-358
Account #04133-16823.

SECTION 2.4 Legal Tender. All payments required to made under this Agreement shall be made in lawful money of the United States of America.

ARTICLE III - EXECUTION, CLOSING AND EFFECTIVENESS

SECTION 3.1 Execution; Closing; Deliveries.

(a) The transactions contemplated by this Agreement shall be consummated at a closing (the "Closing") to occur on or before July 12, 2002, at Targacept's offices in Winston-Salem, North Carolina or at such other time or location as the parties may mutually agree.

(b) On or before the Closing Date, Layton shall deliver to Targacept, by hand delivery at the Closing or by shipping such items to a destination in the United States specified by Targacept: (i) all tangible portions of the Acquired Assets (including, without limitation, the Documentation, the Regulatory Documentation and the Contracts), except that the Inventory shall remain at its current location(s) pending further instruction from Targacept; and (ii) the Technical Package.

(c) At the Closing, Layton shall deliver to Targacept appropriately executed and authenticated Trademark Assignments to Targacept substantially in the form of Schedule A hereto (collectively, the "Trademark Assignments") selling, assigning, transferring and conveying to Targacept all of the trademarks included in the Intellectual Property (the "Trademarks").

(d) At the Closing, Layton shall execute and deliver to Targacept a Bill of Sale and Assignment and Assumption Agreement substantially in the form of Schedule B (the "Bill of Sale and Assignment") selling, assigning, transferring and conveying the Acquired Assets to Targacept.

(e) At the Closing, Layton shall deliver a certificate of its Board of Directors certifying: (i) that the conditions set forth in Sections 3.2(b)(ii), 3.2(b)(iii) and, if the Closing Date is after the date hereof, 3.2(b)(i) have been satisfied; (ii) that the corporate resolutions authorizing the execution, delivery and performance of the Layton Agreements (as defined in Section 4.1(b)) the consummation of the transactions contemplated therein, attached thereto are in full force and effect and have not been amended, modified or rescinded; and (iii) as to the incumbency and authority of the officers of Layton executing the Layton Agreements and acting on its behalf in connection with the transactions contemplated thereby.

(f) At the Closing, Layton shall deliver to Targacept evidence that all Specified Consents have been obtained.

(g) At the Closing, Layton shall cause its counsel, Ken Moseley, to deliver to Targacept certain legal opinions relating to corporate matters, dated the Closing Date, in the form of Schedule C.

(h) At the Closing, Targacept shall make the Closing Payments to Layton as described in Section 2.3(b).

(i) At the Closing, Targacept shall deliver a certificate of its Chief Executive Officer certifying: (i) that the conditions set forth in Sections 3.2(a)(ii) and, if the Closing Date is after the date hereof, 3.2(a)(i) have been satisfied; (ii) that the corporate resolutions authorizing the execution, delivery and performance of this Agreement, and the consummation of the transactions contemplated herein, attached thereto are in full force and effect and have not been amended, modified or rescinded; and (iii) as to the incumbency and authority of the officers of Targacept executing this Agreement and acting on its behalf in connection with the transactions contemplated hereby.

(j) Targacept shall pay or cause to be paid any and all third-party costs and expenses relating to the transfer and assignment to Targacept of the Trademarks, including, without limitation, all costs and taxes with respect to recordation of transfer. Recordation of transfer and assignment of the Trademarks shall be the responsibility of Targacept.

SECTION 3.2 Conditions Precedent to Closing.

(a) Conditions Precedent to Obligations of Layton. The obligation of Layton to consummate the transactions contemplated by this Agreement to be consummated at the Closing shall be subject to the reasonable satisfaction, or to the waiver by Layton in writing, on or before the Closing Date, of the following conditions, all of which are for the sole benefit of Layton:

(i) all representations and warranties of Targacept set forth in Article V or elsewhere in this Agreement shall have been true, correct and complete when made and shall be true, correct and complete as of the Closing Date;

(ii) Targacept shall have performed and complied in all material respects with each and every covenant, agreement and condition required by this Agreement to be performed or complied with by Targacept prior to or on the Closing Date;

(iii) all actions required to be taken, and deliveries required to be made or caused to be made, by Targacept at Closing pursuant to Section 3.1 shall have been taken or made; and

(iv) all Specified Consents shall have been obtained on terms satisfactory to Layton.

(b) Conditions Precedent to Obligations of Targacept. The obligation of Targacept to consummate the transactions contemplated by this Agreement to be consummated at the Closing shall be subject to the reasonable satisfaction, or to the waiver by Targacept in writing, on or before the Closing Date, of the following conditions, all of which are for the sole benefit of Targacept:

(i) all representations and warranties of Layton set forth in Article IV or elsewhere in this Agreement shall have been true, correct and complete when made and shall be true, correct and complete as of the Closing Date;

(ii) Layton shall have performed and complied in all material respects with each and every covenant, agreement and condition required by this Agreement to be performed or compiled with by Layton prior to or on the Closing Date;

(iii) all Specified Consents shall have been obtained on terms satisfactory to Targacept; and

(iv) all actions required to be taken, and deliveries required to be made or caused to be made, by Layton at Closing pursuant to Section 3.1 shall have been taken or made.

SECTION 3.3 Further Assurances. From time to time within one (1) year after the Closing Date, Layton shall, at Targacept’s expense, execute and deliver any further instruments or documents as Targacept may reasonably request in order to accomplish transfer of the Acquired Assets to Targacept as contemplated hereby.

SECTION 3.4 No Brokers. Layton and Targacept mutually represent and warrant to each other that they have not negotiated with any broker or finder in connection with this Agreement or the subject matter hereof. Each party agrees that should any claim be made against the other party for any broker's commission or finder's fee by reason of the acts of such party, the party upon whose acts such claim is adjudicated shall hold the other party harmless from and against all liability and expense in connection therewith.

ARTICLE IV - LAYTON'S REPRESENTATIONS AND WARRANTIES

Layton represents and warrants as of the date hereof and as of the Closing Date that

SECTION 4.1 Corporate Existence and Authorization; No Contravention; Specified Consents.

(a) Layton is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. Layton has the requisite corporate power and authority to own, lease and license the Acquired Assets.

(b) Layton has the requisite corporate power and authority to execute and deliver this Agreement and the related Bill of Sale and Assignment and Trademark Assignments (collectively, the "Layton Agreements") and to perform the transactions contemplated hereby and thereby. The execution, delivery and performance of each of the Layton Agreements has been duly and validly authorized by all necessary corporate and stockholder action on the part of Layton. Each Layton Agreement has been, or will be at the Closing, duly executed and delivered by Layton and each constitutes, or will constitute when executed and delivered, a valid and binding obligation of Layton, enforceable against Layton in accordance with its terms, subject to bankruptcy, insolvency, reorganization, moratorium and similar laws affecting the rights and remedies of creditors, and subject to the further qualification that the remedy of specific performance or injunctive relief is discretionary with the court before which any proceeding therefor may be brought.

(c) The execution, delivery and performance by Layton of the Layton Agreements do not and will not:

(i) conflict with or constitute a violation of the Certificate of Incorporation or Bylaws of Layton;

(ii) conflict with or constitute a violation of any law, statute, judgment, order, decree or regulation of any legislative body, court, administrative agency, governmental authority or arbitrator applicable to or relating to Layton or the Acquired Assets;

(iii) conflict with, constitute a default under, result in a breach or acceleration of or, except as set forth on Schedule 4.1, require notice to or the consent of any third party under any contract, agreement, commitment, lease, mortgage, note, license or other instrument or obligation to which Layton is party or by which it is bound or by which the Acquired Assets are affected; or

(iv) result in the creation or imposition of any Lien or Encumbrance of any nature whatsoever on any of the Acquired Assets.

(d) Schedule 4.1 sets forth the Specified Consents, to include the Required Notice, in substantially the form attached hereto as Schedule D.

SECTION 4.2 Status of Acquired Assets.

(a) Layton has good and marketable title to all of the Acquired Assets, free and clear of any Liens.

(b) To Layton's knowledge, no product, formula, formulation, Trademark, process, method, substance, or other material that is part of the Acquired Assets infringes any rights owned or held by any Person, and, to the knowledge of Layton, no item currently being manufactured, distributed, sold or used by any Person infringes any rights of Layton to the Acquired Assets.

SECTION 4.3 Financial Statement. Layton has previously delivered to Targacept a true and complete copy of its unaudited Monthly Income Statement relating to the revenues and expenses relating to the Product for October 1999 through March 2002 (the "Financial Statement"). The Financial Statement: (a) is true, correct and complete; (b) is in accordance with the books and records of Layton; and (c) presents fairly Layton's results of operations with respect to the Product for the periods shown.

SECTION 4.4 Litigation. There are no claims, actions, suits, arbitration proceedings, inquiries, hearings, injunctions or investigations ("Claims") pending, or to the knowledge of Layton, threatened, against Layton relating to the Product or any of the Acquired Assets. No Claims have been brought within the last two years against Layton relating to the Product or any of the Acquired Assets. To Layton's knowledge, there are no facts or circumstances which could serve as the basis for any Claim against Layton involving the Product or any of the Acquired Assets, or, by virtue of the execution, delivery and performance of this Agreement, against Targacept.

SECTION 4.5 Compliance with Laws. There is not outstanding or, to the knowledge of Layton, threatened any order, writ, injunction or decree of any court, governmental agency or arbitration tribunal against or involving the Product or the Acquired Assets. Layton is currently in full compliance with all laws, statutes, rules, regulations, orders and licensing requirements ("Rules") of federal, state, local and foreign agencies and authorities applicable to the research, development, manufacture, production, sales, marketing, distribution, license, exploitation and/or commercialization of the Product or any of the Acquired Assets. To the knowledge of Layton, there has been no allegation of any violation of any such Rules, and no investigation or review by any federal, state or local body or agency is pending, threatened or planned with respect to the Product or any of the Acquired Assets.

SECTION 4.6 Utilization of Acquired Assets. The Acquired Assets constitute all of the assets, tangible and intangible, of any nature whatsoever, currently used by Layton in connection with the research, development, manufacture, production, sales, marketing, distribution, license, exploitation and/or commercialization of the Product.

SECTION 4.7 Inventory. Except as otherwise described on Schedule 4.7, all items included in the Inventory are: (i) in good condition and not obsolete or defective; and (ii) useable or saleable in the ordinary course of business consistent with Layton's past practice. All of the Inventory is described, and the location of all such Inventory is set forth, on Schedule 4.7.

SECTION 4.8 Contracts. All of the Contracts that (i) are not terminable by either party without penalty on 30 days notice or (ii) are material to the research, development, manufacture, production, sales, marketing, distribution, license, exploitation and/or commercialization of the Product by Layton are listed on Schedule 4.8. Layton has delivered to Targacept true and complete copies of all written Contracts, including any and all amendments and other modifications thereto. Each of the Contracts is valid, binding and enforceable in accordance with its terms and is in full force and effect. Layton has not waived any of its rights under, or modified the terms of, any Contract orally or by a pattern of practice or otherwise. There are no existing defaults, and no events or circumstances have occurred which, with or without notice or lapse of time or both, would constitute defaults, under any of the Contracts. The assignment of the Contracts by Layton to Targacept will not, with respect to any Contract: (i) constitute a default therunder; (ii) require the consent of any person or party, except for the Specified Consents; or (iii) affect the continuation, validity and effectiveness thereof or the terms thereof.

SECTION 4.9 Suppliers and Customers. Each supplier of goods or services to Layton in respect of the Product to which Layton paid any amount during the 12 months ended on March 31, 2002, and each customer of Layton in respect of the Product who paid Layton any amount during such period, are listed on Schedule 4.9 and Schedule 4.7, respectively, which Schedules reflect in each case the amounts so paid. Layton is not engaged in any dispute with any of such suppliers or customers.

SECTION 4.10 Adverse Experiences. Layton has provided Targacept with all information concerning side effects, injury, toxicity or sensitivity reaction, or unexpected incidents, whether or not serious or unexpected, relating to the Product ("Adverse Experiences"), which Layton or Merck & Co., Inc. reported or are to be reported to the FDA. Any additional information regarding Adverse Experiences received by Layton before the Closing Date but not yet reported to the FDA will be provided to Targacept on or before the Closing Date. For purposes of this Section 4.7, "serious" and "unexpected" have the meanings set forth in Section 6.6.

SECTION 4.11 Intellectual Property. All items of Intellectual Property are described in reasonable detail on Schedule 4.11. Except as otherwise specified in Schedule 4.11, Layton represents that each of the Trademarks has been in continuous use since October 1, 2001, and to the knowledge of Layton each of the Trademarks is now in use in interstate or intrastate commerce, in each case as specified in Schedule 4.11, on or in connection with all of the goods or services set forth on such Schedule. Layton has not disclosed any information included in the

Acquired Assets to any third party, except to its advisors, attorneys and consultants and except pursuant to confidentiality arrangements and has taken reasonable measures to protect all such information as confidential. Layton owns all right, title and interest in and to each item included in the Intellectual Property, free and clear of any Liens. Layton is the record owner of each of the Trademark Registrations, each of which is in full force and effect, and all required maintenance filings, tax payments, annuities and maintenance fee payments have been timely completed with respect to each. Except as otherwise disclosed in Schedule 4.11, Layton has not licensed any of the Intellectual Property to any third party, and to Layton's knowledge no third party otherwise has any right to use any of the Intellectual Property. There are no claims or suits against Layton challenging Layton's ownership of or right to use any of the Intellectual Property, nor to Layton's knowledge does there exist any basis therefor. There are no claims or suits against Layton alleging that any of the Intellectual Property or any of Layton's use of the Intellectual Property infringes any rights of any third parties, nor to Layton's knowledge does there exist any basis therefor.

SECTION 4.12 Tax Matters. In all respects relating to the Product or any of the Acquired Assets: (i) Layton has filed all federal, state, local and foreign tax returns required to be filed; (ii) each such return is complete, accurate and in compliance with applicable law and regulations in all material respects; and (iii) Layton has paid or provided for all such taxes of any nature whatsoever, with any related penalties, interest and liabilities, that are or would be shown on such tax returns as due and payable on or before the date hereof, other than such taxes as are being contested in good faith.

SECTION 4.13 Characteristics of Product. All Recorded Information in the possession of, or readily obtainable by, Layton reflecting quality, toxicity, safety and/or efficacy characteristics of the Product has been disclosed to Targacept in writing prior to the date hereof or will be disclosed to Targacept on the Closing Date.

SECTION 4.14 Solvency. Layton is not now insolvent, and will not be rendered insolvent by any of the transactions contemplated by this Agreement. In addition, immediately after giving effect to the consummation of the transactions contemplated by this Agreement: (i) Layton will be able to pay its debts as they become due; and (ii) Layton will not have unreasonably small assets with which to conduct its present or proposed business. As used in this Section, (i) "insolvent" means that the sum of the present fair saleable value of Layton's assets does not and will not exceed its debts and other probable liabilities; and (ii) "debts" includes any legal liability, whether matured or unmatured, liquidated or unliquidated, absolute, fixed or contingent, disputed or undisputed or secured or unsecured.

SECTION 4.15 Disclosure. No representation, warranty or statement made by Layton in any of the Layton Agreements, or any document furnished or to be furnished to Targacept pursuant to any of the Layton Agreements, contains or will contain any untrue statement of a material fact, or omits or will omit to state any material fact necessary to make the statements contained herein or therein not misleading.

ARTICLE V - TARGACEPT'S REPRESENTATIONS AND WARRANTIES

Targacept represents and warrants as of the date hereof and as of the Closing Date that:

SECTION 5.1 Corporate Existence. Targacept is a corporation duly organized and validly existing under the laws of the State of Delaware.

SECTION 5.2 Due Authorization; Binding Agreement. Targacept has the requisite corporate power and authority to execute, deliver and perform this Agreement and any related agreements to which Targacept is a party (collectively, the "Targacept Agreements") and to consummate the transactions contemplated hereby and thereby. The execution, delivery and performance of the Targacept Agreements, and the consummation of the transactions contemplated hereby and thereby, have been duly and validly authorized by all necessary corporate action on the part of Targacept. The Targacept Agreements have been or, with respect to Targacept Agreements to be executed at the Closing, will be duly executed and delivered by Targacept and each constitutes or will constitute when executed and delivered a valid and binding obligation of Targacept, enforceable against Targacept in accordance with its terms, subject to bankruptcy, insolvency, reorganization, moratorium and similar laws affecting the rights and remedies of creditors, and subject to the further qualification that the remedy of specific performance or injunctive relief is discretionary with the court before which any proceeding therefor may be brought.

SECTION 5.3 No Contravention. The execution, delivery and performance of the Targacept Agreements do not and will not: (i) conflict with or constitute a violation of the Certificate of Incorporation or Bylaws of Targacept; or (ii) conflict with or constitute a violation of any law, statute, judgment, order, decree or regulation of any legislative body, court, administrative agency, governmental authority or arbitrator applicable to or relating to Targacept.

SECTION 5.4 No Government Action. To Targacept's knowledge, except for the requirement that both Targacept and Layton provide written notice, in the form attached hereto as Schedule D, of the transfer of the Regulatory Documentation from Layton to Targacept, the execution, delivery and performance by Targacept of this Agreement and each of the documents contemplated hereby to which Targacept is a party require no action by or in respect of, or filing with, any governmental body, agency or official.

SECTION 5.5 Disclosure. No representation, warranty or statement made by Targacept in this Agreement, or any document furnished or to be furnished to Layton pursuant to this Agreement, contains or will contain any untrue statement of a material fact, or omits or will omit to state any material fact necessary to make the statements contained herein or therein not misleading.

ARTICLE VI - LAYTON'S COVENANTS

Layton covenants and agrees as follows:

SECTION 6.1 Filings. Layton will use commercially reasonable efforts in good faith to file or cause to be filed with the FDA, as soon as practicable after the Closing Date, the Required Notice (substantially in the form attached hereto as Schedule D).

SECTION 6.2 No Liens. Any Liens with respect to any of the Acquired Assets shall be satisfied of record on or prior to the Closing Date by Layton.

SECTION 6.3 Confidentiality. Until one year following the Closing Date, Layton will, and will cause each of its employees to, use commercially reasonable efforts to preserve the confidentiality of all confidential and proprietary information used in connection with the research, development, manufacture, production, sales, marketing, distribution, license, exploitation and/or commercialization of the Product or any of the Acquired Assets (the "Product Information"), provided that Layton may use and disclose any such information which has been publicly disclosed (other than by Layton in breach of its obligations under this Agreement) or to the extent that Layton may become legally compelled to disclose any of such information, in which case Layton shall, prior to disclosure, first use commercially reasonable efforts in good faith, and afford Targacept the opportunity, to obtain an appropriate protective order, or other satisfactory assurance of confidential treatment, for the information required to be so disclosed.

SECTION 6.4 Removal of Information from Website. Not later than the Closing Date, Layton shall delete from any and all of its websites (including, without limitation, laytonbio.com) all references to, any and all information pertaining to, the Product. Without limiting the generality of the foregoing, Layton shall specifically remove from any and all of its websites any and all information regarding the sale, distribution or procedure to order INVERSINE®.

SECTION 6.5 Limited Commercialization. Layton hereby agrees that, at all times after the Closing Date, Layton will not, and will not establish any Affiliate to, market, sell, manufacture, produce, license or in any way exploit or commercialize the Product, except that such covenant shall not restrict Layton or an Affiliate from administering mecamylamine hydrochloride to humans in combination with human or animal cells, tissue, and cellular or tissue-based products. For the avoidance of doubt, nothing contained in this Section 6.5 is intended to grant to Layton a license to, or to permit the infringement of, any intellectual property of Targacept.

SECTION 6.6 Adverse Experience and Reaction Reporting. For one (1) year after the Closing Date, Layton shall notify Targacept of any information concerning any serious or unexpected side effects, injuries, toxicities, sensitivity reactions, adverse experiences, or other incidents relating to the Product, of which Layton receives notice on or after the Closing Date, including providing copies of all such adverse experience or reaction reports to Targacept's Chief Medical Officer within seven (7) days of Layton's receipt of such reports. For purposes of this Section 6.6: (i) "serious" means an experience or reaction which is fatal or life threatening, results in persistent or significant disability, requires inpatient hospitalization or prolongation of existing inpatient hospitalization, is a congenital anomaly, cancer, or the result of an overdose, or is another important medical event (even if not life-threatening, resulting in death, or requiring hospitalization) if, based upon appropriate medical judgments, such medical event may jeopardize the patient's or subject's health or may require medical or surgical intervention to prevent one of the other outcomes listed previously, and (ii) "unexpected" means a condition or development not listed in the then-current FDA-approved labeling for the Product, and includes those experiences or reactions that show a significant increase in incidence or severity over what appears an the labeling of the Product or in NDA trials or that represent a failure of the Product to achieve claimed activity.

SECTION 6.7 Notification of Orders Received. Commencing on the Closing Date and continuing for six (6) months after the Closing Date, Layton will notify Targacept of all orders for the Product actually received by Layton, if any, by promptly forwarding such orders to Targacept.

ARTICLE VII - TARGACEPT'S COVENANTS

Targacept covenants and agrees as follows:

SECTION 7.1 FDA Filings. Targacept will use commercially reasonable efforts in good faith promptly to file or cause to be filed with the FDA, any notice, document and/or other materials required to be filed by it in connection with its purchase of the Acquired Assets (including, without limitation, the filings required by 21 CFR Section 314.72) and to make promptly any further filings and take any actions required of it as may be necessary to consummate the transactions contemplated hereby.

SECTION 7.2 Cooperation in Litigation. From and after the Closing Date, Targacept agrees that, in the defense by Layton of any litigation, hearing, regulatory proceeding or investigation or other similar matter relating to the Acquired Assets or the Excluded Liabilities, Targacept will make available to Layton at Layton's expense during normal business hours, but without unreasonably disrupting its business, all records as to the Acquired Assets held by Targacept and reasonably necessary to permit the effective defense or investigation of such matters.

ARTICLE VIII - SURVIVAL; INDEMNIFICATION

SECTION 8.1 Survival. All representations and warranties of the parties contained herein shall survive the Closing Date until one (1) year after the Closing Date. The covenants and agreements (including, without limitation, the indemnification obligations) of Layton and Targacept hereunder that require by their express terms performance or compliance on and after the Closing Date shall continue in force thereafter in accordance with their terms.

SECTION 8.2 Indemnification by Layton. Layton shall indemnify, defend and hold harmless Targacept and its officers, directors and affiliates (collectively, the "Targacept Indemnitees") from, against and with respect to any action or cause of action, loss, damage, claim, obligation, liability, penalty, fine, cost and expense (including, without limitation, reasonable attorneys' and consultants' fees and costs and expenses incurred in investigating, preparing, defending against or prosecuting any litigation, claim, proceeding, demand or request for action by any governmental or administrative entity), of any kind or character, but expressly excluding all foreseeable and unforeseeable consequential damages (a "Loss"): (i) arising out of or in connection with any breach of any of the representations or warranties of Layton contained in this Agreement; (ii) arising out of or in connection with any failure by Layton to perform or observe any covenant, agreement, obligation or condition to be performed or observed by it pursuant to this Agreement; or (iii) constituting an Excluded Liability. Notwithstanding anything whatsoever to the contrary, in no event shall Layton's total indemnification obligation exceed Two Million Five Hundred Thousand Dollars ($2,500,000).

SECTION 8.3 Indemnification by Targacept. Targacept shall indemnify, defend and hold harmless Layton and its officers, directors and affiliates (collectively, the "Layton Indemnitees") from, against and with respect to any Loss: (i) arising out of or in connection with any breach of any of the representations or warranties of Targacept contained in this Agreement; (ii) arising out of or in connection with any failure by Targacept to perform or observe any covenant, agreement, obligation or condition to be performed or observed by it pursuant to this Agreement; (iii) constituting an Assumed Liability; or (iv) any failure by Targacept to fully comply with the performance obligations contained in the Layton Bioscience-Merck & Co. agreement dated March 19, 1998. Notwithstanding any other provision in this Agreement, the Targacept indemnification obligation under Section 8.3(iv) shall continue in effect for as long as Layton may incur any liability arising out of Targacept's non-performance under said Merck agreement.

SECTION 8.4 Indemnification; Notice and Settlements. A party seeking indemnification pursuant to Section 8.2 or 8.3 (an "indemnified party") shall give prompt notice to the party from whom such indemnification is sought (the "indemnifying party") in writing of any claim for recovery, specifying in reasonable detail the nature of the Loss. The indemnified party shall provide to the indemnifying party as promptly as practicable thereafter all information and documentation reasonably requested by the indemnifying party to verify the claim asserted; provided that, in the event of a third party claim giving rise to the Loss, the failure of the indemnified party to notify the indemnifying party on a timely basis will not relieve the indemnifying party of any liability that it may have to the indemnified party, except to the extent that the indemnified party demonstrates that the defense of such action is materially prejudiced by the indemnifying party's failure to give such notice. The indemnifying party shall have the right to, and shall at the request of the indemnified party, assume the defense, with counsel reasonably satisfactory to the indemnified party, of any such suit, action or proceeding at its own expense. An indemnifying party shall not be liable under Section 8.2 or 8.3 for any settlement effected without its consent of any claim, litigation or proceeding in respect of which indemnity may be sought hereunder, which consent shall not be unreasonably withheld.

SECTION 8.5 Other Remedies. The foregoing indemnification provisions are in addition to, and not in derogation of, any statutory, equitable or common law remedy any party may have as a result of a Loss.

ARTICLE IX - MISCELLANEOUS

SECTION 9.1 Notices. All notices, demands and other communications made hereunder shall be in writing and shall be given either by personal delivery, by nationally recognized overnight courier (with charges prepaid) or by facsimile (with telephone confirmation), and shall be deemed to have been given or made when delivered, addressed to the respective parties at the following addresses (or such other address for a party as shall be specified by like notice):

if to Layton to:

Layton BioScience, Inc.

709 East Evelyn Avenue
Sunnyvale, CA 94086
Attention: General Manager
Tel. (408)616-1000
Fax (408)616-1005

with a copy to:

Toucan Capital
7600 Wisconsin Avenue, 7th Floor
Bethesda, MD 20814
Attention: Linda Powers and Robert Hemphill
Tel. (240)497-4060
Tel. (240)497-4065

If to Targacept to:

Targacept, Inc.
200 East First Street, Suite 300
Winston-Salem, NC 27102-1465
Attention: Chief Executive Officer
Tel. (336)480-2100
Fax (336)480-2107

with a copy to:

Peter A. Zorn, Esq.
Womble Carlyle Sandridge & Rice, PLLC
One West Fourth Street
Winston-Salem, NC 27101
Tel. (336)721-3634
Fax (336)726-6906

SECTION 9.2 Expenses. All legal and other costs and expenses incurred in connection herewith and the transactions contemplated hereby shall be paid by the party incurring such expenses.

SECTION 9.3 Bulk Sales Statutes. Targacept hereby waives compliance with applicable bulk sales statutes in any jurisdiction in connection with the transactions under this Agreement.

SECTION 9.4 Limitation on Layton's Representations and Warranties. TARGACEPT ACKNOWLEDGES THAT, EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES OF LAYTON CONTAINED IN THIS AGREEMENT, TARGACEPT IS ACQUIRING THE ACQUIRED ASSETS ON AN "AS IS, WHERE IS" BASIS WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES AS TO THE FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

SECTION 9.5 Successors and Assigns. This Agreement shall be binding upon and shall inure to the benefit of the parties and their respective successors and assigns; provided, however, that this Agreement may not be assigned by either party without the prior written consent of the other party hereto and any attempted assignment without such consent shall be void.

SECTION 9.6 Entire Agreement; Amendment. This Agreement, including without limitation the Schedules hereto, embodies the entire agreement of the parties hereto with respect to the subject matter hereof and supersedes any and all prior agreements with respect thereto, except for any prior confidentiality agreements which shall survive. In the event of any conflict between this Agreement and any such prior confidentiality agreement, the agreement imposing stricter confidentiality shall govern. No waiver, amendment or modification of any provision hereof or of any right or remedy hereunder shall be effective unless in writing and signed by the party against whom such waiver, amendment or modification is sought to be enforced.

SECTION 9.7 Captions; Construction. Captions herein are inserted for convenience of reference only and shall be ignored in the construction or interpretation of this Agreement. Unless otherwise specified, the words "herein," "hereof" and terms of like import shall be deemed to refer to the Agreement as a whole and not merely to a single part thereof.

SECTION 9.8 Public Announcement. Each of Layton and Targacept agrees it will not make any press releases or other public announcements with respect to the transactions contemplated hereby, except as required by applicable law, without the prior approval of the other party not to be unreasonably withheld

SECTION 9.9 Efforts. Each party agrees to use commercially reasonable efforts to satisfy the conditions to the Closing set forth in this Agreement and otherwise to consummate the transactions contemplated by this Agreement.

SECTION 9.10 Governing Law. This Agreement shall be governed by, interpreted and construed, and all claims and disputes, whether in tort, contract or otherwise shall be resolved, in accordance with the substantive laws of the Commonwealth of Delaware, without regard to the principles of conflicts of laws.

SECTION 9.11 Waiver. No waiver by any party in one or more instances of any of the provisions of this Agreement or the breach thereof shall establish a precedent for any other instance with respect to that or any other provision. Furthermore, in case of waiver of a particular provision, all other provisions of this Agreement will continue in full force and effect.

SECTION 9.12 Severability. If any provision of this Agreement is held to be invalid or unenforceable, all ether provisions shall nevertheless continue in full force and effect.

SECTION 9.13 Counterparts. This Agreement may be executed in two counterparts, each of which shall be deemed to be an original and both of which, taken together, shall constitute but one and the same instrument.

SECTION 9.14 No Third Party Beneficiaries. Except for the rights of the "Targacept Indemnitees" and the "Layton Indemnitees" under Article VIII, none of the provisions of this

Agreement or any document contemplated hereby is intended to grant any right or benefit to any person or entity that is not a party to this Agreement.

SECTION 9.15 Specific Performance. Layton agrees that, after Targacept has paid the Three Million Five Hundred Thousand Dollar ($3,500,000) purchase price, if Layton fails to make the Required Notice, then Targacept shall be entitled, in addition to its other remedies at law or at equity, to specific performance of this Agreement to the extent of the Required Notice.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, this Agreement has been signed by authorized representatives on behalf of each of the parties hereto as of the day and year first above written.

LAYTON BIOSCIENCE, INC.

By: /s/ Linda F. Powers
Linda F. Powers,
Member, Board of Directors

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
J. Donald deBethizy,
President and CEO

SCHEDULE 1.20
Regulatory Documentation

1. Inversine NDA 10-251

2. Mecamylamine HCL Layton IND 58,680

3. Mecamylamine HCL Orphan Drug Designation granted Oct. 14, 1998
(NDC #17205-0626-01)

<u>SCHEDULE 4.1</u>
Specified Consents/Required Notice

1. Consent of Merck & Co., Inc.

2. Consent of the University of South Florida Research Foundation.

3. Consent of University of South Florida.

4. Notice to the FDA.

SCHEDULE 4.7
Inventory and Customers
Note: the information contained on this Schedule 4.7 is, on Layton's information and belief, accurate as to status, quantity and quality; however, Layton has not made an actual inspection of the wholesalers or distributor.

Inversine commercial lot numbers/ expiration date (bottles)

Lot Number	Quantity released	Quantity In Inventory At Cord	Quantity shipped To wholesalers	Quantity returned	Exp. Date	Last ship date
08782A	3,045	450*	2,595	-257	Sep-01	Jun-01
06793A	1,367	418*	949	-264	Sep-01	Jun-01
M23324	1,701	71*	1630	-32	Sep-01	Jun-01
005B004	3,619	740*	2,679	-89	May-02	Feb-02
M531	1,942	5*	1,937	-2	Mar-03	Jan-03
M522	1,094	7*	1,087	-5	Mar-03	Jan-03
0103B034	2,493	413	2,080	0	Mar-03	Jan-03

* no longer shipping these lots out.

Location of inventory:

Product (labeled bottles of tablets):	Cord Logistics and wholesalers
Labeling Materials:	Layton
Bulk product:	Poli (15kg)
Tablets:	Siegfried (1.2 million)

Inversine Wholesaler Accounts

1. AmeriSource Corp.
   Accounts Payable
   100 Friars Lane
   PO Box 5916
   Orange, CA 92863
2. Bindley Western
   Accounts Payable
   PO Box 68977
   Indianapolis, IN 46268
3. Cardinal Health
   Accounts Payable
   PO Box 182516

4. H.D. Smith Wholesale Drug Co.
   4650 Industrial Drive
   Springfield, IL 62703

5. McKesson
   Accounts Payable
   PO Box 8199067
   Dallas, TX 753819067

6. Motris and Dickson Co.
   PO Box 51367
   Shreveport, LA 71135 1367

7. North Carolina Mutual Wholesale Drug
   816 Ellis Road
   Durham NC 27702

8. Smith Drug
   PO Box 1779
   Spartamburg, SC 29304

9. Walsh Hearland
   PO Box 40
   Texarkana, TX 75504

10. Bergen Brunswig Drug Company
    Accounts Payable
    PO Box 5916
    Orange, CA 92863

SCHEDULE 4.8
Contracts

1. Merck & Co.-Layton Bioscience Inc., dated March 19, 1998

2. Layton Bioscience Inc.-USF, dated October 13, 1997

3. Siegfried-Layton Bioscience Inc., dated July 20, 2000

4. Poli-Layton Bioscience Inc., dated July 23, 2001

5. Layton Bioscience Inc.-Cord Logistics dated May 9, 2001

SCHEDULE 4.9
Suppliers

ACS State Healthcare
Alabama Medicaid Agency
American Psychological Asso
Bergen Brunswig Corporation
Brown Resource Group
Pharmaceutic Litho & Label Co.
Cardinal Distribution
CO Healthcare Policy Finance
Commonwealth of PA/DRP
CORD Logistics
Dept of PHHS
Dept of SHS – Washington
Drugs, Devices and Cosmetics Trust Fund
Excerpts Medica Inc.
Food and Drug Administration
GA Dept of Medical Assistance
HCL Labels, Inc.
IBAH Pharmaceutics Services (Omnicare)
Illinois Dept of Public Aid
Interchem Corporation
Kentucky State Treasurer
Label Master
Malefyt, Thomas R., Ph.D.
McKesson Health Solutions
Medical Economics
N Carolina XIX Drug Rebate Pgm
Norwood Marking Systems
Omnicare Pharmaceutics, Inc.
Owens-Brockway
Penn-Wheeling Closure
SCDHHS
So. Florida Univ Rsrch Found.
State of Ohio Treasurer
The Tiemey Group
US Healthworks Med Group
Wisconsin DHFS
Agency for Healthcare Admin.
AmeriSource Corporation
Arkansas DHS Pharma Rebate
Bindley Western
CA Dept. of Health Services
CA Dept. of Health Services
CMC Consulting Services
Commonwealth of Massachusetts
Connecticut Drug Rebate Program
Dept of Health & Hospitals
Dept of Public Welfare
DHS Drug Rebate – 050
EDS/Indiana Drug Rebate
Ferdinand Gutmann & Co.
FRACHT FWO Inc.
GMP Labeling
Howe Marketing Group. Inc.
Icon Clinical Research, L.P
IMS Health Inc.
J. Knipper & Co.
KRELL ADVERTISING, INC.
Maine Medical Agency
McKesson Drug Company
MDS Harris
Merck & Co., Inc.
North Dakota Dept of Human Services
Nor-Cal Moving Services
Oread, Inc.
Packaging Results, Inc.
PHARMout Laboratories, Inc.
Siegfried CMS
State of Alaska
Texas Dept of Health
Tourette Syndrome Ass’n. Inc.
Ward-Bagby Pkg., Inc.

SCHEDULE 4.11
Intellectual Property

Marks:

US 0626116 INVERSINE

Ireland INVERSINE [Note: Layton disclaims any knowledge as to whether said mark exists, was ever in force or is enforceable now. Targacept takes it "as-is".]

Somalia INVERSINE [Note: Layton disclaims any knowledge as to whether said mark exists, was ever in force or is enforceable now. Targacept takes it "as-is".]

License of patents and applications:

		PATENT#:	ISSUED
LAY-003CIA	NICOTINE ANTAGONISTS FOR NICOTINE-RESPONSIVE NEUROPSYCHIATRIC DISORDERS	US 6,034,079	07-Mar-2000
LAY-003TW	NICOTINE ANTAGONISTS FOR NICOTINE-RESPONSIVE NEUROPSYCHIATRIC DISORDERS	087113218	04-Nov-1998
LAY-003CID	NICOTINE ANTAGONISTS FOR NICOTINE-RESPONSIVE NEUROPSYCHIATRIC DISORDERS	09/526,403	15-Mar-2000
LAY-003PH	NICOTINE ANTAGONISTS FOR NICOTINE-RESPONSIVE NEUROPSYCHIATRIC DISORDERS	1-1998-02-45	07-Nov-1998
LAY-003CL	NICOTINE ANTAGONISTS FOR NICOTINE-RESPONSIVE NEROPSYCHIATRIC DISORDERS	1998-1934	11-Aug-1998
LAY-003PA	NICOTINE ANTAGONISTS FOR NICOTINE-RESPONSIVE NEUROPSYCHIATRIC DISORDERS	PI/PA98/84573	11-Aug-1998
LAY-003CA	NICOTINE ANTAGONISTS FOR NICOTINE-RESPONSIVE NEUROPSYCHIATRIC DISORDERS	2,300,148	11-Aug-1998
LAY-003AR	NICOTINE ANTAGONISTS FOR NICOTINE-RESPONSIVE NEUROPSYCHIATRIC DISORDERS	980103965	11-Aug-1998

LAY-003JP	NICOTINE ANTAGONISTS FOR NICOTINE-RESPONSIVE NEUROPSYCHIATRIC DISORDERS	2000-506968	07-Nov-1998
LAY-003VE	NICOTINE ANTAGONISTS FOR NICOTINE-RESPONSIVE NEUROPSYCHIATRIC DISORDERS	1792/98	11-Aug-1998
LAY-003CIB	NICOTINE ANTAGONISTS FOR NICOTINE-RESPONSIVE NEUROPSYCHIATRIC DISORDERS	09/398,720	20-Sep-1999
LAY-011JP	EXO-R-MECAMYLAMINE FORMULATION AND USE IN TREATMENT	2000-587609	16-Dec-1999
LAY-011CIA	EXO-R-MECAMYLAMINE FORMULATION AND USE IN TREATMENT	09/882,934	15-Jun-2001
LAY-011CA	EXO-R-MECAMYLAMINE FORMULATION AND USE IN TREATMENT		16-Dec-1999
LAY-011EP	EXO-R-MECAMYLAMINE FORMULATION AND USE IN TREATMENT	99967396.5	16-Dec-1999
LAY-012CIA	EXO-S-MECAMYLAMINE FORMULATION AND USE IN TREATMENT	09/882,935	15-Jun-2001
LAY-012EP	EXO-S-MECAMYLAMINE FORMULATION AND USE IN TREATMENT	99967401.3	16-Dec-1999
LAY-012CA	EXO-S-MECAMYLAMINE FORMULATION AND USE IN TREATMENT		16-Dec-1999
LAY-012JP	EXO-S-MECAMYLAMINE FORMULATION AND USE IN TREATMENT	2000-587608	16-Dec-1999

BILL OF SALE AND
ASSIGNMENT AND ASSUMPTION AGREEMENT

THIS BILL OF SALE AND ASSIGNMENT AND ASSUMPTION AGREEMENT (the “Agreement”) is made and entered into as of August 5, 2002, by and between LAYTON BIOSCIENCE, INC., a Delaware corporation (“Seller”), and TARGACEPT, INC., a Delaware corporation (“Buyer”). All capitalized terms not otherwise defined herein shall have the meanings ascribed to them in the Asset Purchase Agreement dated as of June 28, 2002 between Seller and Buyer (the “Purchase Agreement”).

WHEREAS, pursuant to the Purchase Agreement, Seller has agreed to sell, assign, convey and transfer the Acquired Assets to Buyer and Buyer has agreed to purchase the Acquired Assets and assume the Assumed Liabilities from Seller;

NOW, THEREFORE, for value received and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and in consideration of the premises and mutual agreements set forth herein, the parties hereto agree as follows:

1. Transfer of Acquired Assets. Seller hereby sells, assigns, conveys and transfers to Buyer, its successors and assigns, all of the Acquired Assets, which Acquired Assets are listed, described, included in or referred to in Exhibit A, the contents of which are incorporated herein by reference as if restated in their entirety. Seller hereby represents and warrants to Buyer that: (i) it has good and marketable title to all of the Acquired Assets; and (ii) the Acquired Assets are sold, assigned, conveyed and transferred to Buyer hereunder free and clear of any liens, encumbrances, security interests, claims, mortgages, pledges or charges of any kind whatsoever.

2. Assumption of Liabilities. Buyer hereby agrees to assume all obligations of Seller under the Contracts that accrue for, or are attributable to, periods after the Closing Date and all liabilities arising out of the research, development, manufacture, production, sales, marketing, distribution, license, exploitation and/or commercialization of the Product by Buyer after the Closing Date (except for those liabilities against which Seller is obligated to indemnify Buyer under Section 8.2 of the Purchase Agreement) including, without limitation, the Contracts listed, described, included in or referred to in Exhibit B attached hereto (the “Assumed Liabilities”), the contents of which are incorporated herein by reference as if restated in their entirety. Seller expressly acknowledges and agrees that Buyer does not assume and shall not be liable for any, and Seller retains responsibility for all, Excluded Liabilities.

3. Confirmatory Instruments. Seller and Buyer hereby mutually covenant and agree that each will, upon the request of the other, execute any and all further instruments confirmatory to the foregoing as may be reasonably required to accomplish the purposes and benefits of this Agreement and the Purchase Agreement.

4. Counterparts. This Agreement may be executed in two counterparts, each of which shall be deemed to be an original and both of which, taken together, shall constitute but one and the same instrument.

5. Governing Law. This Agreement shall be governed by, interpreted and construed, and all claims and disputes, whether in tort, contract or otherwise shall be resolved, in accordance with the substantive laws of the State of Delaware, without regard to the principles of conflicts of laws.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, each of the undersigned has duly executed and delivered this Agreement as of the date first written above.

SELLER:

LAYTON BIOSCIENCES, INC.

By: /s/ Annemarie Moseley
Name: Annemarie Moseley
Title: Pres/CEO, acting

BUYER:

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
Name: J. Donald deBethizy
Title: Pres. & CEO

Exhibit A

ACQUIRED ASSETS

1. Intellectual Property. All of the intellectual properties and property rights that are owned, leased or licensed by Seller as of the Closing Date and used in or related to the research, development, manufacture, production, sales, marketing, distribution, license, exploitation and/or commercialization of the Product, including without limitation: (i) the trademarks listed on Schedule 4.11 to the Purchase Agreement and all United States, foreign and state registrations and applications for registration relating thereto; and (ii) the United States and foreign patents and applications for patent relating thereto listed on Schedule 4.11 to the Purchase Agreement (together with all continuations, continuations-in-part, divisions, patents of addition, reissues, renewals or extensions thereof and all SPCs with respect thereto, the "Patents").

2. Documentation. All records, asset ledgers, books of account, inventory records, customer and supplier lists, sales literature and advertising and promotional materials relating to the Product or any of the Acquired Assets.

3. Regulatory Documentation. All regulatory filings, submissions, notices (of approval and otherwise), correspondence and supporting materials and safety data for the Product owned by Seller or to which Seller has rights as of the Closing Date, including without limitation (i) all NDAs, the IND and all applications regarding the "Orphan Drug" classification of mecamylamine hydrochloride and all approvals thereof, all of which in existence as of the date hereof and as of the Closing Date are set forth on Schedule 1.20 to the Purchase Agreement, and (ii) all clinical data contained or related to any of the foregoing, and all legal rights and privileges belonging or accruing to the owner or holder thereof.

4. Contracts. All contracts, commitments, agreements, licenses, understandings and obligations, whether written or oral, to which Seller is a party and that relate to the research, development, manufacture, production, sales, marketing, distribution, license, exploitation and/or commercialization of the Product or by which any of Acquired Assets is bound or affected.

5. Inventory. All supplies and quantities of Seller as of the Closing Date, wherever located, of: (i) the chemical compound mecamylamine hydrochloride; (ii) the formulated tablet containing mecamylamine hydrochloride as marketed by Seller in the United States under the trademark INVERSINE®; (iii) the materials and supplies to be used or consumed in the production of the chemical compound mecamylamine hydrochloride or the formulated tablet containing mecamylamine hydrochloride; and (iv) all packaging materials related to any of the foregoing.

Exhibit B

CONTRACTS

1. Merck & Co.-Layton Bioscience Inc., dated March 19, 1998
2. Layton Bioscience Inc.-USF, dated October 13, 1997
3. Siegfried-Layton Bioscience Inc., dated July 20, 2000
4. Poli-Layton Bioscience Inc., dated July 23, 2001
5. Layton Bioscience Inc.-Cord Logistics dated May 9, 2001

ASSIGNMENT OF TRADEMARKS

THIS ASSIGNMENT OF TRADEMARKS (this “Assignment”), dated as of August 5, 2002 is from Layton Bioscience, Inc., a Delaware corporation (“Assignor”), to Targacept, Inc., a Delaware corporation (“Assignee”).

W I T N E S S E T H:

WHEREAS, in connection with that Asset Purchase Agreement dated June 28, 2002 between Assignor and Assignee, Assignor desires to assign to Assignee all right, title and interest in and to the trademarks identified on Exhibit A attached hereto (the “Trademarks”), together with any and all goodwill of the business associated with the Trademarks; and

WHEREAS, Assignee desires to acquire the Trademarks and all goodwill of the business associated therewith from Assignor; and

WHEREAS, Assignor and Assignee desire to confirm of record the assignment of the Trademarks to Assignee;

NOW, THEREFORE, for $1.00 and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee hereby agree as follows:

1. Assignor hereby assigns to Assignee all right, title and interest in and to the Trademarks, together with (i) the goodwill and the business symbolized by the Trademarks and (ii) all causes of action, claims and demands and other rights for, or arising from, any infringement, including past infringements, of the Trademarks.

2. Assignor further agrees without further consideration to cause to be performed such other lawful acts and to be executed such further assignments and other lawful documents as Assignee may from time to time reasonably request to effect fully this Assignment and to permit Assignee to be duly recorded as the registered owner of the Trademarks and all other rights hereby conveyed.

IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed by their respective authorized officers, all as of the day and year first above written.

ASSIGNOR:	ASSIGNEE:
LAYTON BIOSCIENCE, INC.	TARGACEPT, INC.
By: /s/ Annemarie Moseley	By: /s/ J. Donald deBethizy
Its: President/CEO (acting)	Its: President/CEO

EXHIBIT A

TRADEMARKS

Mark	Registration No.
INVERSINE	626,116 (U.S.)
INVERSINE	5818 (Ireland)

SCHEDULE D

NOTICE TO FDA

Mr. Douglas Throckmorton, M.D.
Acting Director
Division of Cardio-Renal Drug Products
HFD-110, Room 16B-45
Office of Drug Evaluation I (CDER)
Food and Drug Administration
1451 Rockville Pike
Rockville, Maryland 20852

Dear Mr. Throckmorton:

NDA 10-251: Tablets INVERSINE (Mecamylamine HCI)
IND 58,680:Orphan Drug Classification 17205-0626-01

Pursuant to 21 CFR 314.72, we are notifying you that as of ___________, Layton Bioscience, Inc. transferred ownership and all rights and responsibilities for NDA 10-251, IND 58,680 and Orphan Drug classification 17205-0626-01 to Targacept, Inc.

Effective the date of this letter, all communications to the sponsor should be addressed to:

George Hemsworth, Director Regulatory Affairs
Targacept, Inc.
200 East First Street, Suite 300
Winston-Salem, NC 27101-1465
(336) 480-2119

A letter and completed FDA Form 356h has been submitted to your office by Targacept, Inc. under separate cover a copy of which is attached. Their letter certifies that they are assuming sponsorship of and have been provided a complete copy of NDA 10-251, IND 58,680 and Orphan Drug classification 17205-0626-01.

Please direct any questions regarding the transfer of NDA 10-251, IND 58,680 and Orphan Drug classification 17205-0626-01 to ____________________ ____________________.

Sincerely,

Certified No.

Exhibit 10.15

[********] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

<u>ASSET PURCHASE AND TRADEMARK ASSIGNMENT AGREEMENT</u>

ASSET PURCHASE AND TRADEMARK ASSIGNMENT AGREEMENT executed this 19th day of March, 1998, by and between LAYTON BIOSCIENCE, INC., a Delaware corporation ("Purchaser") with an address at 105 Reservoir Road, Atherton, CA 94027 and MERCK & CO., Inc., a New Jersey corporation ("Seller") with an address at One Merck Drive, Whitehouse Station, New Jersey 08889.

<u>ARTICLE 1- DEFINITIONS</u>

The following terms as used in this Agreement shall have the meanings set forth below:

SECTION 1.1 "Acquired Assets" means (a) the Trademarks as set forth in Schedule A, (b) any and all of Seller's worldwide right, title and interest in the Intellectual Property as of the Closing Date, (c) the Documentation, and (d) all United States Food and Drug Administration New Drug Applications for the Product as set forth in Schedule B, but specifically excluding all Excluded Assets.

SECTION 1.2 "Affiliate" of a person means (i) any corporation or business entity fifty (50%) percent or more of the voting stock or other equity interest of which is owned directly or indirectly by such Person; or (ii) any corporation or business entity which directly or indirectly owns fifty (50%) percent or more of the voting stock or other equity interest of such Person; or (iii) any corporation or business entity under the direct or indirect control of a Person described in clause (i) or (ii), but "Affiliate" shall not include, as to Seller, any joint venture, partnership or similar entity in which Seller owns an equity interest of fifty percent (50%) or less and shall not include Banyu Pharmaceutical Co., Limited.

SECTION 1.3 "Agreement" or "this Agreement" means this Asset Purchase and Trademark Assignment Agreement, including all Schedules hereto.

SECTION 1.4 "Assumed Liabilities" means the liabilities to be assumed by Purchaser pursuant hereto, namely all claims and complaints (including, without limitation, all damages, losses, expenses and liabilities) relating to any or all of the Acquired Assets, made or brought after the Closing Date including, without limitation, (i) all liabilities arising out of the sale, purchase, consumption or use of the Product in the Territory and (ii) all liabilities arising out of any generation, treatment, storage, transportation, disposal or release, of any hazardous material, substance, waste or any toxic or other material regulated by any federal, state, provincial or local environmental statute, rule or regulation (except as provided in Section 8.2 hereof); provided, however that Assumed Liabilities shall not include claims and complaints (A) arising out of the sale, purchase, consumption or use of the Product prior to the Closing Date, (B) arising out of the consumption or use of Product sold or otherwise transferred by Seller to Persons other than Purchaser, or (C) asserting and establishing a breach of a specific warranty given by Seller in this Agreement.

SECTION 1.5 “Closing Date” means the date on which the “Closing” occurs as defined in Section 3.1 below.

SECTION 1.6 “Developments” shall mean all developments, improvements, enhancements or additions to or of the Acquired Assets or the Product, including without limitation any rights, patents, research, documents, intellectual property or other property developed, generated, or acquired by Purchaser or its successors or assigns after the date hereof with respect to the Acquired Assets or the Product.

SECTION 1.7 “Documentation” means the documents, papers, files and other Recorded Information described in Schedule C hereto.

SECTION 1.8 “Excluded Assets” means all assets, property, rights and interests of Seller other than the Acquired Assets, including without limitation all patents, information, know-how, trademarks, trade names, good will, intellectual property and proprietary rights, new drug applications and their equivalents, NDC numbers and their equivalents, product registrations, or other assets of Seller.

SECTION 1.9 “Excluded Liabilities” means the liabilities retained by Seller pursuant hereto, namely all claims and complaints (including, without limitation, all damages, losses, expenses and liabilities) relating to any or all of the Acquired Assets, made or brought prior to the Closing Date including, without limitation, all liabilities (A) arising out of the sale, purchase, consumption or use of the Product prior to the Closing Date or (B) arising out of the consumption or use of Product sold or otherwise transferred by Seller to Persons other than Purchaser.

SECTION 1.10 “Intellectual Property” means any and all of the following, but only to the extent that, in each case, they relate directly to the Product in the Territory and are set forth or embodied the Documentation: Know-how, Patents, Marks, methods, processes, formulae, techniques, trade secrets, copyrights, copyright applications, copyright registrations, inventions, inventors’ notes, molecular compositions, mechanisms of activity, and works of authorship; and specifically excludes (A) any information known or to become known to Seller or any of its employees, contractors or agents which is not in the form of Recorded Information, and (B) any Know-how, Patents, methods, processes, formulae, techniques, trade secrets, copyrights, copyright applications, copyright registrations, inventions, inventor’s notes, molecular compositions, mechanism of activity, works of authorship or Information to the extent that they are used for purposes other than manufacturing, marketing, selling, producing, licensing or in any way exploiting mecamylamine hydrochloride in the Territory.

SECTION 1.11 “Know-how” means any and all technical Information and know-how which relates directly to the Product, including, without limitation, biological, chemical, pharmacological, toxicological, clinical, assay, control and manufacturing data.

SECTION 1.12 “Liens and Encumbrances” means, with respect to the Acquired Assets, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind, including, without limitation, the interest of a vendor or lessor under any conditional sale agreement, capital lease or other title retention agreement relating to such asset.

SECTION 1.13 “Marks” means any trademarks, service marks or names used for the Product in the Territory, and all trademark and service mark registrations (and any applications therefor) associated therewith in the Territory, together with all associated good will, including without limitation the name “INVERSINE.”

SECTION 1.14 “Net Sales” means [********].

SECTION 1.15 “New Drug Applications” and “NDAs” mean the applications for the Product filed with the U.S. Food and Drug Administration (“FDA”) for marketing authorization of the Product within the United States, as described in Schedule B, and all legal rights and privileges belonging or accruing to the owner or holder of such applications.

SECTION 1.16 “Patents” shall mean all patents and patent applications which generically or specifically claim the Product and (A) in which Seller has an ownership interest as of the date hereof or (B) to which Seller, as of the date hereof, has or shall in the future have the right to grant licenses. Included within the definition of Patents are all continuations, continuations-in-part, divisions, patents of addition, reissues, renewals or extensions thereof and all SPCs with respect thereto. The list of patent applications and patents encompassed within Patents is set forth in Schedule D hereto.

SECTION 1.17 “Payment Year” means each twelve-month period after the Closing Date, with the first Payment Year, if any, commencing on the date of the first sale of the Product to a customer in the United States and later Payment Years commencing on the same day of each succeeding year.

SECTION 1.18 “Person” means an individual, a corporation, a partnership, an association, a trust, or other entity or organization, including a government or political subdivision or an agency or instrumentality thereof.

SECTION 1.19 “Product” means (A) the chemical compound mecamylamine hydrochloride, and (B) as of the Closing Date, the formulated tablet containing mecamylamine hydrochloride as heretofore marketed by Seller in the United States under the trademark INVERSINE®, and (C) after the Closing Date, any tablet or other formulation of mecalmylamine hydrochloride or any derivative thereof (including but not limited to any stereoisomers, either separated or combined, any hydrates, any solvates and any crystal forms).

SECTION 1.20 “Proprietary Information” means Recorded Information which discloses methods, processes, methodologies, ideas, formulae, techniques, Know-how, marketing data, product pricing, listing, product plans, procedures and techniques used by Seller prior to the date of this Agreement in connection with the Product, where such information derives Independent economic value, actual or potential, from not being generally known to and not being readily ascertainable by proper means by other persons who can obtain economic value from its disclosure or use, and which has heretofore been the subject of efforts by Seller that were reasonable under the circumstances to maintain its secrecy.

SECTION 1.21 “Qualified Successor” means (A) any individual, corporation or partnership that has a net worth of [********] or greater at the time of evaluation, or (B) any individual, corporation or partnership that has a net worth of less than [********] at the time of evaluation if Seller has consented in writing to such entity being classified as a Qualified Successor, which consent shall not be unreasonably withheld. For purposes of this definition, “net worth” shall mean total assets minus total liabilities as shown in a financial statement for such individual, corporation or partnership which has been prepared in accordance with generally accepted accounting principles consistently applied.

SECTION 1.22 “Recorded Information” means information or data that is physically recorded or stored in a readable or retrievable form, e.g., writing microfiche, computer disk, etc.

SECTION 1.23 “SPC” means a right based upon a patent to exclude others from making, using or selling the Product, such as a Supplementary Protection Certificate.

SECTION 1.24 “Territory” means all the countries and territories of the world.

SECTION 1.25 “Technical Package” means a specific collection of Recorded Information relating to the manufacture of the Product by Seller prior to the date of this Agreement. The Technical Package is expected to contain such items as: process flow diagrams, material safety data sheets, bulk drug specifications, finished product specifications.

SECTION 1.26 “Third Party” means any Person other than a party to this Agreement or an Affiliate of either party.

SECTION 1.27 “Trademarks” means the trademarks and trademark registrations for the Product as set forth in Schedule A. “Trademark” means any one of the Trademarks. The Trademark shown on Schedule A as being currently registered in Somalia is referred to hereinafter as the “Somali Trademark.”

ARTICLE II- PURCHASE AND SALE

SECTION 2.1 Purchase and Sale. On and subject to the terms and conditions set forth in this Agreement, Seller agrees to sell, convey, assign and transfer to Purchaser and Purchaser agrees to purchase, on the Closing Date, all of Seller’s right, title and interest in and to the Acquired Assets, subject only to Seller’s retained right to use any information within the Acquired Assets to the extent it relates to the Excluded Assets or to Excluded Liabilities or to any products hereinafter developed by Seller. The Purchaser shall not acquire pursuant hereto any assets or rights of any kind or nature, real or personal, tangible or intangible, other than the Seller’s right, title and interest in and to the Acquires Assets and such rights as may be set forth herein, and Seller shall retain all other assets, including, without limitation, the Excluded Assets. Seller make no representation or warranty of good title to the Acquired Assets but quitclaims all of its right, title and interest in and to the Acquired Assets to the Purchaser.

SECTION 2.2 Assumption of Liabilities. On the terms and subject to the conditions of this Agreement, the Purchaser agrees to assume the Assumed Liabilities. The parties understand and agree that Purchaser does not and should not assume or become liable for any liabilities, obligations, commitments or debts related to the Acquired Assets and arising from the sale, purchase, consumption, or use of Product sold by Seller prior to the Closing Date. However, nothing in this Section 2.2 shall restrict, reduce or in any way affect the obligations of Purchaser pursuant to Section 8.3 of this Agreement.

SECTION 2.3 Purchase Price.

(a) Purchaser shall pay to Seller, in consideration for the Acquired Assets, the following amount (the "Purchase Price"):

(i) on the Closing Date, the sum of [********] (the "Initial Payment"); and

(ii) a series of [********] annual installment payments (each a "Royalty Payment"), due and payable not later than thirty (30) days following the end of each Payment Year and equal to the lesser of

(A) [********], or

(B) an amount (the "Royalty") equal to [********] of Net Sales for such Payment Year.

(b) Notwithstanding any other provision of this Section 2.3, no Royalty Payment shall be payable unless and until Product shall be produced, brought to market, and sold to a customer within the United Sates (other than an Affiliate of Purchaser). And the first Payment Year shall not commence until the date when the first such sale occurs.

(c) On or promptly after the Closing Date, but in no event later than thirty (30) days after the Closing Date, Seller shall deliver all tangible portions of the Acquired Assets (excluding the Technical Package) to Purchaser by hand delivery at the Closing or by shipping such items at Purchaser's expense to a destination in the United States specified by Purchaser. The Technical Package shall be delivered to Purchaser as provided in subsection 2.3(f) below.

(d) Seller hereby agrees that at all times after the Closing Date, unless an Event of Default shall have occurred and be continuing, neither Seller nor any Affiliate of Seller shall directly or indirectly market, sell, produce, license or in any way exploit mecmylamine hydrochloride in the Territory.

(e) The Initial Payment will be tendered by Purchaser to Seller not later than the close of banking business on the Closing Date by Federal wire of funds to Chase Manhattan Bank, [********], Merck & Co., Inc. [********]; Reference: Sale of Inversine® to Layton Bioscience, Inc. March ____ 1998 [Closing Date]. All Royalty Payments shall be paid by Purchaser to Seller on the date they are due by federal wire funds according to the wire transfer fund instructions above or amended wire instructions given by Seller to Purchaser in writing.

(f) Following the Closing Date, the Seller shall use reasonable efforts to assemble the Technical Package. The Seller shall describe the Technical Package in a schedule (the "Technical Package Schedule") to be delivered to Purchaser at the same time as the Technical

Package. Notwithstanding any provision hereof to the contrary, the description of the Technical Package in the Technical Package Schedule as delivered by Seller shall conclusively establish the identity of the Documentation to be included in the Technical Package. Delivery of the Technical Package as described in the Technical Package Schedule to Purchaser shall be the Seller's sole post-Closing responsibility with regard to the delivery of Documentation to Purchaser. The Seller shall deliver the Technical Package and the Technical Package Schedule to Purchaser not later than one hundred twenty (120) days after the Closing Date by shipping such items at Seller's expense to a destination in the United States specified by Purchaser.

SETION 2.4 Events of Default. The following shall be Events of Default under this Agreement:

(a) The Purchaser shall fail to make any payment (including without limitation any Royalty Payment) in accordance with the terms of this Agreement within ten (10) days after such payment is due;

(b) The Purchaser shall fail to furnish to Seller any Payment Statement (as defined in Section 7.9(e) hereof) within ten (10) days after such Payment Statement is due;

(c) Except as provided in Section 7.6 hereof, the Purchaser, without the prior written consent of Seller, shall resell or abandon any Trademark (other than the Somali Trademark) or the NDA or effect any substantial change of ownership or control of Purchaser before payment in full of all payments required or potentially required under Section 2.3, provided that such Event of Default shall be deemed to have occurred immediately prior to any such resale, abandonment or substantial change as set forth in Section 7.5 hereof;

(d) The Purchaser shall fail to observe or perform any other covenant or obligation required to be observed or performed by it hereunder or under the Material Transfer Agreement by and between the parties hereto dated as of the date hereof;

(e) Any financial statement, representation, warranty or certificate (including without limitation any Payment Statement required pursuant to Section 7.9(e) hereof) made or furnished by the Purchaser to Seller in connection with this Agreement shall be materially false, incorrect or incomplete when made;

(f) The Purchaser shall admit its insolvency or its inability to pay its debts as they mature, the Purchaser shall become a debtor in any proceedings in bankruptcy or for reorganization, or Purchaser shall discontinue normal business operations or materially change the nature of its business.

SECTION 2.5 Interest and Liquidated Damages. In the event that any payment by Purchaser under this Agreement (including without limitation any Royalty Payment) is made ten (10) or more days later than when due, Purchaser shall pay interest to Seller, on all such payments, in the amount of the prime rate reported in the *Wall Street Journal* on the payment due date plus two percentage points, such interest to be accrued and payable daily without the necessity for any notice, demand or other action by Seller until the overdue amount has been paid in full. In the event Purchaser fails to make any Royalty Payment required under this Agreement within ninety (90) days of the date such payment is due, Seller shall be entitled to receive liquidated damages of double the amount of the overdue payment, such liquidated damages being payable immediately without the necessity for any notice, demand or other action by Seller until the overdue amount has been paid in full.

SETION 2.8 Indemnity. Purchaser shall indemnify Seller for all costs and expenses (including but not limited to attorney's fees) incurred in attempt(s) to collect any payments due or to enforce any remedy provided under this Agreement.

SECTION 2.9 Remedies. (a) Upon the occurrence of any Event of Default, the Purchaser shall be deemed to have granted Seller a non-exclusive royalty-free license of all Acquired Assets then owned, possessed or claimed by Purchaser, with the right to manufacture, use, distribute, market and sell such Acquired Assets and the Product in the Territory (the"License"). Notwithstanding the preceding sentence, the Seller shall be deemed to have released the License, effective upon the cure of such Event of Default by Purchaser and receipt by Seller of all payments and obligations required under this Agreement (including without limitation all Royalty Payments and all interest payable on account of any overdue payments).

(b) After any Event of Default, Seller shall have, in addition to the rights and remedies given to it by this Agreement, all those rights and remedies allowed by all applicable laws, including without limitation the Uniform Commercial Code as enacted in the Commonwealth of Pennsylvania.

SECTION 2.10 Breach Notice. If any Event of Default occurs as described in Section 2.4 hereof (other than an Event of Default specified in paragraph (f) of Section 2.4), the Seller shall provide written notice of such Event of Default and shall permit the Purchaser thirty (30) days after dispatch of such notice in which to cure such Event of Default. If the Seller breaches any obligation under this Agreement, the Purchaser shall provide written notice of such breach and shall permit the Seller thirty (30) days in which to cure such breach.

SECTION 2.11 Legal Tender. All payments required to made under this Agreement shall be made in lawful money of the United Sates of America.

SECTION 2.12 Copy of Documentation. Notwithstanding any provision of this Agreement to the contrary, Seller shall have the right to retain one copy of the Documentation for its records, subject to the provisions of Sections 6.3 and 2.3(d).

ARTICLE III- EXECUTION, CLOSING AND EFFECTIVENESS

SECTION 3.1 Execution: Closing.

(a) The transactions contemplated by this Agreement shall be consummated at a closing (the "Closing") to occur on or before March 31, 1998, at Seller's offices in West Point, Pennsylvania, or at such other location as the parties may mutually agree.

(b) At the Closing, Seller shall deliver to Purchaser appropriately executed and authenticated Trademark Assignments to the Purchaser in the form of Schedules E-1, E-2 and E-3 hereto quitclaiming all its right, title and interest in and to the Trademarks (collectively the "Trademark Assignment").

(c) At the Closing, Seller shall execute and deliver to Purchaser an assignment and bill of sale, in the form attached hereto as Schedule F, quitclaiming all its right, title and interest in and to the NDA, the Intellectual Property and the Documentation from Seller to Purchaser.

(d) At the Closing, Purchaser shall pay to Seller the Initial Payment of [********] by wire transfer in Federal funds available to Seller, as described in Section 2.3(e).

(e) At the Closing, Purchaser shall deliver to Seller such corporate resolutions of Purchaser, certified copies of the articles of incorporation and by-laws of Purchaser and certificates of incumbency and authority of the officers of Purchaser as Seller may request in order to ascertain the correctness of the representations and warranties of Purchaser as set forth in Article V hereof.

(f) Purchaser shall pay or cause to be paid any and all transfer, stamp, sales or other similar taxes or duties payable in connection with the sale or transfer of the Acquired Assets to Purchaser.

(g) Purchaser shall pay or cause to be paid any and all third-party costs and expenses relating to the transfer and assignment to Purchaser of the Trademarks, including, without limitation, all costs and taxes with respect to recordation of transfer. Recordation of transfer and assignment of the Trademarks shall be the responsibility of Purchaser.

(h) At any time or from time to time after the Closing, Seller shall, at the request of Purchaser and at Purchaser's expense, execute and deliver any further instruments or documents and take such further action as Purchaser may reasonably request in order to accomplish transfer of Seller's right, title and interest in and to the Acquired Assets to Purchaser as contemplated hereby; provided, however, that after the Closing Date, apart from such customary further assurances, the Seller shall have no other obligations except as specifically set forth and described herein, and without limitation of the foregoing the Seller shall have no obligation to (i) assist or otherwise participate in the amendment or supplementation of the NDA or otherwise to participate in any filings or other activities relating to the NDA other than filing the notice of transfer as contemplated by Section B hereof, or (ii) assist or otherwise participate in efforts to validate, continue or improve any process for or related to the manufacture of the Product.

SECTION 3.2 Conditions Precedent to Closing.

(a) Conditions Precedent to Obligations of Seller. The obligation of Seller to consummate the transactions contemplated by this Agreement to be consummated at the Closing shall be subject to the reasonable satisfaction, or to the waiver by Seller in writing, on or before the Closing Date, of the following conditions, all of which are for the sole benefit of Seller:

(i) All representations and warranties of Purchaser set forth in Article V or elsewhere in this Agreement shall be true, correct and complete, and shall be certified by Purchaser to be true, correct and complete, as of the Closing Date.

(ii) No Event of Default under this Agreement shall have occurred and be continuing as of the date of the Closing and Purchaser shall have performed and complied in all material respects with each and every covenant, agreement and condition required by this Agreement to be performed or complied with by Purchaser prior to or on the Closing Date.

(iii) All approvals, applications, notifications or filings of or to public authorities, federal, state, local, or foreign, and, except as consented to Seller, all consents or approvals of any nongovernmental persons who are parties to contracts or other agreements to which Purchaser is also a party or to which any assets of Purchaser are subject, the granting of which is necessary for the consummation of the transactions contemplated to be consummated at the Closing, shall have been obtained.

(iv) Timely and effective occurrence of the events specified in paragraphs (d) and (e) of subsection 3.1 above shall be a condition precedent to the effectiveness of the items and documents delivered as described in paragraphs (b) and (c) of subsection 3.1 above.

(b) Conditions Precedent to Obligations of Purchaser. The obligation of Purchaser to consummate the transactions contemplated by this Agreement to be consummated at the Closing shall be subject to the reasonable satisfaction, or to the waiver by Purchaser in writing, on or before the Closing Date, of the following conditions, all of which are for the sole benefit of Purchaser:

(i) All representations and warranties of Seller set forth in Article IV or elsewhere in this Agreement shall be true, correct and complete, and shall be certified by Seller to be true, correct and complete, as of the Closing Date.

(ii) Seller shall have performed and complied in all material respects with each and every covenant, agreement and condition required by this Agreement to be performed or complied with by Seller prior to or on the Closing Date.

(iii) All approvals, applications, notifications or filings of or to public authorities, federal, state, local, or foreign, and, except as consented to by Purchaser, all consents or approvals of any nongovernmental persons who are parties to contracts or other agreements to which Seller is also a party to or which any assets of Seller are subject, the granting of which is necessary for the consummation of the transactions contemplated to be consummated at the Closing, shall have been obtained.

SECTION 3.3 Further Assurances. Seller and Purchaser agree that at any time or from time to time after the Closing, each party, at the request and expense of the other, shall execute and deliver to the other all such instruments and documents or further assurances as the other party may reasonably request in order to quitclaim to Purchaser all of Seller's right, title and interest in and to the Acquired Assets as contemplated hereby and to implement the License granted to Purchaser in Section 2.9 hereof; provided, however, that after the Closing, apart from such customary further assurances, the Seller shall have no other obligations except as specifically set forth and described herein, and without limitation of the foregoing the Seller shave have no obligation to (i) assist or otherwise participate in the amendment or supplementation of the NDA or otherwise to participate in any filings or other activities relating to the NDA other than filing the notice of transfer as contemplated by Section 6 hereof, or (ii) assist or otherwise participate in efforts to validate, continue or improve any process for or related to the manufacture of the Product.

SECTION 3.4 No Brokers. Seller and Purchaser mutually represent and warrant to each other that they have not negotiated with any broker or finder in connection with this Agreement or the subject matter hereof. Each party agrees that should any claim be made against the other party for any broker's commission or finder's fee by reason of the acts of such party, the party upon whose acts such claim is adjudicated shall hold the other party harmless from and against all liability and expense in connection therewith.

ARTICLE IV- SELLER'S REPRESENTATIONS AND WARRANTIES

Subject to Section 9.4 hereof, Seller represents and warrants as of the Execution Date and the Closing Date that:

SECTION 4.1 Corporate Existence and Authorization; Contravention.

(a) Seller is a corporation duly organized, validly existing and in good standing under the laws of the State of New Jersey.

(b) The execution, delivery and performance by Seller of this Agreement and each of the documents contemplated hereby to which the Seller is a party are within Seller's corporate power, have been duly authorized by all necessary corporate action and do not contravene or constitute a default under any provision of the certificate of incorporation or by-laws of Seller or any provision of applicable law or regulation or of any judgment, injunction, order or decree binding upon Seller or to which any Acquired Asset is subject, or any indenture, bank loan, credit, or other agreement binding upon Seller or to which the Acquired Assets are subject. This Agreement and each of the documents contemplated hereby to which the Seller is a party is a legal, valid and binding agreement of Seller enforceable in accordance with its terms.

(c) Except for the requirement that both Purchaser and Seller provide written notice, in the form attached hereto as Schedule G, of the transfer of the NDA from Seller to Purchaser, and any requirements of Hart-Scott-Rodino and any equivalent law or regulation currently in effect in any country or jurisdiction other than the United States, the execution, delivery and performance by Seller of this Agreement, and the consummation by Seller of the transactions contemplated hereby, require no action by or in respect of, or filing with, any governmental body, agency or official or any other consent of any person, firm or other entity.

SECTION 4.2 Status of Acquired Assets.

(a) To the best of Seller's knowledge, the Acquired Assets are free and clear of all Liens and Encumbrances.

(b) To the best of Seller's knowledge, (i) no product formula, formulation, Trademark, process, method, substance, or other material (an "Item") which is part of the Acquired Assets infringes any rights owned or held by any person other than Seller, and (ii) no item currently being manufactured, distributed, sold or used by any person infringes any rights of Seller to the Acquired Assets.

SECTION 4.3 Litigation.

(a) To the knowledge of Seller, there are no pending private or governmental proceedings, claims, actions, or investigations against Seller relating to the Product which are likely (either individually or in the aggregate) to result in an adverse decision imposing a judgment, fine or penalty.

(b) Since 1960, there have been no judgments, decrees or orders of any court or other governmental body binding upon Seller relating to the Product.

SECTION 4.4 Compliance with Laws. Seller is now charged with, and to the best of the knowledge of Seller is not now under investigation with respect to, any violation of any applicable law, regulation, order or requirement in the United States of America which related to the Product.

SECTION 4.5 Sufficiency of Transfer. The Acquired Assets and the rights transferred under this Agreement include all assets used or held by Seller for use primarily in connection with the Product in the Territory as of the date hereof, except for the Excluded Assets.

SECTION 4.6 Transfer Documents. The assignments and transfer documents to be delivered to Purchaser pursuant to Section 3.1 will be in appropriate form and sufficient to quitclaim to Purchaser all of Seller's right, title and interest in and to the Acquired Assets.

SECTION 4.7 NDA Review. Seller had provided Purchaser with the opportunity to review the true, accurate and complete NDA's for the Product, which include information concerning side effects, injury, toxicity or sensitivity reaction, or unexpected incidents, whether or not serious or unexpected, relating to the Product ("Adverse Experiences"), which Seller has reported to the FDA during the three (3) years immediately preceding the Closing Date. Any additional information regarding Adverse Experiences received by Seller before the Closing Date but not yet reported to the FDA will be provided to Purchaser within fourteen (14) days after Closing Date. For purposes of this Section 4.7, "serious" and "unexpected" have the meanings set forth in Section 6.4 of this Agreement. Additionally, Seller has allowed Purchaser to meet with officials of the Food and Drug Administration review the approval status of the NDAs for the Product.

SECTION 4.8 Intellectual Property. The Intellectual Property set forth or embodied in the Documentation includes substantially all of the Know-how, Marks, Patents, methods, processes, formulae, techniques, trade secrets, copyrights, copyright applications, copyright registrations, inventions, inventor's notes, molecular compositions, mechanisms of activity, and works of authorship which (a) relate primarily to the Product, (b) are owned and readily obtainable by Seller as of the date this representation and warranty is given, and (c) exist on the date this representation and warranty is given in the form of Recorded Information that is in the possession of, and readily obtainable by, the Seller. Seller makes no representation or warranty concerning the accuracy, completeness or utility of the Documentation or any of the Intellectual Property.

SECTION 4.9 Patents and Marks; Disclaimers.

(a) Seller does not represent, and specifically disclaims, that it is the holder of any unexpired Patents in the United States. All of the information about Patents contained in the Documentation relates to expired Patents.

(b) Seller does not represent, and specifically disclaims, that it is the holder of (i) any Patents that are registered or effective outside the United States or (ii) any Marks that are registered or effective outside the United States except as shown on Schedule A.

SECTION 4.10 Tax Matters. In all respects relating to the Acquired Assets or Seller's business related to the Acquired Assets directly or indirectly, (A) Seller has filed all federal, state, local and foreign tax returns required to be filed for the jurisdictions in which the business or assets of Seller are subject to tax, (B) each such return is complete, accurate and in compliance with applicable law and regulations in all material respects, and (C) Seller has paid or provided for all such taxes of any nature whatsoever, with any related penalties, interest and liabilities (any of the foregoing being referred to herein as a "Tax"), that are or would be shown on such tax returns as due and payable on or before the date hereof, other than such Taxes as are being contested in good faith.

SECTION 4.11 Data. All Recorded Information in the possession of, and readily obtainable by, the Seller reflecting quality, toxicity, safety and/or efficacy characteristics of the Product has been disclosed to Purchaser prior to, or will be disclosed to Purchaser on, the Closing Date; provided, however, that to the extent that such Recorded Information is contained in the Technical Package, such Recorded Information will be disclosed to Purchaser at or before the time the Technical Package is delivered to Purchaser. Except as set forth in the preceding sentence, Seller makes no representation or warranty concerning the accuracy, completeness or utility of any Recorded Information disclosed to Purchaser on, prior to or after the Closing Date.

ARTICLE V- PURCHASER'S REPRESENTATIONS AND WARRANTIES

Purchaser represents and warrants as of the Execution Date and the Closing Date that:

SECTION 5.1 Corporate Existence. Purchaser is a corporation duly organized and validly existing under the laws of the State of Delaware.

SECTION 5.2 Due Authorization: Noncontravention. The execution, delivery and performance by Purchaser of this Agreement and each of the documents contemplated hereby to which the Purchaser is a party are within Purchaser's power, have been duly approved and authorized by all necessary action and do not contravene or constitute a default under the constitutive documents of Purchaser or of applicable law or regulation or of any agreement, judgment, injunction, order, decree or other instrument binding upon Purchaser. This agreement is a legal, valid and binding agreement of Purchaser enforceable in accordance with its terms.

SECTION 5.3 Government Action. To the best of Purchaser's knowledge, except for the requirement that both Purchaser and Seller provide written notice, in the form attached hereto as Schedule G, of the transfer of the NDA from Seller to Purchaser and any requirements of Hart-ScottoRodino and any equivalent law or regulation currently in effect in any country or jurisdiction other than the United States, the execution, delivery and performance by Purchaser of this Agreement and each of the documents contemplated hereby to which the Purchaser is a party require no action by or in respect of, or filing with, any governmental body, agency or official, or any other consent.

SECTION 5.4 Solvency and Financial Condition. Purchaser is financially sound and fully solvent and had no reason to anticipate any inability to perform, or material difficulty performing, any of its obligations set forth in this Agreement.

SECTION 5.5 Financial Statements. The financial statements dated March 31, 1996 and 1997 (audit report dated August 29, 1997) and previously furnished to Seller (i) are the most recent financial statements for the Purchaser, (ii) have been prepared in accordance with generally accepted accounting principles consistently applied, (iii) provide an accurate representation of Purchaser's financial condition at the date thereof and the results of operations for the periods covered thereby, (iv) contain no material misstatements, errors or omissions, (v) do not fail to disclose the existence of any liens, judgments, leases, contracts or contingent liabilities of Purchaser. There have been no material adverse changes in the assets or liabilities, or in the business condition, financial or otherwise, of the Purchaser from March 31, 1997 to the date hereof.

SECTION 5.6 Hart Scott Rodino. Purchaser has complied and will comply in all material respects with the requirements of Hart Scott Rodino, 15 U.S.C. Section 18A.

SECTION 5.7 Further representations and warranties.

(a) This Agreement is valid and binding and enforceable in accordance with its terms.

(b) The property of the Purchaser is not subject to any liens, security interests, leases or other interests except as set forth in Schedule 5.7(b). The Acquired Assets and the Developments will not be subject to any liens, security interests, leases or other interests except as set forth in Schedule 5.7(b) at any time before all Royalty Payments have been paid.

(c) The location of the chief executive offices and all other places of business of Purchaser are as set forth in Schedule 5.7(c).

(d) The Purchaser has no subsidiaries, direct or indirect; the Purchaser is not engage in any joint venture or partnership with any other person.

SECTION 5.8 Disclosure. No representation or warranty by Purchaser in this Agreement contains any untrue statement of material fact.

ARTICLE VI- SELLER'S COVENANTS

Seller covenants and agrees as follows:

SECTION 6.1 Filings. Seller will use reasonable efforts in good faith to file or cause to be filed with the FDA, as soon as practicable after the Closing Date, the notice (substantially in the form of Schedule G attached hereto), required to be filed by it in connection with its transfer of the NDA.

SECTION 6.2 No Liens and Encumbrances. Any Liens and Encumbrances known by Seller to exist with respect to any of the Acquired Assets shall be satisfied of record on or prior to the Closing Date by Seller.

SECTION 6.3 Confidentiality. Until the later of ten (10) years following the Closing Date or the payment in full of the last Royalty Payment to become due and payable, Seller will, and will cause each of its Affiliates and employees to, preserve the confidentiality of all confidential, proprietary and trade secret information used or held for use primarily in connection with the Acquired Assets, provided that (i) Seller and its Affiliates may use and disclose any such information which has been publicly disclosed (other than by Seller or any Affiliate in breach of its obligations under this Section) or as otherwise permitted under this Agreement; or to the extent such information relates to Excluded Assets, provided that, if such information relates to both Acquired Assets and Excluded Assets, Seller will maintain its confidentiality only to the extent that maintenance of its confidentiality does not unreasonably interfere with Seller's or its Affiliates ability to use, market or sell any or all of the Excluded Assets; and (ii) to the extent that Seller or any Affiliate thereof may become legally compelled to disclose any of information, Seller or such Affiliate may (to the extent so compelled) disclose such information if they shall have first used reasonable efforts in good faith, and shall have afforded Purchaser the opportunity, to obtain an appropriate protective order, or other satisfactory assurance of confidential treatment, for the information required to be so disclosed.

SECTION 6.4 Adverse Experience and Reaction Reporting. Until the later of ten (10) years following the Closing Date or the payment in full of the last Royalty Payment to become due and payable, Seller shall notify Purchaser of any information concerning any serious or unexpected side effects, injuries, toxicities, sensitivity reactions, adverse experiences, or other incidents relating to the Product, of which Seller receives notice on or after the Closing Date, including providing copies of all such adverse experience or reaction reports within two (2) weeks of Seller's receipt of such reports. For purposes of this Section 6.4 and Section 7.5: (A) "serious" means an experience or reaction which is fatal or life threatening, results in persistent or significant disability, requires inpatient hospitalization or prolongation of existing inpatient hospitalization, is a congenital anomaly, cancer, or the result of an overdose, or is another important medical event (even if not life-threatening, resulting in death, or requiring hospitalization) if, based upon appropriate medical judgments, such medical event may jeopardize the patient's or subject's health or may require medical or surgical intervention to prevent one of the other outcomes listed previously, and (B) "unexpected" means a condition or development not listed in the then-current FDA-approved labeling for the Product, and includes those experiences or reactions that show a significant increase in incidence or severity over what appears on the labeling of the Product or in NDA trials or that are a failure of the Product to achieve claimed activity.

SECTION 6.5 Notification of Orders Received. Commencing on the Closing Date and continuing until the second anniversary of the Closing Date, Seller will use its best efforts to notify Purchaser of any and all order for the Product actually received by the Seller by promptly forwarding such orders to Purchaser. Notwithstanding the foregoing, Seller does not anticipate any such orders and has made no representations to Purchaser that any such orders are likely to be received or forwarded.

ARTICLE VII- PURCHASER'S COVENANTS

Purchaser covenants and agrees as follows:

SECTION 7.1 Confidentiality. Until the later of ten (10) years following the Closing Date or the payment in full of the last Royalty Payment to become due and payable, Purchaser will, and will cause each of its Affiliates and employees to, preserve the confidentiality of all confidential, proprietary and trade secret information and material included within the Acquired Assets, or disclosed hereunder, which relates to any Excluded Assets, provided that (i) Purchaser and its Affiliates may use and disclose any such information which has been publicly disclosed (other than by Purchaser or any Affiliate in breach of its obligations under this Section) or as otherwise permitted under this Agreement; or to the extent such information relates to the Acquired Assets, provided that, if such information relates to both Acquired Assets and Excluded Assets, Purchaser will maintain its confidentiality only to the extent that maintenance of its confidentiality does not unreasonably interfere with Purchaser's ability to use, market or sell units of the Product in the ordinary course of business; and (ii) to the extent that Purchaser or any Affiliate thereof may become legally compelled to disclose any of such information, Purchaser or such Affiliate may (to the extent so compelled) disclose such information if they shall have first used reasonable efforts in good faith, and shall have afforded Seller the opportunity to obtain an appropriate protective order, or other satisfactory assurance of confidential treatment, for the information required to be so disclosed.

SECTION 7.2 FDA Filings. Purchaser will use its reasonable efforts in good faith promptly to file or cause to be filed with the FDA, any notice, document and/or other materials required to be filed by it in connection with its purchase of the Acquired Assets (including without limitation the filings required by 21 CFR Section 314.72) and to make promptly any further filings and take any actions required of it as may be necessary to consummate the transactions contemplated hereby.

SECTION 7.3 Post-Closing; Use of Names. Beginning on the Closing Date, Purchaser will mark clearly all units of the Product manufactured or distributed to indicate Purchaser's ownership of the Product and will not use the words, names or combined letters "Merck", "Merck & Co., Inc.", "MMD", "Merck Manufacturing Division", "Merck Sharp & Dohme", "MSD", "Merck Frosst", "Frosst", "Merck Frosst Canada Inc." or any variation thereof or other word, name or letter combination substantially similar thereto, or any other trade name or trademark of Seller in connection with the Product or otherwise, or as part of the name of the Purchaser or any Affiliate of the Purchaser, after the Closing Date.

SECTION 7.4 Cooperation in Litigation. From and after the Closing Date, Purchaser agrees that in the defense of any litigation, hearing, regulatory proceeding or investigation or other similar matter relating to the Acquired Assets or the Excluded Liabilities, Purchaser will make available to Seller during normal business hours, but without unreasonably disrupting its business, all personnel and records as to the Acquired Assets held by Purchaser and reasonably necessary to permit the effective defense or investigation of such matters.

SECTION 7.5 Adverse Experience and Reaction Reporting. Effective on the Closing Date and continuing until the later of ten (10) years following the Closing Date or the payment in full of the last Royalty Payment to become due and payable, Purchaser shall be responsible for reporting adverse experiences and reactions with respect to the Product in conformance with all applicable laws, rules and regulations and shall send to Seller, throughout the term of this Agreement, copies of all such adverse experience or reaction reports, with all serious and unexpected adverse experiences as defined in Section 6.4 hereof (and relevant government reporting forms) sent within two (2) weeks of Purchaser's receipt, and all adverse experiences or reactions other than serious or unexpected adverse experiences (and relevant government reporting forms) sent to Seller on a quarterly basis addressed to Seller.

SECTION 7.6 Resale; Abandonment. (a) Purchaser agrees not to resell or abandon any Trademark (other than the Somali Trademark) or the NDA for the Product (any such resale or abandonment being a "Transfer"), or to effect any substantial change in ownership or control of Purchaser (including but not limited to a sale of more than 49% of the voting stock or other equity interest of Purchaser or any form of merger or consolidation) (a "Substantial

Change”), before all payments and all potential payments required under Section 2.3 have been made.

(b) Notwithstanding subsection (a) of this Section 7.6, Purchaser shall be entitled to transfer the Acquired Assets or any interest in Purchaser to an Affiliate of Purchaser or to a Qualified Successor or to effect a merger or consolidation as a result of which an Affiliate or a Qualified Successor shall be the surviving corporation, provided that each and every one of the following conditions is met:

(i) In the case of a Qualified Successor, the Purchaser shall provide to Seller in writing, no less than thirty (30) days prior to the proposed Transfer of Substantial Change, the name and address of the proposed Qualified Successor and, unless the proposed Qualified Successor is a public held company which is required to file and has filed current annual and quarterly 10K and 10Q reports with the Securities Exchange commission, copies of the Qualified Successor’s most recent audited financial statements, the dates of which shall not in any case be more than one year prior to the date of the proposed Transfer or Substantial Change. Seller’s receipt and review of such financial statements shall be subject to its confidentiality obligations hereunder, and in addition Seller shall, if so requested, execute an additional confidentiality agreement in customary form for the benefit of the proposed Qualified Successor.

(ii) No such Transfer or Substantial Change shall operate to release Purchaser from any of its obligations hereunder, and (except for a merger or consolidation in which Purchaser ceases to retain its separate corporate existence) Purchaser shall remain obligated hereunder as if no Transfer or Substantial Change had occurred.;

(iii) Immediately prior to any such Transfer or Substantial Change, the Purchaser shall execute and deliver to Seller a certificate signed by its chief executive officer reaffirming the representations and warranties set forth in Sections 5.1, 5.2, 5.3, 5.4 and 5.7 above as to the Purchaser as of the time of such Transfer or Substantial Change;

(iv) Immediately prior to any such Transfer or Substantial Change, the Affiliate or Qualified Successor which is the proposed transferee or surviving corporation shall execute and deliver to Seller a certificate signed by its chief executive officer affirming the representations and warranties set forth in Sections 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, and 5.7 above as to such Affiliate or Qualified Successor as of the time of such Transfer or Substantial Change;

(v) The Affiliate transferee or Qualified Successor under any Transfer or Substantial Change shall agree in writing to be bound by all of the obligations of Purchaser hereunder, including without limitation the obligations set forth in this Section 7.6.

(c) Except as provided in subsection (b) of this Section 7.6, if the Purchaser, without the prior written consent of Seller, effects a Transfer or Substantial Change before payment in full of all payments required or potentially required under Section 2.3, then an Event of Default shall be deemed to have occurred prior to any such Transfer or Substantial Change and the license provided in Section 2.9 hereof shall be deemed to have been granted prior to the effectiveness of any such Transfer or Substantial Change.

SECTION 7.7 <u>Taxes.</u> Purchaser will, at Seller's request and expense, cooperate with Seller and its Affiliates in connection with any audit of Seller by the Internal Revenue Service or any other U.S. or non-U.S. taxing authority of any tax return in connection with the Acquired Assets. Seller will have the sole right, at its sole expense, to conduct any audit (including without limitation, any audit referred to in the preceding sentence) or any other proceeding before any taxing authority, to prepare and file any amended tax return, claim for refund or tax court petition, to prosecute any such claim and to select counsel, to engage in litigation and to consent to any settlement in connection therewith with respect to any taxes for the period prior to the Closing Date, and Purchaser will execute and deliver, or cause to be executed and delivered, to Seller or its designees all instruments (including, without limitation, powers of attorney) reasonably requested by Seller in order to implement the provisions of this Section 7.7.

SECTION 7.8 <u>Best Efforts.</u> Purchaser agrees to use its best efforts, in good faith, to market and sell units of the Product until all Royalty Payments required or potentially required to be made under this Agreement have been paid in full.

SECTION 7.9 <u>Further Covenants.</u> Until all Royalty Payments have been paid in full (together with any interest or liquidated damages payable as provided in Section 2.5):

(a) The Purchaser will notify Seller in writing thirty (30) days in advance of any change in the location of any of its executive offices or places of business.

(b) The purchaser shall keep and require it Affiliates and sublicensees to keep complete and accurate books and records of all sales of the Product and all other matters and transactions relating to the Product and the Acquired Assets, in accordance with generally accepted accounting practices consistently applied, including without limitation records of the volume of unit sales, the prices in effect, from time to time, the revenue derived from sales of the Product and all other information used or necessary to be used in computing Net Sales and Royalty Payments. Seller shall have the right, without charge and at Seller's expense, through a certified public accountant or like person reasonably acceptable to Purchaser, to examine and audit all books and records relating to the Product or the Acquired Assets during regular business hours, subject to customary confidentiality protections; provided, however, that such examination and audit shall not take place more often than once a year. In addition, the Purchaser will furnish Seller any information regarding its business affairs and financial condition within a reasonable time after written request therefor.

(c) The Purchaser will give immediate written notice to Seller of any litigation or proceeding in which Purchaser is a party that might materially and adversely affect the Product or Acquired Assets. Purchaser's rights in the Product or Acquired Assets, or Purchaser's financial condition, property or business.

(d) The Purchaser will not mortgage, pledge, grant or permit to exist a lien, lease, pledge, change or security interest upon any of the Acquired Assets or the Developments, except for liens and security interests in favor of Seller.

(e) At the time each Royalty Payment is due, Purchaser shall furnish to Seller a statement, certified as true and correct by its chief executive officer, which statement shall demonstrate in detail how the amount of the Royalty Payment has been calculated ("Payment Statement"). Without limiting the generality of the foregoing, each payment Statement shall contain the following information: total sales volume of Inversine® in the United States during the applicable Payment Year, the unit price for Inversine® in effect in the United States from time to time during such Payment Year; itemization of all taxes and duties taken into account in calculating Net Sales; and itemized details of all rebates and returns with respect to Inversine® in the United States during such Payment Year. All such information shall be presented in accordance with generally accepted accounting practices consistently applied.

(f) The Purchaser will not materially alter the use of any Trademark or use any Trademark in association with any drug, product, item or service other than the Product. If the Purchaser desires to change or supplement the use of the Product from that specified under "Goods" in Schedule A hereto, Purchaser will (i) register as required in the United States Patent and Trademark Office to reflect any such changed or supplemental use, (ii) retain the present uses as shown under "Goods" in Schedule A in any revised or subsequent trademark registrations for the Product, and (iii) retain and preserve all trademarks for the Product (and all uses therefor) existing as of the Closing Date.

(g) If Purchaser intends to use, manufacture, distribute or sell the Product in the form of a stereoisomer or other derivative other than the formulation heretofore manufactured and sold by Seller under the name "INVERSINE," Purchaser shall notify Seller not less than six (6) months prior to such proposed use, manufacture, distribution or sale.

ARTICLE VIII- SURVIVAL; INDEMNIFICATION

SECTION 8.1 Survival; Remedy for Breach. All representations, warranties, covenants and indemnities of the parties contained herein shall survive the Closing Date until the later of ten (10) years after the Closing Date or two (2) years after the last Royalty Payment required or potentially required to be paid hereunder is due and payable. The covenants and agreements of Seller and Purchaser hereunder that require by their terms performance or compliance on and after the Closing Date shall continue in force thereafter in accordance with their terms.

SECTION 8.2 Indemnification by Seller. Seller shall indemnify Purchaser against and defend Purchaser against any and all damage, loss, liability and expense (including, without limitation, reasonable attorneys' fees in connection with any action, claim, suit or proceeding brought against Purchaser and/or its Affiliate(s)) and the cost of remedial action under applicable laws and regulations incurred or suffered by Purchaser arising out of (1) any misrepresentation or breach of covenant, agreement, representation or warranty of Seller contained in this Agreement or (ii) any Excluded Liability, provided, however, that Purchaser shall not be entitled to any indemnification under this Section 8.2, except for claims under sections 4.2, and 4.5, unless and until the amount of claims for which Purchaser is entitled to be indemnified exceeds in the aggregate $175,000 (the "Deductible"), in which event Purchaser is entitled to receive indemnification with respect to such claims to the extent of the entire amount of the Deductible.

SECTION 8.3 Indemnification by Purchaser.

(a) Purchaser shall indemnify Seller against and agrees to hold Seller harmless from any and all damage, loss, liability and expense (including without limitation, reasonable attorneys' fees and expenses in connection with any action, claim, suit or proceeding brought against Seller and/or its Affiliate(s)) and the cost of remedial action under applicable laws and regulations incurred or suffered by Seller and/or its Affiliates arising out of (i) any and all acts and omissions of Purchaser before or after the Closing Date, whether or not such acts are negligent, unlawful or otherwise wrongful in any manner, in connection with the transactions contemplated by this Agreement, including without limitation Purchaser's efforts to become the owner of the NDA, to amend or supplement the NDA, and to validate, continue or improve any process for or related to the manufacture of the Product, (ii) any misrepresentation or breach of covenant, agreement, representation or warranty of Purchaser contained in this Agreement, or (iii) any Assumed Liability. Without limitation of the foregoing, Purchaser acknowledges and agrees that its indemnification obligations under this section 8.3 include indemnifying Seller and holding Seller harmless against any liability which may be asserted under the "Best Price" provisions of the Federal Medicaid statute (42 U.S.C. Section 1396r-8) in the event that Purchaser raises the price of the Product after the Closing Date.

(b) If Seller or any Affiliate thereof has retained any liability which would otherwise be an Assumed Liability as a result of the failure to obtain the consent of a third party to transfer such liability to Purchaser, Purchaser shall indemnify Seller against and agrees to hold Seller harmless from any such liability incurred with respect to any period beginning on or after the Closing Date, provided that Seller notifies Purchaser of the existence of such failure to obtain consent in a notice expressly referring to this Section 8.3 (b).

SECTION 8.4 Indemnification; Notice and Settlements. A party seeking indemnification pursuant to Section 8.2 or 8.3 (an "indemnified party") shall give prompt notice to the party from whom such indemnification is sought (the "indemnifying party") of the assertion of any claim, or the commencement of any action or proceeding, in respect of which indemnity may be sought hereunder. The indemnifying party shall have the right to, and shall at the request of the indemnified party, assume the defense, with counsel reasonably satisfactory to the indemnified party, of any such suit, action or proceeding at its own expense. An indemnifying party shall not be liable under Section 8.2 or 8.3 for any settlement effected without its consent of any claim, litigation or proceeding in respect of which indemnity may be sought hereunder, which consent shall not be unreasonably withheld.

ARTICLE IX- MISCELLANEOUS

SECTION 9.1 Notices. All notices, requests and other communications to any party hereunder shall be in writing and shall be sent by fax and by first class mail or nationally recognized overnight delivery service:

If to Seller to:

Merck & Co., Inc.
Sumneytown Pike
West Point, PA 19486
Attention: Mr. Eugene Wolkoff
Senior Director, Business Development
Tel. (215) 652-0887
Fax: (215) 652-2131

with a copy to:

Bruce Hartman, Esq.
Legal Department
WP53C-326
Tel. (215) 652-5642
Fax. (215) 652-6355

If to Purchaser to:

Layton Bioscience, Inc.
105 Reservoir Road
Atherton, CA 84027
Attention: Mr. Gary L. Snable
President and CEO
Tel. (650) 854-6614
Fax: (650) 854-4776

with a copy to:

Thomas L. Barton, Esquire
Wise & Shepard LLP
3030 Hansen Way Suite 100
Palo Alto, CA 94304-1006
Tel. (650) 856-1200
Fax. (650) 856-1344

Or such other addresses as such party may hereafter specify by written notice to the other party. Each such notice, request or other communication shall be effective when received at the address specified in this Section 9.1.

SECTION 9.2 Expenses. All legal and other costs and expenses incurred in connection herewith and the transactions contemplated hereby shall (except as otherwise provided herein) be paid by the party incurring such expenses.

SECTION 9.3 Bulk Sales Statutes. Purchaser hereby waives compliance by Seller with any applicable bulk sales statutes in any jurisdiction in connection with the transactions under this Agreement.

SECTION 9.4 Limitation on Seller’s Representations and Warranties.

(a) PURCHASER ACKNOWLEDGES THAT EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES CONTAINED IN THIS AGREEMENT, SELLER HAS MADE NO REPRESENTATION OR WARRANTY WHATSOEVER AND PURCHASER HAS NOT RELIED ON ANY REPRESENATION OR WARRANTY, EXPRESS OR IMPLIED, EXCPET THOSE EXPRESSLY SET FORTH IN THIS AGREEMENT. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, PURCHASER ACKNOWLEDGES THAT, EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT, PURCHASER IS ACQUIRING THE ACQUIRED ASSETS ON AN “AS IS, WHERE IS” BASIS WITHOUT ANY EXPRESS OR

IMPLIED WARRANTIES AS TO THE FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY OR CONDITION OF THE ACQUIRED ASSETS OR AS TO ANY OTHER MATTER.

(b) Without limiting the generality of subsections 9.4(a) above, Seller has made no representations or warranties that the Know-how, methods, processes, formulae, techniques, trade secrets or other information included in the Intellectual Property or in the Documentation or elsewhere in the Acquired Assets will be useful to the Purchaser for any purpose whatsoever, and more specifically Seller has affirmatively disclosed to Purchaser certain problems previously experienced in connection with the manufacture of the Product and Seller makes no representations or warranties concerning the manufacturing process or the efficacy, efficiency or adequacy of the Acquired Assets for the purpose of manufacturing, marketing or selling the Product either before or after the Closing.

(c) Without limiting the generality of subsections 9.4(a) and (b) above, Seller has made no representations or warranties concerning the efficacy or safety for human use of the Product, whether in the formulation heretofore manufactured and sold under the name “INVERSINE” or in the form of any other stereoisomer or other derivative.

SECTION 9.5 Successors and Assigns. This Agreement shall be binding upon and shall insure to the benefit of the parties and their respective successors and assigns; provided, however, that this Agreement may not be assigned by either party without the prior written consent of the other party hereto, and any attempted assignment without such consent shall be void.

SECTION 9.6 Entire Agreement; Amendment. This Agreement, including, without limitation, the Schedules hereto, embodies the entire agreement of the parties hereto with respect to the subject matter hereof and supercedes any and all prior agreements with respect thereto, except for any prior confidentiality agreements which shall survive. In the event of any conflict between this Agreement and any such prior confidentiality agreement, the agreement imposing stricter confidentiality shall govern. No waiver, amendment or modification of any provision hereof or of any right or remedy hereunder shall be effective unless in writing and signed by the party against whom such waiver, amendment or modification is sought to be enforced.

SECTION 9.7 Captions; Construction. Captions herein are inserted for convenience of reference only and shall be ignored in the construction or interpretation of this Agreement. Unless otherwise specified, the words “herein”, “hereof” and terms of like import shall be deemed to refer to the Agreement as a whole and not merely to a single part thereof.

SECTION 9.8 Public Announcement. No press release, public announcement, confirmation or other information regarding this Agreement or related matters shall be made by either party without the prior written consent of the other party (other than as necessary to perform the provisions of this Agreement or to its employees or as may be required by law or by any applicable rules of any stock exchange; provided, however, that disclosure to employees shall not result in a requirement of public disclosure under such applicable law or rules).

SECTION 9.9 Governing Law. This Agreement shall be governed by, interpreted and construed, and all claims and disputes, whether in tort, contract or otherwise be resolved in accordance with the substantive laws of the Commonwealth of Pennsylvania without reference to any rules of conflict or laws of renvoi.

SECTION 9.10 Jurisdiction; Venue; Arbitration and Other Remedies. In the event of any controversy or claim arising out of or relating to this Agreement, performance hereunder, termination hereof, or relationship created hereby, each party irrevocably submits to the exclusive jurisdiction of the courts of the Commonwealth of Pennsylvania and the Federal courts of the United States District Court for the Eastern District of Pennsylvania for the purposes of any suit, action or other proceeding arising out of this Agreement or transactions contemplated hereby. Each party irrevocably and unconditionally waives any objection to the laying of venue in the state and Federal courts of Pennsylvania as stated above and that any such action was brought in an inconvenient forum. Notwithstanding the foregoing:

(a) In the event of a threatened disclosure in violation of this Agreement, Seller shall have the right to seek injunctive relief from any competent court in the jurisdiction where the disclosure is threatened to prevent such disclosure pending resolution of the merits of the dispute;

(b) At the option of Seller, any controversy, claim or dispute between the parties hereto arising out of or relating to the performance, construction, interpretation or enforcement of this Agreement shall be submitting to binding confidential arbitration pursuant to the Federal Arbitration Act, 9 U.S.C. § 1 et seq. in accordance with the Rules of Commercial Arbitration of the American Arbitration Association or its successor. Any arbitration pursuant to this Agreement shall be conducted within the Eastern District of Pennsylvania by three neutral arbitrators selected by the American Arbitration Association. The judgment upon the award rendered in any such arbitration shall be final and binding upon the parties and may be entered in any court having jurisdiction thereof. All fees and expenses of the arbitrators and all other expenses of the arbitration, except for attorneys fees, shall be shared equally by the parties. Each party shall bear its own attorneys fees.

SECTION 9.11 Consent and Waiver Regarding Service of Process and Personal Jurisdiction. In any action, suit, arbitration or proceeding to enforce the rights of either party under this Agreement or otherwise arising out of this Agreement or from any acts, omissions or activities of either party arising from or related in any way to this Agreement or the transactions contemplated hereby, the Purchaser, by execution and delivery of this Agreement, expressly and irrevocably consents to the service of any complaint, summons, notice or other process relating to any such action, suit, arbitration or proceeding by delivery thereof to it by hand or by any other manner provided for in Section 9.1 hereof. Purchaser hereby expressly and irrevocably waives any claim or defense in any such action, suit arbitration or proceeding based on any alleged lack of personal jurisdiction, improper venue, forum non conveniens or any similar doctrine or theory.

SECTION 9.12 Waiver of Jury Trial. In any action, suit, arbitration or proceeding to enforce the rights of either party under this Agreement or otherwise arising out of this Agreement or from any acts, omissions or activities of either party arising from or related in any way to this Agreement or the transactions contemplated hereby, the parties hereto, by execution and delivery of this Agreement, expressly and irrevocably waive their right to a jury trial and stipulate that any such action, suit or proceeding shall be tried to the court (or arbitrator if the proceeding is under Section 9.10(b) hereof).

SECTION 9.13 Cooperation. Each party agrees to execute such further papers, agreements, documents, instruments and the like as may be reasonably necessary or desirable to effect the purpose of this Agreement and to carry out its provisions.

SECTION 9.14 Waiver. No waiver by any party in one or more instances of any of the provisions of this Agreement or the breach thereof shall establish a precedent for any other instance with respect to that or any other provision. Furthermore, in case of waiver of a particular provision, all other provisions of this Agreement will continue in full force and effect.

SECTION 9.15 Severability. If any provision of this Agreement is held to be invalid or unenforceable, all other provisions shall nevertheless continue in full force and effect.

SECTION 9.16 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all of which together shall constitute but one and the same instrument.

SECTION 9.17 No Third Party Beneficiaries. Nothing in this Agreement, express or implied, is intended to confer upon any third party any rights, remedies, obligations or liabilities.

SECTION 9.18 Compliance with Laws and Regulations. In performing their obligations pursuant to this Agreement, the parties hereto agree and covenant that they will comply with all applicable federal, state, and local laws and regulations.

SECTION 9.19 Expenses. Each of the parties hereto will pay its own expenses incurred in connection with this Agreement or any transaction contemplated by this Agreement.

IN WITNESS WHEREOF, this Agreement has been signed by authorized representatives on behalf of each of the parties hereto as of the day and year first above written.

MERCK & CO., INC.

By: /s/ D. Anstice
Name: David W. Anstice
Title: President, Human Health- The Americas

By: /s/ Michael Gaines

LAYTON BIOSCIENCE, INC.

By: /s/ Gary L. Snable

By: /s/ Scott Bauer

INDEX TO SCHEDULES

SCHEDULE A

TRADEMARKS

TRADEMARK	LOCATION	REG. NO.	REG. DATE	EXP. DATE	GOODS
INVERSINE	USA	626,116	01-May-56	01-May-06	Medicinal preparation for use as hypotensive agent
INVERSINE	Ireland	58,180	02-Nov-55	02-Nov-07	Medicinal preparation for use as hypotensive agent
INVERSINE	Somalia	2,948	14-Jan-81	14-Jan-01	Chemical, medicinal, pharmaceutical, sanitary, disinfecting, veterinary

SCHEDULE B

NEW DRUG APPLICATION

INVERSINE®

PROD. NO.	STREGNTH	FORM	INITIAL REG.DATE/NUMBER
3219	2.5 mg	Tablet	01-Mar-55 NDA 10251

SCHEDULE C

DOCUMENTATION

[********]

[Entire page has been redacted.]

SCHEDULE D

PATENTS AND PATENT APPLICATIONS

United States Patent No. 2,831,027, Isocamphane compounds and processes for preparing the same; patented April 15, 1959 (patent expired).

SCHEDULE E-1

TRADEMARK ASSIGNMENT- U.S.

WHEREAS, MERCK & CO., INC., a New Jersey corporation, having its principal offices at One Merck Drive, Whitehouse Station, New Jersey 08889-0100, is the owner of the following trademark now registered in the United States Patent and Trademark Office:

TRADEMARK	REG. NO.	REG. DATE	EXP. DATE	GOODS
INVERSINE	626,116	01-May-56	01-May-06	Medicinal preparation for the use as hypotensive agent

WHEREAS, Layton BioScience, Inc., a Delaware corporation having its principal offices at Atherton, California, U.S.A., is desirous of acquiring said registered trademark,

NOW, THEREFORE, in consideration of the sum of One ($1.00) Dollar and other good and valuable consideration, the receipt of which is hereby acknowledged, MERCK & CO., INC., hereby quitclaims to Layton BioScience, Inc., without representation or warranty of title, all of its presently existing right, title and interest in the United Sates in and to said trademark together with the goodwill of the business symbolized by said trademarks and registrations thereof.

Signed this ______day of______, 1998.

MERCK & CO., INC.

By: ______________________________
Name:
Title:

State of ________________________
s.s.
County of _______________________

Subscribed and sworn to before
me this______day of______,1998

____
Notary Public

SCHEDULE E-2

TRADEMARK ASSIGNMENT- IRELAND

WHEREAS, MERCK & CO., a New Jersey corporation, having its principal offices at One Merck Dr, Whitehouse Station, New Jersey 08889-0100, is the owner of the following trademark now registered with the Controller of Patents, Designs and Trademarks of the Republic of Ireland:

TRADEMARK	REG. NO.	REG. DATE	EXP. DATE	GOODS
INVERSINE	58,180	02-Nov-55	02-Nov-07	Medicinal preparation for use as hypotensive agent

WHEREAS, Layton BioScience, Inc., a Delaware corporation having its principal offices at Atherton, California, U.S.A., is desirous of acquiring said registered trademark.

NOW, THEREFORE, in consideration of the sum of One ($1.00) Dollar and other good and valuable consideration, the receipt of which is hereby acknowledged, MERCK & CO., INC., hereby quitclaims to Layton BioScience, Inc. without representation or warranty of title, all of its presently existing right, title and interest in the Republic of Ireland in and to said trademarks together with the goodwill of the business symbolized by said trademarks and registrations thereof.

Signed this ______day of______, 1998.

MERCK & CO., INC.

By: ________________________________
Name:
Title:

State of ________________________
s.s.
County of ______________________

Subscribed and sworn to before
me this______day of______, 1998

____
Notary Public

SCHEDULE E-3

TRADEMARK ASSIGNMENT- SOMALIA

WHEREAS, MERCK & CO., INC., a New Jersey corporation, having its principal offices at One Merck Drive, Whitehouse Station, New Jersey 08889-0100, is the owner of the following trademark now registered with the Ministry of Industry of the Republic of Somalia:

TRADEMARK	REG. NO	REG. DATE	EXP. DATE	GOODS
INVERSINE	2,948	14-Jan-81	14-Jan-01	Chemical, medicinal, pharmaceutical, sanitary, disinfecting, veterinary products

WHEREAS, Layton BioScience, Inc., a Delaware corporation having its principal offices at Atherton, California, U.S.A., is desirous of acquiring said registered trademark,

NOW, THEREFORE, in consideration of the sum on One ($1.00) Dollar and other good and valuable consideration, the receipt of which is hereby acknowledged, MERCK & CO., INC., hereby quitclaims to Layton BioScience, Inc., without said representation or warranty of title, all of its presently existing right, title and interest in Somalia in and to said trademarks together with the goodwill of the business symbolized by said trademarks and registrations thereof.

Signed this ______day of______, 1998.

MERCK & CO., INC.

By: ________________________________
Name:
Title:

State of ________________________
s.s.
County of ______________________

Subscribed and sworn to before
me this______day of______, 1998

____
Notary Public

SCHEDULE F

[ASSIGNMENT AND BILL OF SALE
FOR NDA, INTELLECTUAL PROPERTY AND DOCUMENTATION]

QUITCLAIM ASSIGNMENT AND BILL OF SALE

KNOW ALL MEN BY THESE PRESENTS, that Merck & Co., Inc., a New Jersey corporation (“Seller”), for and in consideration of the sum on ONE DOLLAR and other valuable consideration as set forth in this Asset Purchase and Trademark Assignment Agreement by and between Seller and Layton BioScience, Inc., a Delaware corporation (“Purchaser”) dated as of the date hereof (the “Agreement”), and intending to be legally bound hereby, has sold, conveyed, assigned, transferred, set over and delivered, and by these presents does hereby sell, convey, assign, transfer, set over and deliver, unto Purchaser all of Seller’s right, title and interest in and to the following property (the “Property”), to have and to hold the Property unto Purchaser, its successors and assigns, for its own proper use and benefit forever:

1. The following New Drug Application for INVERSINE® (mecamylamine hydrochloride) filed with the U.S. Food and Drug Administration (“FDA”) for marketing authorization within the United States, and all legal rights and privileges belonging or accruing to the owner or holder of such application:

PROD. NO.	STRENGTH	FORM	INITIAL REG.DATE/NO.
3219	2.5 mg	Tablet	01-Mar-55 NDA 10251

2. The following documents, paper and files (the “Documentation”):

[********]

3. All intellectual Property to the extent set forth or embodied in the Documentation.

Notwithstanding any other provision hereof to the contrary, the Buyer shall not acquire pursuant hereto any property, assets or rights of any kind or nature, real or personal, tangible or intangible, other than the Seller’s right, title and interest in and to the Property. Seller makes no representation or warranty of good title to the Property but quitclaims all of its right, title and interest in and to the Property to the Purchaser.

PURCHASER ACKNOWLEDGES THAT EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES CONTAINED IN THIS ASSIGNMENT AND BILL OF SALE OR IN THE AGREEMENT, SELLER HAS MADE NO REPRESENTATION OR WARRANTY WHATSOEVER AND PURCHASER HAS NOT RELIED ON ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, EXCEPT THOSE EXPRESSLY SET FORTH IN THIS ASSIGNMENT AND BILL OF SALE OR IN THE AGREEMENT. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, PURCHASER ACKNOWLEDGES THAT, EXCEPT AS EXPRESSLY PROVIDED IN THIS ASSIGNMENT AND BILL OF SALE OR IN THE AGREEMENT, PURCHASER IS ACQUIRING THE PROPERTY ON AN “AS IS, WHERE IS” BASIS WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES AS TO THE FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY OR CONDITION OF THE PROPERTY OR AS TO ANY OTHER MATTER.

Without limiting the generality of the foregoing:

(a) Seller has made no representations or warranties that the Know-how, methods, processes, formulae, techniques, trade secrets or other information included in the Intellectual Property or in the Documentation or elsewhere in the Property will be useful to the Purchaser for any purpose whatsoever, and more specifically Seller has affirmatively disclosed to Purchaser certain problems previously experienced in connection with the manufacture of the Product and Seller makes no representations or warranties concerning the manufacturing process or the efficacy, efficiency or adequacy of the Property for the purpose of manufacturing, marketing or selling the Product either before or after the First Closing.

(b) Seller has made no representations or warranties concerning the efficacy or safety for human use of the Product, whether in the formulation heretofore manufactured and sold under the name "INVERSINE" or in the form of any other stereoisomer or other derivative.

(c) Seller has made no representation or warranty concerning the accuracy, completeness or utility of any Documentation or Intellectual Property contained within the Property.

(d) Seller has made no representation, and has specifically disclaimed, that it is the holder of any unexpired Patents in the United Stated. Any information about Patents contained in the Documentation relates to expired Patents.

(e) Seller has made no representation, and has specifically disclaimed, that it is the holder of (i) any Patents that are registered or effective outside the United States or (ii) any Marks that are registered or effective outside the United States except the trademarks in Ireland and Somalia shown on Schedule A to the Agreement.

Capitalized terms used in this Assignment and Bill of Sale, unless otherwise defined herein, shall have the meanings ascribed to them in the Agreement. In the event of a conflict between the Agreement and this Assignment and Bill of Sale, the terms and conditions of the Agreement shall control.

IN WITNESS WHEREOF, Seller has caused this Assignment and Bill of Sale to be signed this ______day of March 1998.

SELLER:

MERCK & CO., INC.

By: ____

Name:

Title:

Witness:____

Name:

Title:

SCHEDULE G

NOTICE TO FDA

Raymond J. Lipicky, M.D.- Director
Division of Cardio- Renal Drug Products
HFD-110, Room 16B-45
Office of Drug Evaluation 1 (CDER)
Food and Drug Administration
1451 Rockville Pike
Rockville, Maryland 20852

Dear Dr. Lipicky:

NDA 10-251: Tablets INVERSINE (Mecamylamine HCI)

Pursuant to 21 CFR 314.72, we are notifying you that as of ______, Merck Research Laboratories division of Merck & Co., Inc., transferred ownership and all rights and responsibilities for NDA 10-251 to Layton BioSciences.

Effective the date of this letter; all communications to the sponsor should be addressed to:

Martha Reitman, M.D.
Layton BioScience, Inc.
105 Reservoir Road
Atherton, CA 94027
(650) 854-6614

A letter and completed FDA Form 356h has been submitted to your office by Layton BioScience, Inc. under separate cover a copy of which is attached. Their letter certifies that they are assuming sponsorship of and have been provided a complete copy of NDA 10-251.

Please direct any questions regarding the transfer of NDA 10-251 to Larry P. Bell, M.D. (610/397-2310) or, in my absence, to Bonnie J. Goldmann, M.D. (610/397-2383).

Sincerely,

____
Larry P. Bell, M.D.
Senior Director, Regulatory Affairs

Certified No.

SCHEDULE 5.7(b)

LIENS AND ENCUMBRANCES

None

SCHEDULE 5.7(c)

LOCATION OF PURCHASER'S OFFICES AND PLACES OF BUSINESS

105 Reservoir Road
Atherton, CA 94027

Exhibit 10.16

[********] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

TARGACEPT CONTRACT NO. 03-060-0147

AMENDED AND RESTATED
LICENSE AGREEMENT

This Amended and Restated License Agreement (this "**Agreement**") is made and entered into to be effective the 9th day of March 2004, by and between the UNIVERSITY OF SOUTH FLORIDA RESEARCH FOUNDATION, INC., a corporation not for profit under Chapter 617 of the Florida Statutes and a direct support organization of the University of South Florida ("**University**") pursuant to Section 1004.28 of the Florida Statutes, having its principal office at 4202 East Fowler Avenue, Tampa, Florida 33620, U.S.A. (hereinafter referred to as "**RESEARCH FOUNDATION**"), and Targacept, Inc., a Delaware Corporation, having its principal office at 200 East First Street, Suite 300, Winston-Salem, North Carolina 27101-4165 (hereinafter referred to as "**LICENSEE**") and amends and restates in its entirety the License Agreement dated October 13, 1997, as amended, between RESEARCH FOUNDATION and LICENSEE, as assignee of Layton Bioscience, Inc. (the "**Original Agreement**").

WITNESSETH

WHEREAS, RESEARCH FOUNDATION is the exclusive licensee of certain "Patent Rights" (as later defined herein) relating to the use of mecamylamine to treat neuropsychiatric disorders and has the right to grant licenses under said Patent Rights;

WHEREAS, RESEARCH FOUNDATION desires to have the Patent Rights utilized in the public interest and is willing to grant a license thereunder; and

WHEREAS, LICENSEE intends to develop, produce, manufacture, market and/or sell "Licensed Product(s)" (as later defined herein) and is willing to commit itself to a diligent program of exploiting the Patent Rights so that public utilization shall result therefrom; and

WHEREAS, LICENSEE desires to obtain a license under the Patent Rights upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties hereto agree as follows:

ARTICLE I. DEFINITIONS

For the purposes of this Agreement, the following words and phrases shall have the following meanings:

1.1 "Annual License Fee" shall mean **[********]**, and "Annual Rights Fee" means **[********]**.

1.2 “Competition” shall, with respect to any Licensed Product, be deemed to exist in a particular country for and after the first calendar quarter in which **[********]**.

1.3 “Competitive Product” shall mean, with respect to any Licensed Product, any pharmaceutical product containing an active ingredient that is the same compound as a Named Compound contained in or comprising such Licensed Product, or any analog, salt, solvate, prodrug form, inclusion complex or metabolite thereof, that **[********]**.

1.4 “Confidential Information” shall mean, subject to Paragraph 15.3, information that is confidential, proprietary or otherwise not generally available to the public.

1.5 “Effective Date” shall mean the date so identified above in the preamble to this Agreement.

1.6 “Improvement” shall mean, with respect to any Licensed Product, technology that **[********]**.

1.7 “Licensed Process” shall mean any process that relates to a Named Compound and infringes or would infringe, in whole or in part, a Valid Claim contained in the Patent Rights.

1.8 “Licensed Product” shall mean any product or part thereof containing or comprising a Named Compound that:

(a) infringes or would infringe, in whole or in part, a Valid Claim contained in the Patent Rights in the country in which such product or part thereof is made, used, leased or sold; or

(b) is made by a process that is a Licensed Process in the country in which such product is made, used or sold.

1.9 “LICENSEE” shall include, in addition to Targacept, Inc.: a related company of Targacept, Inc., the voting stock of which is, directly or indirectly, at least fifty percent (50%) owned or controlled by Targacept, Inc.; an organization which directly or indirectly controls more than fifty percent (50%) of the voting stock of Targacept, Inc.; and an organization, the majority ownership of which is, directly or indirectly, common to the ownership of Targacept, Inc.. References in this Paragraph 1.9 to “voting stock” shall mean capital stock entitled to vote in the election of the board of directors or the analogous body of a noncorporate entity.

1.10 “Losses” shall mean all claims and expenses, including reasonable attorneys’ fees, actually incurred.

1.11 “Milestones” shall mean events defined in Appendix B.

1.12 "Named Compounds" shall mean **[********]**.

1.13 "NDA Filing Date" shall mean the date on which LICENSEE (or its sublicensee or collaborative partner) files its first New Drug Application (or its equivalent) with the United States Food and Drug Administration or any comparable foreign regulatory authority for the use of a Licensed Product to treat attention deficit hyperactivity disorder and/or any other neuropsychiatric disease or disorder in any country.

1.14 "Net Sales" shall mean **[********]**.

1.15 "Option Invention" shall mean any discovery, compound, improvement, invention, idea, process or technique, whether or not patentable, that (i) is made, conceived or first reduced to practice by RESEARCH FOUNDATION and (ii) without regard to any rights reserved under Paragraph 2.2, cannot reasonably be practiced without infringing the Patent Rights licensed to LICENSEE hereunder.

1.16 "Patent Rights" shall mean, collectively, (i) the patents and patent applications listed on Appendix A, (ii) all patents that issue from patent applications listed on Appendix A and all reexaminations, reissues, revisions, substitutes, renewals or extensions thereof, and (iii) all other United States and foreign patents that issue from applications that claim priority to patents and patent applications listed on Appendix A, including, without limitation, continuation applications, continuation-in-part applications, divisional applications, substitute applications, reissue applications or requests for examination and foreign applications of any of the foregoing.

1.17 "Special Issue Dispute" shall mean a dispute between the parties as to whether (i) LICENSEE is meeting its diligence obligation hereunder or (ii) a condition that would give rise to a royalty reduction under Paragraph 4.1(b)(i) or 4.1(c) has occurred or been met.

1.18 "Sublicense Fees" shall mean any fees (including the fair market value of any consideration paid other than in cash) received by LICENSEE for a sublicense of Patent Rights, excluding (i) running royalties on the sale or lease of Licensed Products, (ii) payments specifically allocated to research and development for, or to the manufacture or supply of, a Licensed Product or Licensed Process, (iii) amounts received by LICENSEE that it is required to repay (e.g., a loan) and (iv) payments received in exchange for securities of LICENSEE.

1.19 "Substantial LICENSEE IP Rights" shall mean any issued patent or pending patent application owned or licensed by LICENSEE that claims an Improvement, but excluding Improvements for which both LICENSEE and RESEARCH FOUNDATION provided independent inventive contribution.

1.20 "Territory" shall mean the world.

1.21 "Valid Claim" shall mean: (i) any claim of an issued patent that has not expired and that has not been held invalid or unenforceable by decision of a court or other governmental agency of competent jurisdiction or been admitted to be invalid through reissue, disclaimer or otherwise; or (ii) any claim of a pending patent application that has not expired or become canceled, abandoned or otherwise disallowed.

ARTICLE II. GRANT

2.1 (a) RESEARCH FOUNDATION hereby grants to LICENSEE the perpetual, exclusive right and license under the Patent Rights to research, develop, make, have made, use, market, distribute, lease, sell, import and export Licensed Products and Licensed Processes for any and all indications in the Territory, with the right to practice all or any portion of the foregoing right and license through subcontractors which, unless specifically sublicensed hereunder, shall not be considered sublicensees hereunder.

(b) In the event that RESEARCH FOUNDATION receives a *bona fide* third party offer whereby such third party would obtain a right or license under any of the Patent Rights for any purpose not exclusively licensed to LICENSEE hereunder (the "**Subject Rights**"), (i) RESEARCH FOUNDATION shall notify LICENSEE of all material terms of such offer in writing (the "**Subject Notice**") within ten (10) business days after its receipt by RESEARCH FOUNDATION, which notice shall certify as to the receipt of such offer from a *bona fide* third party, and (ii) LICENSEE shall thereupon have a right of refusal to license the Subject Rights on the same terms set forth in the Subject Notice. LICENSEE may exercise its right of first refusal at any time within **[********]** after its receipt of the Subject Notice by written notice to RESEARCH FOUNDATION, and, in such event, the parties shall work diligently towards execution of a definitive license agreement reflecting the terms in the Subject Notice and, to the extent not inconsistent, the terms hereof; provided that, if mutually acceptable, the parties may elect instead to amend and restate this agreement to incorporate the Subject Rights and associated terms. If LICENSEE's right of refusal expires unexercised, RESEARCH FOUNDATION shall have the right to license the Subject Rights to such third party on the terms set forth in the Subject Notice; provided that, in the event of any substantive change in such terms, RESEARCH FOUNDATION shall again provide the Subject Notice to LICENSEE and LICENSEE shall again have a right of first refusal as provided herein. LICENSEE shall, notwithstanding the periods provided in this Paragraph 2.1(b), use good faith efforts to respond to the Subject Notice (whether the initial Subject Notice or a subsequent Subject Notice following a substantive change in terms) as promptly as reasonably practicable within the applicable period.

(c) RESEARCH FOUNDATION: (i) shall, within thirty (30) days of the identification of each Option Invention, report such Option Invention to LICENSEE, together with any patent disclosures and any supporting technical data or other information it possesses that may be relevant to understanding the value or commercial significance of such Option Invention; and (ii) hereby grants to LICENSEE a first option to negotiate an exclusive, worldwide, royalty-bearing commercially reasonable license (with the right to sublicense) to RESEARCH FOUNDATION's rights in each Option Invention for any purpose. LICENSEE may exercise any such option by providing written notice to RESEARCH FOUNDATION within sixty (60) days of its receipt of the notice of the applicable Option Invention. Upon exercise of the Option, the parties shall negotiate in good faith the terms of such license based on **[********]**.

2.2 RESEARCH FOUNDATION reserves to the University the right to practice under the Patent Rights solely for the University's internal research and education purposes; provided that the foregoing rights shall be expressly subject to RESEARCH FOUNDATION's obligations pursuant to Paragraph 15.

2.3 Notwithstanding anything herein to the contrary, in no event shall either RESEARCH FOUNDATION or University perform research sponsored by, or for the benefit of, a third party for-profit entity where such research, if performed by such third party for-profit entity, would infringe or would be reasonably likely to infringe the Patent Rights licensed to LICENSEE hereunder.

2.4 The license granted hereunder shall not be construed to confer any rights upon LICENSEE by implication, estoppel or otherwise as to any technology except as specifically set forth herein.

2.5 LICENSEE may grant exclusive or nonexclusive sublicenses to third-party sublicensees with respect to all or any portion of the license granted to LICENSEE hereunder only with the approval of RESEARCH FOUNDATION, which shall: (i) be given unless RESEARCH FOUNDATION reasonably believes in good faith that the proposed sublicense will result in LICENSEE's inability to fulfill its obligations hereunder; (ii) otherwise not be unreasonably withheld or delayed; and (iii) be deemed given unless written notice to the contrary is received by LICENSEE within thirty (30) days after written notice requesting approval is received by RESEARCH FOUNDATION. RESEARCH FOUNDATION shall, notwithstanding the period provided in this Paragraph 2.4, use good faith efforts to respond to LICENSEE'S written notice as promptly as reasonably practicable within such period.

2.6 LICENSEE agrees to forward to RESEARCH FOUNDATION a copy of any and all fully executed sublicense agreements contemplated by Paragraph 2.4. At the request of RESEARCH FOUNDATION, LICENSEE shall also provide copies of all distribution agreements and other such agreements relative to the Licensed Products or involving rights granted to LICENSEE under the agreement.

2.7 Termination of the license granted to LICENSEE in this Agreement shall terminate all sublicenses which may have been granted by LICENSEE; provided that any sublicensee may elect to continue its sublicense by advising RESEARCH

FOUNDATION in writing, within (60) sixty days of the sublicensee's receipt of written notice of such termination from RESEARCH FOUNDATION, of its election and its agreement to assume all of the obligations to RESEARCH FOUNDATION (including obligations for payment) contained in this Agreement. Any sublicense granted by LICENSEE shall contain provisions corresponding to those of this paragraph respecting termination and the conditions of continuance of sublicenses.

2.8 Except as otherwise provided in a research or other written agreement between the parties, each invention, discovery, proprietary development, data and information, in any medium or manifestation, including any method, process, composition of matter, apparatus, device, system, product, article of manufacture or appliance made or developed after the Effective Date, and all intellectual property rights relating thereto, shall be owned exclusively by the party making or developing it, without any accounting, compensation or other obligation hereunder to the other party.

ARTICLE III. DUE DILIGENCE

3.1 LICENSEE shall use commercially reasonable efforts (either alone or through research collaborations or alliances with research organizations, pharmaceutical companies or other third parties) to market and sell, or to develop, one or more Licensed Products or Licensed Processes through a diligent program for exploitation of the Patent Rights, and LICENSEE's failure to use such efforts shall be grounds for RESEARCH FOUNDATION to terminate this Agreement pursuant to Paragraph 13.3. Without limiting the generality of the foregoing, until the NDA Filing Date, LICENSEE shall: (i) spend a minimum of **[********]**to conduct research and development of one or more Licensed Products; provided that, for the avoidance of doubt, any or all of such amount may **[********]**; and (ii) deliver to RESEARCH FOUNDATION, at least annually, a brief report summarizing its research and development activities completed since the last report, research and development activities currently in process, planned future research and development activities and research and development work being performed by third parties. If RESEARCH FOUNDATION believes LICENSEE is failing to comply with its obligations under this Paragraph 3.1, RESEARCH FOUNDATION may send notice to the LICENSEE asserting such belief and the basis therefor. LICENSEE shall have sixty (60) days from its receipt of such notice either to (i) commence compliance with its obligations under this Paragraph 3.1 to RESEARCH FOUNDATION's reasonable satisfaction or (ii) send notice to RESEARCH FOUNDATION requesting that such issue be resolved in accordance with Article XII, in which case the procedures set forth in Article XII shall be followed.

3.2 LICENSEE will use commercially reasonable efforts to effect the NDA Filing Date on or before December 31, 2012; provided that the parties acknowledge that (i) the foregoing target is expressly subject to significant scientific, clinical and regulatory uncertainties and (ii) failure to meet such target shall not constitute a breach of this Agreement or entitle RESEARCH FOUNDATION to terminate this Agreement if SPONSOR is in compliance with Paragraph 3.1, but shall entitle RESEARCH FOUNDATION, upon sixty (60) days written notice to LICENSEE, to make the license granted in Paragraph 2.1(a) nonexclusive.

3.3 LICENSEE may, but expressly without creating any binding obligation, (i) consider University to conduct or, if applicable, to coordinate particular pre-clinical or early-stage clinical research in furtherance of LICENSEE's diligence obligations hereunder and (ii) communicate with University researchers from time to time regarding the research and development of one or more Licensed Products hereunder.

ARTICLE IV. FEES AND ROYALTIES

4.1 For the rights, privileges and license granted hereunder, LICENSEE shall pay to RESEARCH FOUNDATION:

(a) Milestone payments payable, if at all, at the times and upon achievement of the Milestones set forth on Appendix B.

(b) Running royalties equal to the Applicable Royalty Amount. The "Applicable Royalty Amount" shall be **[********]** of Net Sales of Licensed Products in any country; provided that, with respect to a particular Licensed Product in a particular country:

(i) if (A) **[********]** or (B) there exists Competition for such Licensed Product in such country, the Applicable Royalty Amount shall be reduced to **[********]** of Net Sales of such Licensed Product in such country; and

(ii) if LICENSEE (or a sublicensee) deems it necessary or advisable to secure a third party license in order to practice in such country any portion of the license granted by RESEARCH FOUNDATION hereunder (including, without limitation, the sale of Licensed Products), the Applicable Royalty Amount shall be reduced by **[********]**of the amounts paid to secure such third party license, but in no event to an amount less than **[********]** of Net Sales of Licensed Products in such country.

Notwithstanding the foregoing:

(1) the obligations in this Paragraph 4.1(b) shall expire with respect to Net Sales of a particular Licensed Product in a particular country on the date of expiration of the last-to-expire Valid Claim included in the Patent Rights covering, in whole or in part, such Licensed Product in such country;

(2) if Licensed Products are sold or leased by a sublicensee, LICENSEE shall instead pay to RESEARCH FOUNDATION the lesser of the amount calculated as provided above in this Paragraph 4.1(b) or **[********]** of the running royalties on the sale or lease of Licensed Products actually received by LICENSEE from such sublicensee;

(3) the Company's obligation to pay royalties under this Paragraph 4.1(b) shall be imposed only once with respect to the same unit of a Licensed Product regardless of how many Patent Rights or Valid Claims pertain thereto; and

(4) all Annual License Fees, in the aggregate, paid by LICENSEE hereunder as of the NDA Filing Date shall be creditable against running royalties due under this Paragraph 4.1, after any reduction resulting from application of the various subparagraphs of this Paragraph 4.1; provided that a maximum of **[********]** shall be creditable annually under this subparagraph (4). **[********]**

(c) **[********]** of all Sublicense Fees actually received by LICENSEE from any sublicensee, to be reduced to **[********]** if such sublicense is granted together (whether in the same or in a related agreement) with Substantial LICENSEE IP Rights.

4.2 Royalty payments shall be paid in United States dollars in Tampa, Florida, or at such other place as RESEARCH FOUNDATION may reasonably designate consistent with the laws and regulations controlling in any foreign country. Any withholding taxes that the LICENSEE is required by law to withhold on remittance of the royalty payments will be deducted from the royalty paid. If any currency conversion shall be required in connection with the payment of royalties hereunder, such conversion shall be made by using the exchange rate prevailing at the Chase Manhattan Bank (N.A.) on the last business day of the calendar quarter reporting period to which such royalty payments relate.

4.3 In addition to the foregoing, LICENSEE shall pay to RESEARCH FOUNDATION (i) the Annual License Fee, which obligation shall expire as of the NDA Filing Date, and (ii) for the rights granted to LICENSEE in Paragraph 2.1(b), the Annual Rights Fee, each such payment to be made within thirty (30) days of each anniversary of the Effective Date in United States dollars.

ARTICLE V. REPORTS AND RECORDS

5.1 LICENSEE shall keep full, true and accurate books of account containing all particulars that may be necessary for the purpose of showing the amounts payable to RESEARCH FOUNDATION hereunder for five (5) years following the end of the calendar year to which they pertain. Such books and records shall be made available, upon reasonable notice and during normal business hours, for the inspection of RESEARCH FOUNDATION or its agents (at the sole expense of RESEARCH FOUNDATION) for the purpose of verifying LICENSEE's royalty statement or compliance in other respects with this Agreement. This obligation to maintain accurate books of account and the right to inspect them shall survive termination of this Agreement for the period described above.

5.2 LICENSEE, within sixty (60) days after March 31, June 30, September 30 and December 31, of each year, shall deliver to RESEARCH FOUNDATION true and accurate reports, giving such particulars of the business conducted by LICENSEE and its sublicensees during the preceding three-month period under this Agreement as shall be pertinent to a royalty accounting hereunder, including an accounting for Licensed Processes used and Licensed Products and the billings, deductions and royalties due with respect thereto. In the event the examination shows an underpayment, LICENSEE shall pay RESEARCH FOUNDATION the amounts underpaid. In addition, in the event the examination shows an underpayment of more than five percent (5%) for any quarter, LICENSEE shall pay the RESEARCH FOUNDATION, in addition to the amounts underpaid, out-of-pocket costs of the audit and interest on the underpayment at the rate of **[********]**.

5.3 With each such report submitted, LICENSEE shall pay to RESEARCH FOUNDATION the royalties due and payable under this Agreement. If no royalties shall be due, LICENSEE shall so report.

5.4 The royalty payments set forth in this Agreement shall, if overdue, bear interest until payment at a rate of **[********]**. The payment of such interest shall not foreclose RESEARCH FOUNDATION from exercising any other rights it may have as a consequence of the lateness of the payment.

ARTICLE VI. PATENT PROSECUTION

6.1 The filing and prosecution of all United States and foreign patent applications and maintenance of all United States and foreign patents within the Patent Rights during the term of this Agreement shall be the responsibility of LICENSEE at its sole expense and acting in good faith. LICENSEE shall (i) provide, or direct its patent counsel to provide, to RESEARCH FOUNDATION copies of all material information specifically relating to the prosecution, issuance and maintenance of the Patent Rights and (ii) give due consideration in good faith to comments timely received from RESEARCH FOUNDATION or its patent counsel. RESEARCH FOUNDATION agrees to promptly provide to LICENSEE such assistance, information, and executed documents needed to facilitate the prosecution, issuance, and maintenance of the Patent Rights as LICENSEE may reasonably request and LICENSEE shall reimburse RESEARCH FOUNDATION for reasonable out-of-pocket expenses incurred to provide such assistance, information, and documents, subject to received of itemized statements and other appropriate supporting documentation.

6.2 In the event the LICENSEE determines that filing, prosecution or maintenance of any of the U.S. or foreign patent applications or patents within the Patent Rights is not justified and so advises RESEARCH FOUNDATION in writing, RESEARCH FOUNDATION will then have the option to file, prosecute or maintain any such Patent Rights at its own expense. If RESEARCH FOUNDATION does so: (i) RESEARCH FOUNDATION will then have the option to delete such U.S. or foreign patent applications or patents within said Patent Rights from the license granted hereunder for the territory covered thereby; (ii) LICENSEE will have no rights under the license granted hereunder for any such deleted U.S. or foreign patent applications or patent; (iii) RESEARCH FOUNDATION will obtain all rights in and to such deleted U.S. or foreign patent applications or patents and will be free to exploit and to assign or license any such deleted U.S. or foreign patent applications or patents to third parties without effect on the amount of royalties or other payments due to RESEARCH FOUNDATION under Article III.

<u>ARTICLE VII. INFRINGEMENT</u>

7.1 The parties shall inform each other promptly, in writing, of any alleged infringement of the Patent Rights by a third party and any available evidence thereof. Neither party will settle or compromise any claim or action in a manner that imposes any restrictions or obligations on the other party without such other party's written consent, which shall not be unreasonably withheld.

7.2 During the term of this Agreement, LICENSEE shall have the first right, but shall not be obligated, to prosecute at its own expense any such infringements of the Patent Rights and, in furtherance of such right, RESEARCH FOUNDATION hereby agrees that LICENSEE may join RESEARCH FOUNDATION as a party plaintiff in any such suit, without expense to RESEARCH FOUNDATION. Except as provided in Paragraph 7.4, the total cost of any such infringement action commenced solely by LICENSEE shall be borne by LICENSEE, and LICENSEE shall keep any recovery or damages for past infringement derived therefrom. Subject to Paragraph 7.1, LICENSEE shall be entitled to settle any such litigation by agreement, consent, judgment, voluntary dismissal or otherwise.

7.3 If within six (6) months after having been notified of any alleged infringement, LICENSEE shall have been unsuccessful in persuading the alleged infringer to desist and shall not have brought and shall not be diligently prosecuting an infringement action, or if LICENSEE shall notify RESEARCH FOUNDATION at any time prior thereto of its intention not to bring suit against any alleged infringer, then, and in those events only, RESEARCH FOUNDATION shall have the right, but shall not be obligated, to prosecute at its own expense any infringement of the Patent Rights. The total cost of any such infringement action commenced solely by RESEARCH FOUNDATION will be borne by

RESEARCH FOUNDATION, and RESEARCH FOUNDATION will keep any recovery or damages for past infringement derived therefrom. Subject to Paragraph 7.1, RESEARCH FOUNDATION shall be entitled to settle any such litigation by agreement, consent, judgment, voluntary dismissal or otherwise.

7.4 In the event that LICENSEE shall undertake the enforcement and/or defense of the Patent Rights by litigation, LICENSEE may withhold up to fifty percent (50%) of the royalties otherwise thereafter due RESEARCH FOUNDATION hereunder and apply the same toward reimbursement of up to fifty percent (50%) of its expenses, including reasonable attorneys' fees, in connection therewith. Any recovery by LICENSEE of damages for past infringement in any such suit shall be applied first in satisfaction of any unreimbursed expenses and legal fees of LICENSEE relating to the suit and next toward reimbursement of RESEARCH FOUNDATION for any royalties past due or withheld and applied pursuant to this Article VII. LICENSEE shall keep the balance remaining from any such recovery.

7.5 In the event that a declaratory judgment action alleging invalidity or noninfringement of any of the Patent Rights shall be brought against RESEARCH FOUNDATION, LICENSEE at its option, shall have the right, within thirty (30) days after commencement of such action, to intervene and take over the sole defense of the action at its own expense, except as provided in Paragraph 7.4. In such event, LICENSEE shall keep any recovery or damages derived therefrom or from any counterclaims asserted therein.

7.6 In any infringement suit instituted, or declaratory action defended, by either party to enforce or protect the Patent Rights pursuant to this Agreement, the other party hereto shall, at the request and expense of the party initiating or defending such suit, cooperate in all respects and, to the extent possible, have its employees testify when requested and make available relevant records, papers, information, samples, specimens, and the like.

7.7 RESEARCH FOUNDATION warrants and represents that it owns all right, title and interest in and to the Patent Rights, has the lawful right to grant the license provided in this Agreement and that it has not granted rights or licenses in derogation of this Agreement. RESEARCH FOUNDATION agrees that, during the term of this Agreement or any license granted hereunder, RESEARCH FOUNDATION shall not enter into any other agreements that conflict with the rights or obligations provided hereunder, including any rights and obligations that survive termination of this Agreement.

ARTICLE VIII. PRODUCT LIABILITY; INDEMNIFICATION

8.1 LICENSEE shall, at all times during the term of this Agreement and thereafter, indemnify, defend and hold RESEARCH FOUNDATION, the University and their trustees, officers, employees and affiliates, harmless against all Losses arising directly out of the death of, or injury to, any person or persons or damage to property resulting from the LICENSEE's or any of its sublicensee's production, manufacture, sale, use (both experimental and consumer), lease, consumption or advertisement of the Licensed Product(s), except to the extent such Losses arise, directly or indirectly, out of the negligence or misconduct of RESEARCH FOUNDATION, the University or any of their respective trustees, officers, employees, agents, representatives or affiliates.

8.2 LICENSEE shall procure and maintain liability insurance in amounts customary in the relevant industry in which LICENSEE commercially exploits Licensed Products.

8.3 EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS AGREEMENT, RESEARCH FOUNDATION MAKES NO REPRESENTATIONS AND EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND VALIDITY OF PATENT RIGHTS CLAIMS, ISSUED OR PENDING. NOTWITHSTANDING ANYTHING IN THIS ARTICLE VIII OR ELSEWHERE HEREIN TO THE CONTRARY, NEITHER PARTY SHALL BE LIABLE FOR LOSS OF PROFITS, LOSS OF USE OR ANY OTHER INCIDENTAL, CONSEQUENTIAL, EXEMPLARY OR SPECIAL DAMAGES WHATSOEVER EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

ARTICLE IX. EXPORT CONTROLS

9.1 It is understood that RESEARCH FOUNDATION is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities (including the Arms Export Control Act, as amended and the Export Administration Act of 1979), and that its obligations hereunder are contingent on compliance with applicable United States export laws and regulations. The transfer of certain technical data and commodities may require a license from the applicable agency of the United States Government and/or written assurances by LICENSEE that LICENSEE shall not export data or commodities to certain foreign countries without prior approval of such agency. RESEARCH FOUNDATION neither represents that a license will not be required nor that, if required, it will be issued.

ARTICLE X. NON-USE OF NAMES

10.1 LICENSEE shall not use the names of RESEARCH FOUNDATION, the University or of any of its employees, or any adaptation thereof, in any advertising, promotional or sales literature without prior written consent obtained from RESEARCH FOUNDATION in each case, except that (i) LICENSEE may state that it is licensed by RESEARCH FOUNDATION under one or more of the patents and/or applications comprising the Patent Rights and (ii) to the extent required by law, regulation or court order.

10.2 RESEARCH FOUNDATION shall not use the name of LICENSEE or of any of its employees, or any adaptation thereof, in any advertising, promotional or sales literature without prior written consent obtained from LICENSEE, except RESEARCH FOUNDATION to the extent required by law, regulation or court order.

ARTICLE XI. ASSIGNMENT

11.1 This Agreement is not assignable by either party without the consent of the other party except that (i) LICENSEE may assign this Agreement in connection with any merger, consolidation, sale of all or substantially all of its assets or equity, or sale of a controlling interest in LICENSEE, and (ii) LICENSEE may assign this Agreement to another entity in which LICENSEE maintains at least a majority ownership interest.

ARTICLE XII. DISPUTE RESOLUTION

12.1 No party to this Agreement shall institute a proceeding in any court or administrative agency to resolve a Special Issue Dispute before that party has sought to resolve the Special Issue Dispute through direct negotiation with the other party. If the dispute is not resolved within three weeks after a demand for direct negotiation, the parties shall attempt to resolve such Special Issue Dispute through mediation in Atlanta, Georgia administered by the American Arbitration Association under its commercial mediation rules and procedures then in effect. The mediator shall be mutually acceptable to each of the parties. If the mediator is unable to facilitate a settlement of the Special Issue Dispute within a reasonable period of time, as determined by the mediator, the mediator shall issue a written statement to the parties to that effect and the aggrieved party may then seek relief through final and binding arbitration in Atlanta, Georgia administered by the American Arbitration Association under its commercial arbitration rules and procedures then in effect. All arbitration proceedings shall be before a board of three (3) arbitrators who are knowledgeable about pharmaceutical development, and each party shall select one (1) arbitrator and the selected arbitrators shall select the third arbitrator. The arbitration proceedings shall be conducted in the English language and any award shall be in United States dollars. The cost of the third arbitrator shall be divided equally between the parties and each party shall pay the costs of the arbitrator selected by it. The arbitrators shall have no power to add to, subtract from or modify any of the terms or conditions of this Agreement, shall base any award on applicable laws and judicial precedent and include in such award a statement of the reasons upon which the award is based.

12.2 All applicable statutes of limitation and defenses based upon the passage of time shall be tolled while the procedures specified in this Article XII are pending. The parties shall take such action, if any, required to effectuate such tolling

12.3 Each party is required to continue to perform its obligations under this Agreement pending final resolution of any Special Issue Dispute.

ARTICLE XIII. TERMINATION

13.1 RESEARCH FOUNDATION shall have the right to terminate this Agreement at any time upon notice to LICENSEE in the event either (a) If LICENSEE shall file in any court, pursuant to any statute either of the United States or any state, a petition in bankruptcy or insolvency or for the appointment of a receiver or trustee of all or substantially all of LICENSEE's property, or if LICENSEE shall make an assignment for the benefit of creditors, or if LICENSEE shall commit any other affirmative act of insolvency; or (b) if there shall be filed against LICENSEE in any court, pursuant to any statute either of the United States or any state, an involuntary petition in bankruptcy or insolvency or for reorganization, or if there shall be involuntarily appointed a receiver or trustee of all or substantially all of LICENSEE's property, in either case unless such petition, assignment, affirmative act or appointment is set aside or withdrawn or ceases to be in effect within one hundred twenty (120) days after the date of the filing.

13.2 If LICENSEE fails to pay RESEARCH FOUNDATION royalties due and payable hereunder, RESEARCH FOUNDATION shall have the right to terminate this Agreement on thirty (30) days notice, unless LICENSEE shall pay RESEARCH FOUNDATION within the thirty (30) day period, all such royalties and interest due and payable. Upon the expiration of the thirty (30) day period and unless such termination notice shall have been withdrawn or canceled during the 30-day period, if LICENSEE shall not have paid all such royalties and interest due and payable, the rights, privileges and license granted hereunder shall terminate. For the avoidance of doubt, failure by LICENSEE to pay the Annual Rights Fee to RESEARCH FOUNDATION shall not give rise to a right of termination of this Agreement but, if such failure continues for ten (10) business days following receipt by LICENSEE of written notice thereof from RESEARCH FOUNDATION, the rights granted to LICENSEE under Paragraph 2.1(b), but no other provision of this Agreement, shall terminate.

13.3 Upon any material breach or default of this Agreement by LICENSEE, other than those occurrences set out in Paragraphs 12.1, 13.1 and 13.2 hereinabove, which shall always take precedence in that order over any material breach or default referred to in this Paragraph 13.3, RESEARCH FOUNDATION shall have the right to terminate this Agreement and the rights, privileges and license granted hereunder on thirty (30) days notice to LICENSEE. Such termination shall become effective unless (i) the termination notice shall have been withdrawn or canceled during the 30-day period, (ii) LICENSEE shall have cured such breach or default prior to the expiration of the thirty (30) day period or (iii) at the expiration of such thirty (30) day period, LICENSEE can demonstrate to RESEARCH FOUNDATION's reasonable satisfaction that it is working diligently and in good faith to cure such breach or default, LICENSEE shall have an additional cure period, not to exceed ninety (90) days.

13.4 LICENSEE shall have the right to terminate this Agreement at any time upon written notice to RESEARCH FOUNDATION and payment of all amounts due RESEARCH FOUNDATION through the effective date of the termination.

13.5 Upon termination of this Agreement for any reason, nothing herein shall be construed to release either party from any obligation that matured prior to the effective date of such termination. LICENSEE may, however, after the effective date of such termination, sell all Licensed Products, and complete Licensed Products in the process of manufacture at the time of such termination and sell the same; provided that LICENSEE shall pay to RESEARCH FOUNDATION the royalties thereon as required by Article IV and shall submit the reports required by Article V.

13.6 If not earlier terminated, this Agreement shall terminate on the date of expiration of the last-to-expire Valid Claim included in the Patent Rights, and LICENSEE shall thereupon have the rights and licenses set forth in Paragraphs 2.1(a) and 2.4 without any further obligation to RESEARCH FOUNDATION hereunder, which rights and licenses shall survive such termination.

ARTICLE XIV. PAYMENTS, NOTICES AND OTHER COMMUNICATIONS

14.1 Any payment, notice or other communication pursuant to this Agreement shall be given in writing and shall be deemed received on the date of personal delivery, one day after deposit with a nationally recognized overnight delivery service with charges prepaid or two days after mailing if sent to such party by Certified First Class Mail, Postage Prepaid, addressed to it at its address below or as it shall designate by written notice given to the other party. In the case of:

RESEARCH FOUNDATION:

USF Research Foundation, Inc.
Attention: Business Manager
USF Box 30445
Tampa, Florida 33620-3044

LICENSEE:

Targacept, Inc.
200 East First Street, Suite 300
Winston-Salem, NC 27101-4165
Attn: Vice President, Business
and Commercial Development

ARTICLE XV. CONFIDENTIALITY

15.1 RESEARCH FOUNDATION and LICENSEE recognize that each party may need to provide certain of its Confidential Information from time to time to the other party pursuant to this Agreement. The parties expressly agree that Confidential Information does not exist in written form only, but may also include oral, printed, magnetic, electronic, computer-generated or other communications and information learned by inspection of tangible objects. RESEARCH FOUNDATION and LICENSEE agree to hold in confidence, in accordance with this Article XV, any Confidential Information disclosed by one party to the other under this Agreement. For the purpose hereof, “hold in confidence” means that RESEARCH FOUNDATION and LICENSEE will not disclose the Information of the other party to a third party and will protect the Information provided to it by the other party in the same manner in which it protects its own confidential information of similar nature, but will in no event use less than reasonable care. The Confidential Information will remain the property of the party disclosing it.

15.2 The obligations of the receiving party to maintain confidentiality under this Agreement will survive its termination for ten (10) years thereafter.

15.3 Confidential Information does not include information that:

(i) is already known to the receiving party prior to the Effective Date;

(ii) is or becomes publicly known through no fault of receiving party;

(iii) has been or is disclosed to the receiving party by a third party that the receiving party does not know (and is not reckless in not knowing) to be under an obligation of confidence or secrecy to the disclosing party at the time of disclosure;

(iv) is developed by employees or consultants of the receiving party who had no knowledge of the Confidential Information;

(v) is approved for release by written authorization of the disclosing party; or

(vi) is required to be disclosed by law, provided the receiving party promptly notifies the disclosing party in writing prior to such disclosure, considers in good faith any comments or suggested changes to such disclosure from the disclosing party and gives the disclosing party a reasonable opportunity to prevent or limit the disclosure.

15.4 The parties further agree that LICENSEE shall have the right to disclose Confidential Information to: (i) potential sublicensees, assignees or subcontractors for the purpose of allowing any such potential sublicensee, assignee or subcontractor to evaluate whether to enter into a sublicense, assignment or subcontract; (ii) potential sublicensees, assignees or subcontractors, for the purpose of allowing such sublicensee, assignee or subcontractor, as the case may be, to make, have made, use, research, develop, have developed, lease, market, offer to sell, sell, have sold, distribute, improve, import and export Licensed

Products; (iii) a purchaser or potential purchaser of all or substantially all of LICENSEE's assets, or a party with which LICENSEE is then in discussions regarding a potential business combination; and (iv) an investor or lender, or prospective investor or lender, in or to LICENSEE; provided, however, that, except in the case of an actual or prospective investor or lender, LICENSEE shall obtain a confidentiality agreement (substantially similar in content to the provisions of this Paragraph 15) from the party to which such disclosures are to be made prior to any such disclosure.

ARTICLE XVI. MISCELLANEOUS PROVISIONS

16.1 This Agreement shall be construed, governed, interpreted and applied in accordance with the laws of the State of Florida, U.S.A., except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent was granted.

16.2 The parties hereto acknowledge that this Agreement sets forth the entire Agreement and understanding, and supersedes and makes null and void any and all prior understandings and agreements, of the parties hereto as to the subject matter hereof (including without limitation the Original Agreement and the letter between the RESEARCH FOUNDATION and LICENSEE dated April 29, 2003), and shall not be subject to any change or modification except by the execution of a written instrument subscribed to by the parties hereto.

16.3 The provisions of this Agreement are severable, and in the event that any provisions of this Agreement shall be determined to be invalid or unenforceable under any controlling body of the law, such invalidity or unenforceability shall not in any way affect the validity or enforceability of the remaining provisions hereof.

16.4 LICENSEE agrees to mark the Licensed Products sold in the United States (or their respective packagings or packaging inserts) with all applicable United States patent numbers. All Licensed Products shipped to or sold in other countries (or their respective packagings or packaging inserts) shall be marked in such a manner as to conform with the patent laws and practice of the country of manufacture or sale.

16.5 The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

16.6 This Agreement will be binding and inure to the benefit of the parties hereto and their respective affiliates and permitted successors and assigns.

16.7 The representations, warranties, covenants, and undertakings contained in this Agreement are for the sole benefit of the parties hereto and their permitted successors and assigns and such representations, warranties, covenants, and undertakings will not be construed as conferring any rights on any other party, other than the University.

16.8 Nothing contained in this Agreement will be deemed to place the parties hereto in a partnership, joint venture or agency relationship and neither party will have the right or authority to obligate or bind the other party in any manner.

16.9 This Agreement may be executed in two counterparts, each of which will be deemed an original and both of which, taken together, shall constitute one and the same instrument.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals and fully executed this Agreement the day and year set forth below:

UNIVERSITY OF SOUTH FLORIDA RESEARCH FOUNDATION, INC.	TARGACEPT, INC.
By /s/ C P Carlucci	By /s/ J. Donald deBethizy
Name Carl P. Carlucci	Name J. Donald deBethizy
Title President	Title President & CEO

Acknowledged and Agreed to:

University of South Florida

By /s/ Priscilla Pope
Name Priscilla Pope
Title Associate Vice President

Patent Applications

No.	Date Filed
60/055,234	11-Aug-1997
08/935,364	22-Sep-1997
US97/20689	07-Nov-1997
US98/16634	11-Aug-1998
09/198,882	23-Nov-1998
09/461,087	14-Dec-1999
09/526,403	15-Mar-2000
09/398,720	20-Sep-1999
60/112,534	16-Dec-1998
US99/30137	16-Dec-1999
US99/30153	16-Dec-1999
09/882,934	15-Jun-2001
09/882,935	15-Jun-2001
10/441,947	19-May-2003

Issued Patents

No.	Date Filed
6,034,079	March 7, 2000

[********]

[Entire page has been redacted.]

Exhibit 10.17(a)

[********] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

RJR Contract No. 97-773-069

VCU-L9706

LICENSE AGREEMENT

THIS AGREEMENT is made and entered into this 6th day of October 1997, by and between

RJ Reynolds Tobacco Company (hereinafter referred to as the "LICENSEE"), with its principal place of business at 401 N. Main Street, Winston-Salem, North Carolina, 27102-1487 and place of operation at Bowman Gray Technical Center, 950 Reynolds Boulevard, Winston-Salem North Carolina, 27102-1487; and,

VIRGINIA COMMONWEALTH UNIVERSITY INTELLECTUAL PROPERTY FOUNDATION (hereinafter referred to as the "LICENSOR"), and with its principal place of operation at Virginia Commonwealth University, 1101 E. Marshall Street, Sanger Hall, Room 1-026, Richmond, Virginia 23298-0568.

WHEREAS, LICENSOR is the owner of all right, title, and interest in a U.S. Patent Application entitled "Compounds and Pharmaceutical Compositions Thereof for Eliciting Analgesic Effects" invented by Drs. Martin and Damage at Virginia Commonwealth University (VC Invention #97-12); and,

WHEREAS LICENSEE is desirous of acquiring from LICENSOR certain rights set forth below, and wishes to engage Virginia Commonwealth University in a related Sponsored Research Agreement as defined below,

NOW, THEREFORE, in consideration of the promises and the covenants set forth herein, LICENSOR and LICENSEE agree as follows:

I. DEFINITIONS

The following definitions shall apply in the interpretation of this Agreement.

1.1 "AFFILIATE" of any company means any corporation which, directly or indirectly, controls or is controlled by, or is under direct or indirect common control with, such company; and for the purposes of this definition "control" (including "control by" and "under common control with") as used with respect to any corporation or company, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such corporation or company, through the ownership of more than 50% of the voting shares.

1.2 "CALENDAR QUARTER" means the three-month period ending March 31, June 30, September 30, or December 31 in any year.

1.3 "TECHNOLOGY" shall mean all the intellectual property in the FIELD OF USE including the patent application named above as well as continuations, continuations-in-part, divisional, reexaminations, reissues and extensions thereof both foreign and domestic, owned or to be owned by LICENSOR. It does not include ADDITIONAL TECHNOLOGY, discoveries and inventions or other developments made during and under the currently negotiated Sponsored Research Agreement between Virginia Commonwealth University and LICENSEE) or improvements to intellectual property developed during and under the Sponsored Research Agreement. Such discoveries made during and under the Sponsored Research Agreement will be subject of future negotiation.

1.4 “LICENSED TECHNOLOGY” shall mean the patent application cited above and all patent applications filed from and patents issuing from said patent application in the field which are owned or controlled by LICENSOR.

1.5 “LICENSED PRODUCTS” shall mean any product in the FIELD OF USE that incorporates, is covered by or is made, in whole or part, by the use of the LICENSED TECHNOLOGY.

1.6 “ADDITIONAL TECHNOLOGY” shall mean inventions, discoveries, information, and know-how in the FIELD OF USE which may be developed under the Sponsored Research Agreement.

1.7 “FIELD OF USE” shall mean analgesia and applications related to pain control. VCU-IPF reserves the right to make, use, or sell the LICENSED TECHNOLOGY and LICENSED PRODUCTS in the area of smoking cessation management.

1.8 “EFFECTIVE DATE” shall mean the date of the Agreement set forth above.

1.9 “LICENSED TERRITORY” shall mean worldwide.

1.91 “NET SALES” for purposes of computing the royalty payment contemplated under the provisions below, means **[********]**.

1.92. “EFFECTIVE DATE shall mean the date of the agreement set forth above.

II. GRANT

2.1 LICENSOR grants to LICENSEE a royalty bearing, worldwide, exclusive license under LICENSED TECHNOLOGY to make, have made, use, or sell LICENSED TECHNOLOGY and LICENSED PRODUCT in the FIELD OF USE defined above. This grant shall be subject to the payment by LICENSEE to LICENSOR of all consideration as provided in this Agreement, and shall be further subject to the rights retained by LICENSOR and Virginia Commonwealth University to:

a. publish the scientific findings, subject to agreed upon provisions, from research related to LICENSED TECHNOLOGY; and,

b. use any information contained in the LICENSED TECHNOLOGY for research, teaching, and similar noncommercial activities and other education-related purposes.

c. use the LICENSED TECHNOLOGY and LICENSED PRODUCTS for commercial purposes, including licensing, in the area of smoking cessation management.

2.2 LICENSEE shall have the right to grant sublicenses subject to the terms and conditions of this agreement. LICENSEE will attach and incorporate by reference the provisions of this Agreement pertaining to payment obligations, patent applications, warranties, reporting requirements, and confidentiality, to any sub-license agreements entered into by LICENSEE. LICENSEE will provide LICENSOR with copies either (I) of appropriate sections of sub-license agreements evidencing a third party or AFFILIATE sublicensee's commitment to be bound by the terms and conditions of this Agreement and with sections pertaining to NET SALES within one month of their being executed by the LICENSEE with the third party or AFFILIATE sublicensee, or (ii) other evidence of such commitment, which evidence is mutually acceptable to LICENSOR and LICENSEE.

2.3 LICENSOR hereby grants to LICENSEE an exclusive Option to acquire a license to any and all parts of the ADDITIONAL TECHNOLOGY that may arise from execution of the Sponsored Research Agreement. The Option period on any part of the ADDITIONAL TECHNOLOGY will be for six (6) months from the date it is disclosed to LICENSEE. The Option will be deemed exercised by the LICENSEE when LICENSEE notifies the LICENSOR in writing that it wishes to exercise its Option and enter into good faith negotiation for a license on a particular portion of the ADDITIONAL TECHNOLOGY. The LICENSEE shall retain no rights in, or options on ADDITIONAL TECHNOLOGY OF LICENSOR developed under the Sponsored Research Agreement if LICENSEE fails to exercise its Option.

2.4 If LICENSEE exercises its Option under Section 2.3 of this Agreement, LICENSOR to the extent not prohibited by law or other patents, and subject to any rights of the U.S. Government under 37 C.F.R 401, will enter into good faith negotiation to grant LICENSEE an exclusive license to make, have made, use, lease, sell, import and export technology developed under the Sponsored Research Agreement.

2.5 This Agreement shall terminate on the date of the last patent to expire on the LICENSED TECHNOLOGY.

2.6 Nothing in this Agreement shall be construed to confer rights upon LICENSEE by implication, estoppel, or otherwise to any technology or intellectual property other than the LICENSED TECHNOLOGY.

III. PAYMENT PROVISIONS

3.1 LICENSEE agrees to pay LICENSOR **[********]** within 30 days of the execution of this Agreement.

3.2 LICENSEE shall pay to LICENSOR all documented costs for the patent filing for LICENSED TECHNOLOGY within 30 days of the execution of this agreement.

3.3 To maintain an exclusive license to the LICENSED TECHNOLOGY, LICENSEE agrees to make an annual minimum payment of **[********]** due each year on the anniversary of the effective date of this Agreement. **[********]**

3.4 Licensee agrees to make the following milestone payments to LICENSOR:

a. [********]

c. [********]

d. [********]

3.5 LICENSEE shall pay to LICENSOR a running royalty of **[********]** based upon annual NET SALES for LICENSED PRODUCTS, or **[********]** of that amount received by LICENSEE from a third party, which ever is less.

3.6. Royalty payments shall be based on NET SALES in any country where a valid patent covering LICENSED TECHNOLOGY or LICENSED PRODUCT is in effect, or based on NET SALES of export product in any country where a valid patent covering LICENSED TECHNOLOGY is in effect and product is made for export.

IV. Diligence and Patent Prosecution

4.1 LICENSEE shall use reasonable efforts to bring one or more LICENSED PRODUCTS to market through diligent efforts and to continue active, commercially reasonable research and development, and sub-licensing efforts for one or more LICENSED PRODUCTS.

4.2 LICENSOR, shall apply for, seek issuance or registration of, and maintain patents and copyrights during the term of this Agreement on the LICENSED TECHNOLOGY for subject matter protect able by patent or copyright using counsel which is mutually acceptable to both LICENSEE and LICENSOR. The management of the various tasks and procedures involved shall be the primary responsibility of LICENSOR. LICENSEE, at the request of LICENSOR, shall assist LICENSOR in all such tasks and procedures.

4.3 All patents, patent applications, and copyrights on the LICENSED TECHNOLOGY shall be, assigned to LICENSOR, and LICENSOR's interest therein shall be recorded in the U.S. Patent and Trademark Office, U.S. Copyright Office, and corresponding foreign patent and copyright offices at the expense of LICENSOR.

4.4 LICENSOR shall provide LICENSEE with copies of all papers received from and to be filed in the U.S. Patent and Trademark Office, U.S. Copyright Office, and corresponding foreign patent and copyright offices.

4.5 LICENSOR shall be entitled, in its discretion, to abandon any application or granted patent or copyright if it considers that the ongoing costs of the same are not justified, provided that LICENSOR notifies LICENSEE prior to such abandonment and allows LICENSEE reasonable opportunity to avoid such abandonment. In no event shall such reasonable opportunity be less than one (l) month prior to abandonment. If LICENSOR chooses to abandon an application or granted patent or copyright under this provision and LICENSEE, at its sole expense, continues pursuing the application, granted patent or copyright, LICENSOR shall retain no right to exclusively use or exclusively exploit the technology claimed in a granted patent or copyright on the technology which LICENSEE later obtains in the country, territory or jurisdiction which granted the patent or copyright; however LICENSOR shall maintain a non-exclusive right, limited to those rights enumerated in Section 2.1a, b and c.

4.6 LICENSEE may designate foreign countries in which it desires to have filed corresponding patent applications for LICENSED TECHNOLOGY, and LICENSEE shall be responsible for all costs associated with filing, prosecuting and maintaining those patent applications in the designated foreign countries. If LICENSEE does not so designate such foreign countries, then LICENSOR, at its own expense may file, prosecute and maintain patent applications corresponding to LICENSED TECHNOLOGY.

4.7 Subject to the provision of Section 4.6 LICENSEE shall pay to LICENSOR all documented costs associated with patent prosecution and maintenance of the LICENSED TECHNOLOGY, within 30 days of receipt of an invoice from LICENSOR. In the event that the costs of patent prosecution and maintenance exceed **[********]** during any calendar year, or in the event of a declaration of interference or appeal beyond final rejection, LICENSOR and LICENSEE shall negotiate in good faith toward arriving at a mutually acceptable manner in which the costs associated with patent prosecution and maintenance shall be borne. In any event, the first **[********]** paid to LICENSOR by LICENSEE in any calendar year, except for those costs paid in connection with Section 3.2, shall be creditable against the annual minimum payment due in accordance with Section 3.3 in that calendar year.

V. Reporting Obligations

5.1 LICENSEE, within sixty (60) days after each calendar quarter of each year, shall deliver to LICENSOR true and accurate reports, pertaining to NET SALES of LICENSED PRODUCT which shall include at least the following information:

a) the identity of each LICENSED PRODUCT being developed, manufactured, marketed and/or sold,

b) the stage of development of each LICENSED PRODUCT each country in the TERRITORY;

c) the number of each LICENSED PRODUCT manufactured and/or sold in each country in the TERRITORY,

d) NET SALES of LICENSED PRODUCT sold by the LICENSEE and all sublicensees, prepared in accordance with generally accepted accounting principles, on a country by country basis, for each LICENSED PRODUCT (a) above;

e) any and all deductions from NET SALES made by LICENSEE;

f) names and addresses of all sublicensees of LICENSEE;

g) NET SALES derived from sublicensees; and

h) total royalties due.

5.2 With each report submitted under Section 5.1 of this Agreement, LICENSEE shall make all payments to LICENSOR in US dollars due and payable under Section 3 of this Agreement. If no royalties are due, LICENSEE shall so report.

5.3 LICENSEE shall keep full, true and accurate books of account containing all particulars that may be necessary for the purpose of showing the amounts payable to LICENSOR hereunder. Said books of account shall be kept at LICENSEE's principal place of business. Said books and supporting data shall be open at all reasonable times for three (3) years following the end of the calendar year to which they pertain, to the inspection of LICENSOR or its agents for the purpose of verifying LICENSEE's royalty statement or compliance in other respects with this Agreement. Should such inspection lead to the discovery of a greater than **[********]** discrepancy in reporting to LICENSOR's detriment, LICENSEE shall pay the full cost of such inspection. . LICENSEE shall pay any amounts such inspection reveals to be due and owing within thirty (30) days of the receipt of an invoice for same.

VI. INFRINGEMENT

6.1 LICENSEE and LICENSOR shall promptly inform each other in writing of any alleged infringement of the LICENSED PATENTs by a third party.

6.2 During the term of this agreement, LICENSOR will have the right, but shall not be obligated, to prosecute at its own expense all infringements of the LICENSED PATENTS and, in furtherance of such right, LICENSOR may include LICENSEE, upon agreement by LICENSEE, as a party plaintiff in any such suit, at LICENSEE'S expense. Each party shall bear its own costs of prosecuting any such infringement action, and shall be entitled to prove and recover its damages, Upon mutual agreement of the parties, each may assign to the other its right to sue for past, present, or future infringement of the LICENSED TECHNOLOGY, and to agree to a method to allocate damages recovered by the assignee of such rights.

6.3 LICENSOR or LICENSEE shall have three (3) months after having been notified of any alleged infringement to investigate whether infringement can be established. If LICENSOR determines that infringement exits, then it shall have **[********]** to negotiate in good faith with the alleged infringer to resolve the dispute. If at the end of such period the dispute is has nor been resolved, LICENSOR shall have **[********]** to commence prosecuting an infringement action (the filing period). If LICENSOR determines that infringement can be established and (a) at any time decides not to pursue an action against the alleged infringer, or (b) fails to commence prosecuting an action before the end of the filing period, then LICENSOR shall notify LICENSEE of its intention not to bring suit against any alleged infringer in the TERRITORY. In those events only LICENSEE shall have the right but shall not be obligated, to prosecute at its own expense any infringement of the LICENSED TECHNOLOGY, and LICENSOR hereby agrees at its discretion and upon terms to be mutually agreed by the parties, to either be named as a plaintiff in any such proceedings or to assign its rights to sue for infringement. LICENSEE shall pay all of LICENSOR'S costs and reasonable attorney fees incurred in such action. No settlement, consent judgment, or other voluntary final disposition of the suit shall be entered into without the consent of LICENSOR, which consent shall not be unreasonably withheld. LICENSEE hereby indemnifies LICENSOR against any order for costs or attorney fees that may be made against LICENSOR in such proceedings instituted by LICENSEE.

6.4 In the event that LICENSOR shall undertake the enforcement and/or defense of the LICENSED TECHNOLOGY by litigation, any monetary recovery by LICENSOR, shall be divide equally between LICENSOR and LICENSEE after all costs have been paid. In the event that LICENSEE undertakes the enforcement and/or defense of the LICENSED PATENTS by litigation, any monetary recovery by LICENSEE shall be shared with LICENSOR after all costs are paid.

6.5 In any infringement suit that either party may institute to enforce the LICENSED TECHNOLOGY pursuant to this Agreement, the other party hereto shall, at the request of the party initiating such suit and upon reasonable notice, cooperate in all respects and, to the extent possible, have its employees testify when requested and make available relevant records, papers, information samples, models, specimens and the like.

6.6 LICENSEE, during the exclusive period of this Agreement, shall have the sole right, subject to approval by LICENSOR, which shall not be unreasonably withheld, in accordance, with the terms and conditions herein to sublicense any alleged infringer in the TERRITORY for future use of LICENSED TECHNOLOGY. Prior to the distribution of sublicensing fees received from an alleged infringer as specified in Section III, LICENSOR shall be compensated for any and all expenses incurred by it, if any, in that regard prior to the commencement of the sublicense with the infringer.

6.7 In the event of any legal action alleging invalidity or noninfringement of any of the LICENSED TECHNOLOGY shall be brought against LICENSEE, or LICENSOR, LICENSOR, at its option, shall have the right within **[********]** after the commencement of such action, to intervene and take over the sole defense of the action at its own expense. If LICENSOR chooses not to intervene, LICENSEE shall have the option to intervene and take over the sole defense at its own expense.

VII. Termination

7.1 The provisions of this Agreement, having come into force on the Effective Date, shall, unless terminated earlier for any reason, continue in force in accordance with their respective terms if any as indicated in section 3.4.

7.2 LICENSEE may terminate this Agreement at any time by giving LICENSOR ninety (90) days written notice. In the event of termination of this Agreement by LICENSEE, LICENSEE shall have no further rights under this Agreement; however, LICENSEE will remain obligated for any royalties due or other expenses incurred up until the date of termination.

7.3 LICENSOR may terminate this Agreement if LICENSEE:

a. fails to pay on the due date any sum due under section 3 of this Agreement; or

b. fails to provide reports on the due date specified under Section 5 of this Agreement.

7.4 Either party may forthwith terminate this Agreement by written notice to the other

d. anything analogous to any of the foregoing under the law of any jurisdiction occurs in relation to that other party; or

e. if the other party ceases, or threatens to cease, to carry on business.

7.5 No relaxation, forbearance, delay or indulgence by either party in enforcing any of the terms of this Agreement or the granting of time by either party to the other shall prejudice, affect or restrict the rights and powers of the former hereunder nor shall any waiver by either party of a breach of this Agreement be considered as a waiver of any subsequent breach of the same or any other provision hereof

7.6 The rights to terminate this Agreement given by this clause shall not prejudice any other right or remedy of either party in respect of the breach concerned (if any) or any other breach.

VIII. Miscellaneous

8.1 Nothing in this Agreement shall create, or be deemed to create, a partnership, or the relationship of principal and agent, between the parties.

8.2 LICENSEE shall be entitled to assign this Agreement to any of its AFFILIATES taking over substantially all the business of LICENSEE relating to this Agreement or, with the consent of LICENSOR, which shall not be unreasonably be withheld, to any other company taking over substantially all the business of LICENSEE relating to this Agreement and all or a major part of the voting shares in which are, or are to be floated on, a recognized exchange or otherwise publicly owned.

8.3 Subject to Section 8.2 of this Agreement, the clauses are personal to the parties and neither party may assign, mortgage, charge or license any of its rights hereunder, nor may either party sub-contract or otherwise delegate any of its obligations hereunder, except with the prior written consent of the other party.

8.4 LICENSEE shall (i) to the extent reasonably practical, place in a conspicuous location on all patented products made pursuant to this Agreement a patent notice in accordance with 35 U.S. C. §282 consisting of the word “Patent” or “Patents” and the number or numbers of the United States patent or patents licensed hereunder and (ii) comply in all respects with the laws of the country of manufacture, and/or sale of the Technology with respect to marking such products so as to ensure LICENSOR of full protection and rights under such laws. LICENSEE shall include the provisions of this clause in all sub-licenses with third parties and Affiliates.

8.5 LICENSEE shall at all times during the term of this Agreement and thereafter indemnify, defend and hold LICENSOR, its trustees, directors, officers, employees and affiliates harmless against all claims, proceedings, demands and liabilities, including legal expenses and reasonable Adam’s fees, arising out of the death of or injury to any person or persons or out of any damages to property resulting from the research, development, production, manufacture, sale, modification, use, import or advertisement of LICENSED PRODUCT or arising from any obligation of LICENSEE hereunder.

8.6 In the event that LICENSEE or a sublicensee of LICENSEE conducts studies involving human subjects and LICENSED TECHNOLOGY, LICENSEE shall obtain and carry in full force and effect commercial, general liability insurance which shall protect LICENSEE and LICENSOR with respect to events set forth above. Such insurance shall be written by a reputable company authorized to due business in the Commonwealth of Virginia, shall list LICENSOR as an additional named insured thereunder, shall be endorsed to include product liability coverage and shall require reasonable written notice to be given to LICENSOR prior to any cancellation or material change thereof The limits of such insurance shall not be less than one million dollars ($1,000,000) per occurrence with an aggregate of five million ($5,000,000) for personal injury or death, and one million dollars ($1,000,000) per occurrence with aggregate of three million dollars ($3,000,000) for property damage. LICENSEE shall provide LICENSOR with Certificates of Insurance evidencing same.

8.7 EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS AGREEMENT, LICENSOR, ITS TRUSTEES, DIRECTORS, OFFICERS, EMPLOYEES, AND AFFILIATES MAKE NO REPRESENTATIONS AND EXTEND NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANT OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND VALIDITY OF THE CLAIMS OF ANY PATENTS ON THE TECHNOLOGY ISSUED OR PENDING, OR FREEDOM OF A PRODUCT THAT EMBODIES TECHNOLOGY FROM INFRINGEMENT OF THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS, THE ABSENCE OF LATENT OR OTHER DEFECTS, WHETHER OR NOT DISCOVERABLE. IN NO EVENT SHALL LICENSOR, ITS TRUSTEES, DIRECTORS, OFFICERS, EMPLOYEES, AND AFFILIATES BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO ECONOMIC DAMAGE OR INJURY TO PROPERTY AND LOST PROFITS, WHETHER LICENSOR SHALL BE ADVISED, SHALL HAVE OTHER REASON TO KNOW, OR IN FACT SHALL KNOW OF THE POSSIBILITY OF THE FOREGOING. LICENSOR REPRESENTS AND WARRANTS IN RESPECT TO THE LICENSED TECHNOLOGY THAT IT HAS LEGAL RIGHT TO EXTEND THE RIGHTS TO LICENSEE, AND THAT IT HAS NOT MADE AND WILL NOT MAKE ANY COMMITMENTS TO OTHERS INCONSISTENT WITH OR IN DEROGATION OF SUCH RIGHTS.

8.8 For the purposes of this Agreement “Force Majeure” means any circumstances beyond the reasonable control of either party including, without limitation, any strike, lock-out, or other form of industrial action. If either party is affected by Force Majeure, it shall forthwith notify the other party of the nature and extent thereof Neither party shall be deemed to be in breach of this Agreement, or otherwise be liable to the other, by reason of any delay in performance, or the non-performance, of any of its obligations under this Agreement, to the extent that such delay or non-performance is due to any Force Majeure of which it has notified the other party, and the time for performance of that obligation shall be extended accordingly. If the Force Majeure in question prevails for a continuous period in excess of **[********]**, the parties shall enter into bona fide discussions with a view to alleviating its effects, or to agreeing upon such alternative arrangements as may be fair and reasonable.

8.9 LICENSEE shall not use the names or trademarks of LICENSOR, nor any adaptation thereof, nor the names of any of its employees, in any advertising, promotional or sales literature without prior written consent obtained from LICENSOR, or said employee, in each case, except that the LICENSEE may state that it is a licensee of LICENSOR with respect to the LICENSED TECHNOLOGY.

8. 10 All Notices shall be made in writing to the individuals noted below at the addresses noted above, and shall be sent by certified mail, returned receipt requested. If the individual to whom notices are to be given, or address where notices are to be sent changes for any party, that party shall promptly notify the other party accordingly:

Virginia Commonwealth University:

Director, Office of Technology Transfer Box 980568
1101 E. Marshall Street
Sanger Hall Room 1-026
Virginia Commonwealth University
Richmond, VA 23298-0568

RJ Reynolds Tobacco Company:

Senior Counsel
Bowman Gray Center
950 Reynolds Boulevard
Winston-Salem, NC 27102-1487

8.11 This Agreement contains the entire and only agreement and understanding between the parties and supersedes all preexisting agreements between them respecting its subject matter. Any representation, promises, or condition in connection with such subject matter which is not extension, incorporated in this Agreement shall not be binding on either party. No modification, renewal, wavier, and no termination of this Agreement or any of its provisions shall be binding upon the party against whom enforcement of such modification, renewal, extension, waiver or termination is sough, unless made in writing and signed on behalf of such party by one of its duly authorized officers. As used herein, the word “termination” includes any and all means of bringing an end prior to its expiration by its own terms this Agreement, or any provisions thereof, whether by release, discharge, abandonment or otherwise.

8.12 This Agreement shall be construed, governed, interpreted and applied in accordance with the laws of the Commonwealth of Virginia, U.S.A., except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent was granted. Any legal action or proceeding relating to this Agreement or any document or instrument related hereto shall be brought only in the courts of the Commonwealth of Virginia in Richmond, Virginia, and by its execution and delivery of this Agreement, LICENSEE hereby accepts for itself and in respect to its property, generally and unconditionally, the jurisdiction of the aforesaid courts.

8.13 This Agreement may be executed in one or more counterparts and any party hereto may execute any such counterparts each of which shall be deemed an original and all of which, taken together, shall constitute but one and the same document. It shall not be necessary in making proof of this document or any counterpart hereof to produce or account for any of the other counterparts.

8.14 The provisions of this Agreement are severable, and in the event that any provisions of this Agreement shall be determined to be invalid or unenforceable under any controlling body of the law, such invalidity and unenforceability shall not in any way affect the validity or enforceability of the remaining provisions hereof. In the event the validity or unenforceability of any provision of this Agreement is brought into question because of the decision of a court of competent jurisdiction, LICENSOR, by written notice to LICENSEE may revise the provision in question or may delete it entirely so as to comply with the decision of said court.

8.15 The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar failure to perform any such term or condition by the other party.

8.16 It is understood that LICENSOR is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities (including the Anns Export Control Act, as amended and the United States Department of Commerce Export Administration Act of 1979). The transfer of such items may require a license from the cognizant agency of the United States Government and/or written assurances by LICENSEE that LICENSEE shall not export data or commodities to certain foreign countries without prior approval of such agency. LICENSOR neither represents that license shall not be required not that, if required, it shall be issued.

8.17 All reports and documents to be forwarded to LICENSOR shall be in the English Language.

8.18 All payments required under this Agreement shall be made in U.S. Dollars. LICENSEE agrees to pay interest of **[********]** on any delinquent payments to LICENSOR, and pay for all costs and reasonable attorneys fees incurred by LICENSOR in collecting payments due to LICENSOR.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed in duplicate as first above written.

AGREED AND ACCEPTED:

R. J. REYNOLDS TOBACCO COMPANY

By: /s/ Gary T. Burger Date: 10/1/97
Print Name & Title
Gary T. Burger, D.V.M.
Senior Vice President, R&D

VIRGINIA COMMONWEALTH UNIVERSITY INTELLECTUAL
RESEARCH FOUNDATION (VCU-IPF)

By: /s/ Richard C. Franson Date: 10/2/97
Print Name/Title
Richard C. Franson, Ph.D.
President, VCU-IPF
Director, Office of Technology
Transfer Virginia Commonwealth
University

Exhibit 10.17(b)

[********] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

February 11, 2004

Richard C. Franson, Ph.D.
Director, Office of Technology Transfer
Virginia Commonwealth University
1101 East Marshall Street, Sanger Hall – Room 1-026
Richmond, Virginia 23298-0568

Re: Amendment to License Agreement

Dear Dick:

Reference is made to the License Agreement between Targacept, Inc. (“Targacept”), as assignee of R.J. Reynolds Tobacco Company, and Virginia Commonwealth University Intellectual Property Foundation (“VCUIPF”) dated October 6, 1997 (the “Agreement”).

Section 8.11 of the Agreement provides that no modification of the Agreement is binding unless it is signed by an authorized officer of the party against which it is to be enforced, and each of Targacept and VCUIPF desires to amend the Agreement as provided herein. Accordingly, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Targacept and VCUIPF agree as follows:

1. Section 2.1 of the Agreement is hereby amended by deleting “, exclusive” from the first sentence thereof.

2. Section 2.2 of the Agreement is hereby deleted in its entirety and replaced by the following

“LICENSOR hereby grants to LICENSEE the right to grant exclusive or nonexclusive sublicenses to third-party sublicensees with respect to all or any portion of the license granted to LICENSEE hereunder. LICENSEE will provide LICENSOR a copy of any and all sublicense agreements within sixty (60) days of execution. Unless LICENSOR otherwise consents in writing, no such sublicense shall release LICENSEE from its obligations hereunder.”

3. Section 3.3 of the Agreement is hereby deleted in its entirety and replaced with the following:

“LICENSEE shall pay an annual license maintenance fee due each year on the anniversary of the effective date of this Agreement. The amount of such annual fee shall be **[********]**; provided that LICENSEE may elect, in its sole discretion, to instead pay an annual fee of **[********]** to maintain “Exclusivity Rights.”

As used herein: (A) “Exclusivity Rights” means LICENSEE’s right to convert the license granted hereunder to an exclusive license (1) at any time prior to the date that LICENSEE receives a Notice of Third Party Offer, upon notice to LICENSOR and payment of **[********]**, and (2) within thirty (30) days following receipt by LICENSEE of a Notice of Third Party Offer, upon notice to LICENSOR and payment of **[********]**; and (B) “Notice of Third Party Offer” means a written notice to LICENSEE from LICENSOR of its receipt of a *bona fide* offer from an unaffiliated third party for a nonexclusive license under or to LICENSED TECHNOLOGY or ADDITIONAL TECHNOLOGY and setting forth the material terms of such offer. During the period in which LICENSEE has Exclusivity Rights, LICENSOR shall not grant such a license to any third party without having delivered to LICENSEE the Notice of Third Party Offer.

If LICENSEE exercises its Exclusivity Rights, the amount of the annual license maintenance fee, beginning with the next anniversary of the effective date of this Agreement following exercise, shall become **[********]**. LICENSEE may irrevocably relinquish its Exclusivity Rights, either before or after exercise, by written notice to LICENSOR and, in such event, the annual license maintenance fee shall, beginning with the next anniversary of the effective date of this Agreement, be restored to **[********]** and the license granted hereunder shall remain or become nonexclusive.

Each such annual fee paid under this Section 3.3 shall be creditable against any royalties otherwise due hereunder for the next year."

3. Section 8.11 of the Agreement is hereby amended by deleting the last sentence thereof and replacing it with the following:

"As used herein, the word "termination" includes any and all means of bringing an end prior to its expiration by its own terms this Agreement, or any provisions thereof, whether by release, discharge, abandonment or otherwise, but specifically excludes termination by a party as and to the extent permitted by Article VII."

4. Except as expressly amended hereby, the terms of the Agreement shall continue in full force and effect.

5. This letter agreement may be executed in two counterparts, each of which shall be deemed an original and both of which, taken together, shall be deemed a single document.

6. LICENSOR acknowledges receipt of LICENSEE's annual license maintenance fee of **[********]** for the year beginning October 6, 2003 and ending October 5, 2004, which fee includes the maintenance of Exclusivity Rights for that period.

Please indicate your acceptance of, and agreement with, the foregoing, by executing the duplicate copies of this letter agreement and returning one fully-executed original to my attention.

Sincerely,

TARGACEPT, INC.

By: /s/ J. Donald deBethizy
Name: J. Donald deBethizy
Title: President and CEO

Accepted and agreed:

Virginia Commonwealth University
Intellectual Property Foundation

By: /s/ Richard C. Franson
Richard C. Franson
President

[********] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

LICENSE AGREEMENT

THIS AGREEMENT, made and entered into this 26th day of May, 1999, (the Effective Date) by and between the University of Kentucky Research Foundation, a corporation duly organized and existing under the laws of the Commonwealth of Kentucky and having its principle office at Lexington, Kentucky, U.S.A. (hereinafter referred to as UKRF), and Targacept, Inc., (“TARGACEPT”) a subsidiary of R.J.R. Reynolds Tobacco Company (“RJR”).

WITNESSETH

WHEREAS, TARGACEPT desires to obtain a license under the Patent Rights upon the terms and conditions hereinafter set forth, and

WHEREAS, UKRF previously has entered into agreements with RJR (and subsequently, TARGACEPT) regarding research and development activities concerning nicotinic compounds for use in therapeutic applications. RJR (and subsequently, TARGACEPT) have funded activities involving collaborative research as well as activities involving a sabbatical program. As a result, UKRF and TARGACEPT jointly own certain technologies (listed in Attachment A, which becomes a part of this agreement), and UKRF has assigned certain technologies to TARGACEPT (listed in Attachment B, which becomes part of this agreement) but which are subject to the terms of that agreement regarding sharing of royalty income, and

WHEREAS, TARGACEPT has entered into an agreement with Rhone-Poulene Rorer, whereby as part of that agreement, certain technologies of TARGACEPT were licensed to Phone-Poulene Rorer; and TARGACEPT is entitled to certain royalty and milestone income, and

WHEREAS, in previous agreements between UKRF and RJR (and subsequently TARGACEPT), it was agreed that UKRF and RJR would negotiate in good faith towards arriving at terms relating to further use of the technology developed during the collaborative research and sabbatical programs. UKRF and TARGACEPT acknowledge negotiating in good faith towards terms by which that technology can best be developed for commercial application.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties hereto agree as follows:

ARTICLE 1- Definitions

For the purposes of this agreement, the following words and phrases shall have the following meanings:

1.1 "TARGACEPT" shall mean Targacept and any subsidiary or affiliate of Targacept.

1.2 "Patent Rights" shall mean the United States and Foreign pending patent applications set forth in Attachments "A" and "B" attached hereto and made a part hereof (hereinafter referred to as the "Patent Rights Patent Application(s)"), and the United States patents and Foreign patents issuing from said pending United States and Foreign patent applications or later-filed foreign applications based upon any of said United States patents and applications (hereinafter referred to as the "Patent Rights Patent(s)") and any continuations, continuations-in-part, divisions reissues or extensions or any of the foregoing.

1.3 "Licensed Product(s)" shall mean any product made or covered by a pending or issued patent included in the Patent Rights.

ARTICLE 2- Grant

2.1 UKRF hereby grants to TARGACEPT the world-wide right and license to the Patent Rights set forth in Attachment A to the full end of the term of each patent included therein unless sooner terminated as hereinafter provided. This grant is expressly subject to the rights of the U.S. Government, if any.

2.2 In order to establish a period of exclusivity for TARGACEPT, UKRF hereby agrees that it shall not grant any other license to make, have made, use, lease and sell the Patent Rights during the period of time commencing with the Effective Date of this Agreement and terminating with the full end of the term of this Agreement, unless sooner terminated as hereinafter provided.

2.3 TARGACEPT shall have the right to sublicense worldwide any of the rights, privileges and license granted hereunder.

2.4 Notwithstanding the foregoing, on behalf of itself and its affiliates, UKRF reserves the right to use the Patent Rights for internal research purposes.

2.5 TARGACEPT agrees that any sublicenses granted by it shall include a contractual provision granting UKRF the right and ability to proceed directly against the sublicensee to require such sublicensee to comply with all terms of the sublicense agreement. TARGACEPT further agrees to include the substance of ARTICLES 4, 5, 8, 9, and 10 of this Agreement in all sublicense agreements.

2.6 TARGACEPT agrees to forward to UKRF a copy of any and all fully executed sublicense agreements, and further agrees to forward to UKRF annually a copy of such reports received by TARGACEPT from its sublicensees during the preceding twelve (12) month period under the sublicenses as shall be pertinent to a royalty accounting under said sublicense agreements.

ARTICLE 3- Due Diligence

TARGACEPT shall use its best efforts to bring the Patent Rights to market through a thorough, vigorous and diligent program for exploitation of the Patent Rights.

ARTICLE 4- Royalties

4.1 For the rights, privileges and license granted hereunder, TARGACEPT shall pay to UKRF in the manner hereinafter provided to the end of the term of the Patent Rights or until this Agreement shall be terminated as hereinafter provided:

(a) A license issue fee of $20,000.00 Dollars, which said license issue fee shall be deemed earned and due immediately upon the execution of this Agreement.

(b) For each of the patents described in Attachment A, a royalty in the amount of **[********]**.

(c) For each of the patents described in Attachment B, a royalty in the amount of **[********]**. Such payments shall only be made if income is based on technology claimed in those patents listed in Attachment B, in countries where those patents are in force. Such payments shall be made for the life of the patents listed in Attachment B.

4.2 As used herein, the phrase “Net Sales Price” shall mean TARGACEPT’s billings for the Licensed Product(s) produced hereunder less the sum of the following:

(a) Discounts allowed in amounts customary in the trade;

(b) Sales, tariff duties and/or use taxes directly imposed and with reference to particular sales;

(c) Outbound transportation prepaid or allowed; and

(d) Amounts allowed or credited on returns.

No deductions shall be made for commissions paid to individuals whether they be with independent sales agencies or regularly employed by TARGACEPT and on its payroll, or for cost of collections. Licensed Product(s) shall be considered “sold” when billed out or invoiced.

4.3 No multiple royalties shall be payable because the Licensed Product(s), its manufacture, lease or sale are or shall be covered by more than one patent application or patent license under this Agreement.

4.4 Royalty payments shall be paid in United States dollars in Lexington, Kentucky, or at such other place as UKRF may reasonably designate consistent with the laws and regulations controlling in any foreign country. Any withholding taxes which TARGACEPT or any sublicensee shall be required by law to withhold on remittance of the royalty payments shall be deducted from royalty paid to UKRF. If any currency conversion shall be required in connection with the payment of royalties hereunder, such conversion shall be made by using the exchange rate prevailing at a first-class foreign exchange bank on the last business day of the calendar quarterly reporting period to which such royalty payments relate.

ARTICLE 5-Reports and Records

5.1 TARGACEPT shall keep full, true and accurate books of account containing all particulars that may be necessary for the purpose of showing the amount payable to UKRF by way of royalty as aforesaid. Said books of account shall be kept at TARGACEPT’s principal place of business or the principal place of business of the appropriate division of TARGACEPT to which this Agreement relates. Said books and the supporting data shall be open at all reasonable times, for five (5) years following the end of the calendar year to which they pertain, to the inspection of the UKRF Internal Audit Division and/or an independent certified public accountant retained by UKRF and/or an accountant employed by UKRF, for the purpose of verifying TARGACEPT's royalty statement or compliance in other respects with this Agreement.

5.2 TARGACEPT, within thirty (30) days after June 30 and December 31, of each year, shall deliver to UKRF true and accurate reports, giving such particulars of the business conducted by TRAGACEPT during the preceding six-month period under this Agreement as shall be pertinent to a royalty accounting hereunder. These shall include at least the following:

(a) All Licensed Products manufactured and sold;

(b) Total billings for Licensed Product sold;

(c) Deductions applicable as provided in Paragraph 5.2;

(d) Total royalties due;

(e) Names and addresses of all sublicensees of TARGACEPT; and

(f) Annually, the TARGACEPT's certified financial statements for the preceding twelve (12) months including, at a minimum, a Balance Sheet and an Operating Statement.

5.3 With each such report submitted, TARGACEPT shall pay to UKRF the royalties due and payable under this Agreement. If no royalties shall be due, TARGACEPT shall so report.

ARTICLE 6-Patent Prosecution

Patent prosecution shall be in accordance with the applicable collaborative research agreements or sabbatical agreements that gave rise to the patent.

ARTICLE 7- Termination

7.1 If TARGACEPT shall become bankrupt or insolvent, or shall file a petition in bankruptcy, or if the business of TARGACEPT shall be placed in the hands of a receiver, assignee or trustee for the benefit of creditors, whether by the voluntary act of TARGACEPT or otherwise, this Agreement shall automatically terminate.

7.2 Should TARGACEPT fail in its payment to UKRF of royalties due in accordance with the terms of this agreement, UKRF shall have the right to serve notice upon TARGACEPT by certified mail at the address designated herein, of its intention to terminate this Agreement within thirty (30) days after receipt of said notice of termination unless TARGACEPT shall pay to UKRF, within the thirty (30) day period, all such royalties due and payable. Upon the expiration of the thirty (30) day period, if TARGACEPT shall not have paid all such royalties due and payable, the rights, privileges and license granted hereunder shall thereupon immediately terminate.

7.3 Upon any material breach or default of this Agreement by TARGACEPT, other than those occurrences set out in Paragraphs 7.1 and 7.2 hereinabove, which shall always take precedence in that order over any material breach or default referred to in this Paragraph 7.3, UKRF shall have the right to terminate this Agreement and the rights, privileges and license granted hereunder by ninety (90) days' notice by certified mail to TARGACEPT. Such termination shall become effective unless TARGACEPT shall have cured any such breach or default prior to the expiration of the ninety (90) day period from receipt of UKRF's notice of termination.

7.4 TARGACEPT shall have the right to terminate this Agreement at any time on six (6) months' notice by certified mail to UKRF.

7.5 Upon termination of this Agreement for any reason, nothing herein shall be construed to release either party from any obligation that matured prior to the effective date of such termination. TARGACEPT and/or any sublicensee thereof may, however, after the effective date of such termination, sell all licensed product in the process of manufacture at the time of such termination and sell the same, provided that TARGACEPT shall pay to UKRF the royalties theron as required by Article 4 of this Agreement and shall submit the reports required by Article 5 hereof.

ARTICLE 8- Product Liability

8.1 TARGACEPT shall at all times during the term of this Agreement and thereafter, indemnify, defend and hold UKRF, the University of Kentucky, their trustees, officers, employees and affiliates, harmless against all claims and expenses, including legal expenses and reasonable attorneys' fees, arising out of the death of or injury to any person or persons or out of any damage to property and against any other claim, proceeding, demand, expense and liability of any kind whatsoever resulting from the production, manufacture, sales, use, consumption or advertisement of any Licensed Product(s) or the Patent Rights or arising from any obligation of TARGACEPT hereunder.

8.2 If TARGACEPT produces, manufactures or sells any Licensed Product(s), TARGACEPT will maintain product liability insurance, with an endorsement naming the University of Kentucky Research Foundation, the University of Kentucky, their Board of Trustees, agents officers and employees as additional insureds covering liabilities for the production, manufacture and/or sole of the product. The policy of insurance shall contain a provision of non-cancellation except upon the provision of sixty (60) days notice to the University. Policy limits shall be not less than $5,000,0000 per person per occurrence.

8.3 If TARGACEPT, sublicenses any of the rights, privileges and licenses granted hereunder, TARGACEPT shall require the sublicensee to provide UKRF evidence of such product liability insurance.

ARTICLE 9- Warranties

9.1 TARGACEPT AGREES THAT THE RIGHTS GRANTED ARE MADE AVAILABLE WITHOUT WARRANTY OF ANY KIND EXPRESSED OR IMPLIED INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND FURTHER INCLUDING NO WARRANTY AS TO CONFORMITY WITH WHATEVER USER MANUALS OR OTHER LITERATURE MAY BE ISSUED FROM TIME TO TIME.

9.2 TARGACEPT FURTHER AGREES THAT UKRF HAS NOT CONDUCTED NOR HAD CONDUCTED A PATENTABILITY OR INFRINGEMENT STUDY AND THUS MAKES NO CLAIMS THAT THE LICENSED RIGHTS WILL NOT INFRINGE ANY THIRD PARTIES' VALID PATENT RIGHTS.

ARTICLE 10- Non-Use of Names

TARGACEPT shall not use the names of the University of Kentucky, University of Kentucky Research Foundation nor of Dr. Peter Crooks nor any other employee of the University of Kentucky.

ARTICLE 11- Export Controls

It is understood that UKRF us subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities (including the Arms Export Control Act, as amended, and the Export Administration Act of 1979), and that its obligations hereunder are contingent on compliance with applicable United States export laws and regulations. The transfer of certain technical data and commodities may require a license from the cognizant agency of the United States Government and/or written assurances by TARGACEPT that TARGACEPT shall not export data or commodities to certain foreign countries without prior approval of such agency. UKRF neither represents that a license shall not be required nor that, if required, it shall be issued.

ARTICLE 12- Payments, Notices and Other Communications

Any payment, notice or other communication pursuant to this Agreement shall be sufficiently made or given on the date of mailing if sent to such party by certified first class mail, postage prepaid, addressed to it at its address below or as it shall designate by written notice given to the other party:

In the case of UKRF:	University of Kentucky Research Foundation 207 Administration Building Lexington, Kentucky 40506
With a copy to	University Legal Counsel 2 Administration Building Lexington, Kentucky 40506

In the case of TARGACEPT: J.D. deBethizy
Targacept, Inc.
Winston-Salem, NC 27102

ARTICLE 13- Miscellaneous Provisions

13.1 This Agreement shall be construed, governed, interpreted and applied in accordance with the laws of the Commonwealth of Kentucky, U.S.A., except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which patent was granted.

13.2 The partied hereto acknowledge that this Agreement sets forth the entire Agreement and understanding of the partied hereto as to the subject matter hereof, and shall not be subject to any change or modification except by the execution of a written instrument subscribed to by the parties hereto.

13.3 The provisions of this Agreement are severable, and in the event that any provision of this Agreement shall be determined to be invalid or unenforceable under any controlling body of law, such invalidity or unenforceability shall not in any way affect the validity or enforceability of the remaining provisions hereof.

13.4 The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals and duly executed this License Agreement the day and year first set forth below.

WITNESS:

/s/ Donald G. Keach

UNIVERSITY OF KENTUCKY
RESEARCH FOUNDATION

By: /s/ Jeff L. Fink III

Title: Assistant V.P., RGS

WITNESS:

/s/ A. J. Borschke

TARGACEPT, INC.

By: /s/ J. Donald deBethizy

Title: President

By execution of this Agreement, the undersigned acknowledge receiving a copy of this Agreement, and of having read and reviewed same prior to its execution by the parties.

By: /s/ Peter A. Crooks
Dr. Peter Crooks

5,616,707*

5,726,316

* Also includes Foreign Equivalents

Attachment B

Schedule I

Applications

08/885,397*
08/885,768*
09/098,285*
09/177,231*

Schedule II

Applications

09/053,937*
09/054,179*
09/210,113*

---

* Also includes Foreign Equivalents

Exhibit 10.19

[********] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

LICENSE AGREEMENT

This License Agreement (the "Agreement") effective as of this 12th day of August, 2002, between **Wake Forest University Health Sciences**, an institution organized as a nonprofit corporation under the laws of the state of North Carolina with its principal offices at Medical Center Boulevard, Winston-Salem, North Carolina 27109 ("WFUHS"), and **Targacept, Inc.**, a Delaware corporation with its principal offices at 200 East First Street, Suite 300, Winston-Salem, North Carolina 27101-4165 (the "Company").

WHEREAS, WFUHS is in possession of all right, title, and interest in and to the Patent Rights and the WFUHS Know-How (in each case as defined below) and desires to have the inventions and discoveries included therein or covered thereby utilized in the public interest; and

WHEREAS, WFUHS has the right to grant a license to the Company to said Patent Rights and WFUHS Know-How, and the Company desires to obtain said license, on the terms and conditions set forth herein; and

NOW, THEREFORE, in consideration of the premises and the mutual covenants set forth herein, and for good and valuable consideration, the receipt and sufficiency of which are acknowledged, the parties hereto, intending to be legally bound, agree as follows:

1. <u>Definitions</u>

1.1 "Affiliate" or "Affiliates" means any entity: (i) in which from time to time hereafter the Company owns or controls, directly or indirectly, at least fifty percent (50%) of the capital stock entitled to vote in the election of the board of directors (or the body providing an analogous function for entities other than corporations); (ii) that from time to time hereafter owns or controls, directly or indirectly, at least fifty percent (50%) of the Company's capital stock entitled to vote in the election of directors; and (iii) in which at least fifty percent (50%) of the capital stock entitled to vote in the election of the board of directors (or the body providing an analogous function for entities other than corporations) is from time to time hereafter owned or controlled, directly or indirectly, by an entity that from time to time hereafter owns or controls, directly or indirectly, at least fifty percent (50%) of the Company's capital stock entitled to vote in the election of directors.

1.2 "Development" means invention, discovery, proprietary development, data and information, in any medium or manifestation, including any method, process, composition of matter, apparatus, device, system, product, article of manufacture or appliance.

1.3 "Effective Date" means the date first written above.

1.4 “Field” means worldwide therapeutic use, including without limitation for humans.

1.5 “Invention” means WFUHS#98-14 *Sex Related Deference in Pain Relief from Spinal Compound (RJR 2403)*, discovered and reduced to practice by Dr. James Eisenach, an employee of WFUHS.

1.6 “License” means (i) an exclusive, worldwide right and license under the Patent Rights and (ii) a non-exclusive, worldwide right and license to the WFUHS Know-How to: (a) make, have made, use, research, develop, have developed, lease, market, offer to sell, sell, have sold, distribute, improve, import and export Licensed Products and Licensed Processes in the Field; and (b) otherwise practice the Invention in the Field.

1.7 “Licensed Product” means any product that:

(a) infringes or would infringe, in whole or in part, a Valid Claim included in the Patent Rights in the country in which the product is made, developed, used or sold; or

(b) is manufactured, produced or used using a product or process that infringes or would infringe, in whole or in part, a Valid Claim included in the Patent Rights in the country in which the product or process is used, including without limitation a Licensed Process; or

(c) is manufactured, developed, used or sold using WFUHS Know-How.

1.8 “Licensed Process” means a process for making or using therapeutic agents that infringes or would infringe, in whole or in part, a Valid Claim included in the Patent Rights or is developed using WFUHS Know-How.

1.9 “Major Country” means any of the United States of America, any individual country in the European Union or Japan.

1.10 “Net Sales” means **[********]**

1.11 “Option Agreement” means that certain Option Agreement dated February 16, 2000 between WFUHS and the Company.

1.12 “Patent Rights” means, collectively: (i) United States Patent No. 6,248,744 issued June 9, 2001 (from United States Application No. 09/622,675, the United States National Phase of PCT/US99/03896, which claimed priority to United States Provisional Application No. 60/075,794 filed February 24, 1998) and all other United States and foreign patents that issue from applications that claim priority to United States Provisional Application No. 60/075,794, PCT/US99/03896 or United States Application No. 09/622,675, including, without limitation, continuation applications, continuation-in-part applications, divisional applications, substitute applications, reissue applications or requests for examination and foreign applications of any of the foregoing; and (ii) all other patents (U.S. or foreign) now issued or hereafter issuing on the patent applications described in clause (i) and all reexaminations, reissues, revisions, substitutes, renewals or extensions thereof.

1.13 "Regulatory Approval" means all approvals, licenses, registrations or authorizations of any federal, national, state, provincial or local regulatory agency, department, bureau or other government entity, necessary for the use, storage, import, transport and sale of a Licensed Product in a country.

1.14 "Royalty Expiration Date" means the date of expiration of the last-to-expire Valid Claim included in the Patent Rights covering, in whole or in part, a particular Licensed Product or Licensed Process in the Field in a particular country.

1.15 "Valid Claim" means: (i) any claim of an issued patent that has not expired and that has not been held invalid or unenforceable by decision of a court or other governmental agency of competent jurisdiction, unappealable or unappealed within the time allowed for appeal having expired, and that has not been admitted to be invalid through reissue, disclaimer or otherwise; or (ii) any claim of a pending patent application that has not expired or become abandoned.

1.16 "VCU Covered Product" means any product that:

(a) infringes or would infringe, in whole or in part, a Valid Claim included in the VCU Patents in the country in which the product is made, developed, used or sold; or

(b) is manufactured, produced or used using a product or process that infringes or would infringe, in whole or in part, a Valid Claim included in the VCU Patents in the country in which the product or process is used.

1.17 "VCU Patents" means, collectively: (i) United States Patent No. 5,914,337 issued June 22, 1999 (from United States Application No. 08/908,440 filed August 7, 1997); (ii) United States Patent No. 6,117,891 issued September 12, 2000 (from United States Application No. 09/257,368 filed February 15, 1999 as a continuation of Application No. 08/908,440); (iii) all United States or foreign patents that claim priority to United States Application Nos. 08/908,440 or 09/257,368, including without limitation PCT/US98/1648 (publication number WO 99/07369); and (iv) any continuations, continuations-in-part, divisionals, substitutes, reissues or requests for examination and all reexaminations, reissues, revisions, substitutes, renewals or extensions of any of the patents referred to in clauses (i-iii).

1.18 "WFUHS Know-How" means design criteria, technical data, practices, plans, specifications or formulas owned by WFUHS, or with respect to which WFUHS has use rights and is free to grant the License and sublicenses as provided for in Sections 2.1 and 4.1, respectively, as of the Effective Date and related to the Invention or its use in the Field.

2. Grant of License

2.1 Subject to the terms and conditions hereof, WFUHS hereby grants the License to the Company and its Affiliates.

2.2 WFUHS acknowledges and agrees that all or any portion of the License may be practiced by the Company or its Affiliates through the use of subcontractors and that, unless specifically sublicensed, such subcontractors shall not be considered sublicensees.

2.3 The License is subject to the rights of the United States government under guidelines applicable as a result of federal funding to WFUHS to support the development of the Patent Rights and WFUHS Know-How, including, but not limited to, a non-exclusive right and license to the United States government to practice the Patent Rights for governmental purposes. In addition, WFUHS retains the right to use, practice, publish, display, discuss and present the Patent Rights and WFUHS Know-How for noncommercial educational, research, clinical and academic purposes; provided that the foregoing rights shall be expressly subject to WFUHS' obligations pursuant to Section 6.

2.4 The Company shall mark the Licensed Products (i) made, used or sold in the United States with all applicable United States patent numbers and (ii) used, shipped to or sold in other countries in such a manner as to conform with the patent laws and practice of the country of use, shipment or sale.

2.5 Any Development made or developed after the Effective Date, and all intellectual property rights relating thereto, shall be owned exclusively by the party making or developing such Development, without any accounting, compensation or other obligation hereunder to the other party.

3. Royalties and other Financial Consideration

3.1 In partial consideration for the License and the transfer of the WFUHS Know-How, the Company will pay to WFUHS a license fee equal to $25,000. The license fee is due and payable to WFUHS within thirty (30) days of the Effective Date. The license fee is non-refundable and not creditable against any other payments or fees due or payable to WFUHS pursuant to this Agreement.

3.2 In partial consideration for the License and the transfer of the WFUHS Know-How, the Company will pay to WFUHS a royalty equal to **[********]** of Net Sales of any and all Licensed Products that are not also VCU Covered Products (Licensed Products that are also VCU Covered Products being provided for in Section 3.4), such obligation to expire with respect to any particular Licensed Product in a particular country on the Royalty Expiration Date for that country; provided that the Company's obligation to pay royalties under this Section 3.1 shall be imposed only once with respect to the same unit of a Licensed Product regardless of how many Patent Rights or Valid Claims pertain thereto.

3.3 In further consideration for the License and the transfer of the WFUHS Know-How and subject to Section 4.2.2 and Section 4.3.2, the Company will make certain nonrefundable, noncreditable milestone payments to WFUHS within forty-five (45) days of achievement of the applicable milestone by the Company or, as applicable, its Affiliate with respect to each Licensed Product:

(i) **[********]**;

(ii) **[********]**;

(iii) **[********]**;

(iv) **[********]**;

(v) **[********]**; and

(vi) **[********]**.

3.4 In partial consideration for the License and the transfer of the WFUHS Know-How, the Company will pay to WFUHS a royalty equal to **[********]** of Net Sales of any and all Licensed Products that are also VCU Covered Products (Licensed Products that are not also VCU Covered Products being provided for in Section 3.2), such obligation to expire with respect to any particular Licensed Product in a particular country on the Royalty Expiration Date for that country; provided that the Company's obligation to pay royalties under this Section 3.4 shall be imposed only once with respect to the same unit of a Licensed Product regardless of how many Patent Rights or Valid Claims pertain thereto.

3.5 As of the Effective Date, WFUHS has not incurred any additional unreimbursed fees or other costs for the preparation, filing, prosecution, and maintenance of the Patent Rights. Accordingly, WFUHS acknowledges and agrees that no amounts not previously invoiced to Company shall be due from the Company under Section 3.1 of the Option Agreement.

4. <u>Sublicenses</u>

4.1 WFUHS hereby grants to the Company the exclusive right to grant exclusive or nonexclusive sublicenses to third-party sublicensees with respect to all or any portion of the License granted to the Company hereunder. The Company will provide WFUHS a copy of any and all sublicense agreements within sixty (60) days of execution. Unless WFUHS otherwise expressly consents in writing, no such sublicense shall release the Company from its obligations hereunder.

4.2 For each sublicense granted by the Company hereunder with respect to the sale of Licensed Products that are not also VCU Covered Products (Licensed Products that are also VCU Covered Products being provided for in Section 4.3), the Company will pay to WFUHS the amounts provided below:

4.2.1 Royalties on the sale, lease, license or other transfer of Licensed Products that are not

VCU Covered Products under a sublicense equal to the lesser of: (i) the royalty that WFUHS would have received from the Company under Section 3.2 if such Licensed Products had been sold, licensed, leased or otherwise transferred by the Company instead of the sublicensee or (ii) **[********]** of all royalties received by the Company under such sublicense on sales, leases, licenses or other transfers by such sublicensee; provided that under no circumstances will WFUHS receive less under this Section 4.2.1 than the royalty that WFUHS would have received from the Company under Section 3.2 if (A) such Licensed Product had been sold, licensed, leased or otherwise transferred by the Company instead of the sublicensee and (B) **[********]**.

4.2.2 If a sublicensee first reaches any milestone set forth in Section 3.3 before Company, then, for each milestone so reached by any such sublicensee, the Company shall pay to WFUHS the lesser of:

(1) the amount of the milestone payment set forth in Section 3.3 as if Company had reached such milestone instead of the sublicensee; or

(2) the amount of consideration received by Company from the sublicensee specifically for reaching such milestone; provided that the amount payable in respect of such milestone under this Section 4.2.2 shall in no event be less than **[********]**.

In the event that a payment is required under this Section 4.2.2 with respect to any milestone and such payment is made to WFUHS, no payment with respect to the achievement of the same such milestone by the Company shall be payable at any time under Section 3.3 or otherwise.

4.2.3 If in lieu of, or in addition to, a royalty on sales, licenses, leases, or other transfers of Licensed Products as provided for in Section 4.2.1, a sublicensee **[********]** (all of the foregoing, collectively, “Other Amounts”) in consideration of the sublicense, the Company shall pay to WFUHS an amount equal **[********]** of all such Other Amounts (including, without limitation **[********]**); provided that:

(A) if, as of the date payment in respect of such Other Amount is to be made to WFUHS under Section 8.2, any royalties on the actual sale, lease, license or other transfer of Licensed Products have previously been actually paid, or are then payable, to WFUHS under Section 4.2.1, then the maximum amount payable in respect of such Other Amount under this Section 4.2.3 shall be equal to **[********]**; and

(B) any milestone amounts paid by the Company to WFUHS under Section 4.2.2 or Section 4.3.2 shall be creditable against any amounts otherwise payable under this Section 4.2.3, and any amounts paid by the Company to WFUHS under this Section 4.2.3 shall be creditable against any milestone amounts otherwise subsequently due and payable to WFUHS under Section 4.2.2 or Section 4.3.2.

For purposes of clarity:

(Example 1) **[********]**; and

(Example 2) **[********]**.

To the extent the Company has fulfilled its obligations to WFUHS pursuant to this Section 4 and is not required to share the same with WFUHS pursuant to this Agreement, the Company shall be entitled to retain all Other Amounts without compensation to WFUHS.

4.3 For each sublicense granted by the Company hereunder with respect to Licensed Products that are also VCU Covered Products (Licensed Products that are not also VCU Covered Products being covered by Section 4.2), the Company will pay to WFUHS the amounts provided below:

4.3.1 Royalties on the sale, lease, license or other transfer of Licensed Products that are also VCU Covered Products under a sublicense equal to the lesser of: (i) the royalty that WFUHS would have received from the Company under Section 3.4 if the VCU Covered Product had been sold, licensed, leased or otherwise transferred by the Company instead of the sublicensee or (ii) **[********]** of all royalties received by the Company under such sublicense on sales, leases, licenses or other transfers by such sublicensee; provided that under no circumstances will WFUHS receive less under this Section 4.3.1 than the royalty that WFUHS would have received from the Company under Section 3.4 if (A) such VCU Covered Product had been sold, licensed, leased or otherwise transferred by the Company instead of the sublicensee and (B) **[********]**.

4.3.2 If a sublicensee first reaches any milestone set forth in Section 3.3 before Company, then, for each milestone so reached by any such sublicensee, Company shall pay to WFUHS the lesser of:

(1) the amount of the milestone payment set forth in Section 3.3 as if Company had reached such milestone instead of the sublicensee; or

(2) the amount of consideration received by Company from the sublicensee specifically for reaching such milestone; provided that the amount payable in respect of such milestone under this Section 4.3.2 shall in no event be less than **[********]**.

In the event that a payment is required under this Section 4.3.2 with respect to any milestone and such payment is made to WFUHS, no payment with respect to the achievement of the same such milestone by the Company shall be payable at any time under Section 3.3 or otherwise.

4.3.3 If in lieu of, or in addition to, a royalty on sales of Licensed Products as provided for in Section 4.3.1, a sublicensee pays or delivers Other Amounts to the Company in consideration of the sublicense, the Company shall pay to WFUHS an amount equal to **[********]** of all such Other Amounts (including, without limitation, **[********]**); provided that:

(A) if, as of the date payment in respect of such Other Amount is to be made to WFUHS under Section 8.2, any royalties on the actual sale, lease, license or other transfer of Licensed Products have previously been actually paid, or are then payable, to WFUHS under Section 4.3.1, then the maximum amount payable in respect of such Other Amount under this Section 4.3.3 shall be equal to **[********]**; and

(B) any milestone amounts paid by the Company to WFUHS under Section 4.2.2 or Section 4.3.2 shall be creditable against any amounts otherwise payable under this Section 4.3.3, and any amounts paid by the Company to WFUHS under this Section 4.3.3 shall be creditable against any milestone amounts otherwise subsequently due and payable to WFUHS under Section 4.2.2 or Section 4.3.2.

For purposes of clarity:

(Example 1) **[********]**; and

(Example 2) **[********]**.

To the extent the Company has fulfilled its obligations to WFUHS pursuant to this Section 4 and is not required to share the same with WFUHS pursuant to this Agreement, the Company shall be entitled to retain all Other Amounts without compensation to WFUHS.

4.4 If a milestone payment or an "Other Amount" (such as an initial license fee) is received by Company and such milestone payment or "Other Amount" cannot be reasonably determined at the date of the applicable payment under Section 8.2 to be with respect to Licensed Products that are not also VCU Covered Products or Licensed Products that are also VCU Covered Products, then such milestone payment or "Other Amount" shall be deemed to be for (i) Licensed Products that are also VCU Covered Products and therefore subject to Section 4.3.3 if both VCU Patents and any Patent Rights are licensed under the sublicense to the sublicensee or (ii) Licensed Products that are not also VCU Covered Products and subject to Section 4.2.3 if any Patent Rights, but no VCU Patents, are licensed under the sublicense to the sublicensee.

4.5 Unless otherwise agreed by WFUHS, termination of the License granted to the Company by WFUHS under this Agreement will terminate all sublicenses that may have been granted by the Company; provided, however, that any sublicensee who desires to continue its sublicense may so advise WFUHS in writing of such sublicensee's desire to continue the sublicense within thirty (30) days of the sublicensee's receipt of written notice of the termination of the Company's License and, subject to the sublicensee's agreement to assume relative to WFUHS all the payment and other obligations contained in this Agreement (or, as applicable, the sublicense agreement with the Company), WFUHS, in the exercise of reasonable discretion, may elect to continue the sublicense.

4.6 Any sublicense granted by the Company must contain provisions corresponding to those of Section 4.5 relative to termination and the conditions of continuance of any sublicenses.

5. Commercially Reasonable Efforts and Due Diligence

5.1 The Company will use commercially reasonable efforts (either alone or through research collaborations or alliances with research organizations, pharmaceutical companies or other third parties), taking into account all scientific, clinical and regulatory uncertainties, to pursue the development of Licensed Products and to bring Licensed Products to market through a thorough and diligent program for exploitation of the Patent Rights and the marketing and commercialization of the Licensed Products. Upon receipt of Regulatory Approval for the first Licensed Product in a Major Country, the Company will have no further diligence obligations hereunder, other than an obligation to use commercially reasonable efforts to market and sell the Licensed Product in the Major Country in which Regulatory Approval was obtained.

5.2 The Company will prepare and, not later than the **[********]** of the Effective Date, submit to WFUHS a development plan of the Company for bringing the Licensed Products to market. The development plan of Company will be revised and updated from time to time (and not less frequently than once per calendar year) and, upon delivery to WFUHS, each such revision or update will become a part of this Agreement.

5.3 If WFUHS believes the Company is failing to comply with its obligations under Section 5.1, WFUHS may send notice to the Company asserting such belief and the basis therefor. The Company shall have sixty (60) days from its receipt of such notice either to (i) commence compliance with its obligations under Section 5.1 to WFUHS' reasonable satisfaction or (ii) send notice to WFUHS requesting arbitration of such issue in accordance with Section 18.10. In the event that the Company fails to satisfy its obligation set forth in the previous sentence, WFUHS shall have the right, at its option, to convert any portion of the License granted by WFUHS to the Company hereunder to a non-exclusive license, or to cancel the License upon thirty (30) days written notice and to require a reversion back to WFUHS of all rights and all relevant materials, research information and technology, including Patent Rights and WFUHS Know-How, transferred to the Company by WFUHS.

6. Confidentiality

6.1 WFUHS and the Company recognize that each party may need to provide confidential and proprietary information from time to time to the other party pursuant to this Agreement. In recognition of WFUHS as a non-commercial, academic institution, the Company agrees to limit to the extent possible the delivery of confidential information to WFUHS. WFUHS and the Company agree to hold in confidence, in accordance with this Section 6, any information disclosed by one party to the other under this Agreement that is clearly identified as "confidential" at the time of disclosure (hereinafter "Information"). Information will be provided in written or other tangible form whenever possible marked as "confidential" but, if provided orally or in an other non-tangible form, the Information must be summarized in writing, labeled as "confidential" and be provided to the receiving party with thirty (30) days of first disclosure to be considered confidential under this Agreement. For the purpose hereof, "hold in confidence" means that WFUHS and the Company will not disclose the Information of the other party to a third party and will protect the Information provided to it by the other party in the same manner in which it protects its own confidential information of similar nature, but will in no event use less than reasonable care. The Information will remain the property of the party disclosing such Information.

6.2 The obligations of the receiving party to maintain confidentiality under this Agreement will survive its expiration or termination and will endure for five (5) years from the date of first disclosure of such Information.

6.3 Information does not include information that:

(i) is already known to the receiving party prior to the Effective Date;

(ii) is or becomes publicly known through no fault of receiving party;

(iii) has been or is disclosed to the receiving party by a third party that the receiving party does not know (and is not reckless in not knowing) to be under an obligation of confidence or secrecy to the disclosing party at the time of disclosure;

(iv) is developed by employees or consultants of the receiving party who had no knowledge of the Information, as evidenced by written records;

(v) is approved for release by written authorization of the disclosing party; or

(vi) is required to be disclosed by law, provided the receiving party promptly notifies the disclosing party in writing prior to such disclosure, considers in good faith any comments or suggested changes to such disclosure from the disclosing party and gives the disclosing party a reasonable opportunity to prevent or limit the disclosure.

6.4 The parties further agree that the Company shall have the right to disclose Information and the provisions hereof to: (i) its Affiliates; (ii) potential sublicensees, assignees or subcontractors for the purpose of allowing any such potential sublicensee, assignee or subcontractor to evaluate such technologies and to determine whether to enter into a sublicense, assignment or subcontract; (iii) sublicensees, assignees or subcontractors, for the purpose of allowing such sublicensee, assignee or subcontractor, as the case may be, to make, have made, use, research, develop, have developed, lease, market, offer to sell, sell, have sold, distribute, improve, import and export Licensed Products; (iv) a purchaser or potential purchaser of all or substantially all of the Company's assets, or a party with which the Company is then in discussions regarding a potential business combination; and (v) an investor or lender, or prospective investor or lender, in or to the Company; provided, however, that, prior to any such disclosure, the Company shall obtain a confidentiality agreement (substantially similar in content to the provisions of this Section 6) from the party to which such disclosures are to be made.

7. Representations and Disclaimer

7.1 WFUHS represents that, to its actual knowledge, it owns all right, title and interest in and to the Patent Rights existing as of the Effective Date, free of any liens, licenses, encumbrances, restrictions and other legal or equitable claims, other than the rights of the federal government under federal funding guidelines.

7.2 The Company represents that (i) it has the authority and corporate power to enter into this Agreement and (ii) it is the exclusive licensee of the VCU Patents in the Field and such license is in full force and effect as of the Effective Date.

7.3 Information, materials and property, whether tangible or intangible, which may be delivered hereunder to the Company, will be delivered on an "as is, where is" basis without any express or implied warranty except as expressly set forth in Section 7.1. WFUHS HEREBY DISCLAIMS ANY AND ALL REPRESENTATIONS OR WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY IMPLIED WARRANTIES ARISING FROM ANY COURSE OF DEALING, USAGE, OR TRADE PRACTICE. WFUHS MAKES NO REPRESENTATIONS AND EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AS TO THE VALIDITY OF PATENT RIGHTS, INCLUDING CLAIMS ISSUED OR PENDING, OR THAT THE USE OF ANY TECHNOLOGY UNDER THE PATENT RIGHTS OR WFUHS KNOW-HOW WILL NOT INFRINGE ANY PATENT OR OTHER PROPRIETARY RIGHT OF A THIRD PARTY. WFUHS ASSUMES NO RESPONSIBILITY WITH RESPECT TO THE EXPLOITATION OR COMMERCIALIZATION OF THE PATENT RIGHTS, LICENSED PRODUCTS AND PROCESSES OR WFUHS KNOW-HOW OR THE MANUFACTURE, USE, SALE, LEASE OR DISTRIBUTION OF ANY METHODS, PROCESSES, APPARATUS, DEVICES, SYSTEMS, PRODUCTS, ARTICLES, AND/OR APPLIANCES DERIVED FROM OR USING THE LICENSED PRODUCTS AND PROCESSES, PATENT RIGHTS OR WFUHS KNOW-HOW BY THE COMPANY. NO PARTY WILL BE LIABLE FOR LOSS OF PROFITS, LOSS OF USE OR ANY OTHER INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES.

8. Records, Reports and Payments

8.1 The Company will keep and maintain, and will require any and all of its Affiliates and sublicensees to keep and maintain, complete, accurate, and correct records and books relating to the sale or lease of the Licensed Products for four (4) years following the end of the calendar year to which such records and books pertain.

8.2 The Company will render to WFUHS calendar quarter reports for each calendar quarter during the term hereof. Within thirty (30) days following (i) each such calendar quarter and (ii) expiration of the sixty (60) day period of permissible sales of inventory following termination of this license under Section 10.5, if applicable, the Company will provide to WFUHS a written report setting forth the following information with respect to the immediately preceding calendar quarter or sixty (60) day period, as applicable:

(i) an accounting for all Licensed Products sold, distributed or used;

(ii) gross receipts from the sale of Licensed Products;

(iii) any applicable reductions calculated as provided in the definition of "Net Sales" hereunder;

(iv) total Net Sales;

(v) total of all milestone payments due and payable to WFUHS; and

(vi) total royalties, sublicense revenues, milestone payments and any and all other payments under this Agreement then due.

The Company will remit to WFUHS with each such report the amount of royalty and other payments shown thereby to be due. If no sales of Licensed Products were made during any calendar quarter, the Company will provide to WFUHS a statement to that effect.

8.3 The books and records of account relating to sales of Licensed Products kept by the Company shall be made available upon reasonable notice, during normal business hours for examination by an auditor chosen by WFUHS and reasonably acceptable to the Company, who will be permitted to enter upon the premises of the Company and, at WFUHS's expense, make and retain copies of any and all parts of said books and records of account, including invoices that are relevant to any report required to be rendered by the Company. Any amount determined owed but not paid will be paid promptly to WFUHS with interest accruing from the date finally determined at the rate of **[********]** per year. In the event any such audit shows that the Company has underpaid its royalty obligation hereunder by **[********]** or more during any calendar quarter, the Company will reimburse WFUHS for the out-of-pocket expenses actually incurred for such audit. WFUHS may conduct no more than one (1) audit per calendar year.

8.4 Royalty or other payments will be paid in United States dollars to WFUHS in Winston-Salem, North Carolina, or at such other place as WFUHS may reasonably designate consistent with the laws and regulations controlling in any foreign country. Any withholding taxes that the Company is required by law to withhold on remittance of the royalty payments will be deducted from the royalty paid. The Company will cooperate in all reasonable respects with WFUHS, at WFUHS' expense, in WFUHS' filing of documents or in pursuing other actions deemed appropriate by WFUHS to reclaim any such taxes paid to local, state, or federal governments on a country-by-country basis to which WFUHS may be entitled pursuant to the laws of that locale, state or country. The Company will furnish WFUHS with original copies of all official receipts for such taxes. If any royalties hereunder are based on Net Sales converted from foreign currency, the conversion will be made by using the average exchange rate at a first-class foreign exchange bank for the calendar quarter period to which such royalty payments relate.

9. <u>Patent Prosecution</u>

9.1 The filing and prosecution of all United States and foreign patent applications and maintenance of all United States and foreign patents within the Patent Rights shall be the primary responsibility of WFUHS; provided, however, that WFUHS shall: (i) notify the Company in writing prior to any initial patent application filing in a country and keep the Company informed of, and give the Company a reasonable opportunity to participate in, all major decisions affecting all filing, prosecution and maintenance activities related to the Patent Rights; (ii) provide, or require its patent counsel to provide, to the Company copies of all papers and other materials relating to all patent applications and registrations prior to submission; and (iii) give due consideration to comments of the Company related to patent prosecution. WFUHS will seek patent protection for each invention within the Patent Rights in all countries designated by the Company from time to time so long as the Company assumes full financial responsibility, and actually reimburses WFHUS, for the associated patent preparation, prosecution and maintenance costs in such countries. Upon the failure or refusal of WFUHS to undertake such prosecution efforts, the Company may, upon notice to WFUHS, assume such efforts unless WFUHS commences such efforts to the reasonable satisfaction of the Company within thirty (30) days of such notice. In such event, Company will (i) provide, or require its patent counsel to provide, to WFUHS copies of all papers and other materials relating to all patent applications and registrations prior to submission; and (ii) give due consideration to comments of WFUHS related to patent prosecution.

9.2 Within thirty (30) days following receipt of itemized statements and other proper supporting documentation, the Company will reimburse WFUHS its reasonable fees and costs actually incurred that relate to the preparation, filing, prosecution, and maintenance of the U.S., PCT, and/or foreign patent applications, and any U.S. and foreign patents issuing thereon, within the Patent Rights that are incurred following the Effective Date and that are requested or authorized by the Company.

9.4 In the event the Company determines that filing, prosecution or maintenance of any of the U.S. or foreign patent applications or patents within the Patent Rights is not justified and so advises WFUHS in writing or in the event that Company fails to pay WFUHS within thirty (30) days of receipt of notice of any delinquent payment for any such filing, prosecution, or maintenance, WFUHS will then have the option to file, prosecute or maintain any such Patent Rights at its own expense. If WFUHS does so: (i) WFUHS will then have the option to delete such U.S. or foreign patent applications or patents within said Patent Rights from the License for the territory covered thereby; (ii) the Company will have no rights under the

License for any such deleted U.S. or foreign patent applications or patent; (iii) WFUHS will obtain all rights in and to such deleted U.S. or foreign patent applications or patents and will be free to exploit and to assign or license any such deleted U.S. or foreign patent applications or patents to third parties without effect on the amount of royalties or other payments due to WFUHS under Sections 3 or 4.

9.5 In the event that any claim of any application within the Patent Rights is canceled, abandoned, or otherwise disallowed by a final non-appealable or non-appealed action of a Patent Office having jurisdiction, or in the event that any claim of any patent within the Patent Rights is held invalid or unenforceable by a non-appealable or non-appealed decision by any court of competent jurisdiction, such claim will be deemed to have expired, as of the date of final disallowance or final decision of invalidity or non-enforceability.

10. <u>Termination</u>

10.1 The term of this Agreement and the License shall begin on the Effective Date and, unless sooner canceled or terminated as provided herein, shall expire upon expiration of the last-to-expire patent or patent application included within the Patent Rights.

10.2 If the Company becomes bankrupt or insolvent, or files a petition in bankruptcy, or if the business of the Company is placed in the hands of a receiver, assignee or trustee for the benefit of creditors, whether by the voluntary act of the Company or otherwise, and such proceeding continues unstayed for sixty (60) days, this Agreement will automatically terminate without any notice whatsoever to the Company.

10.3 If the Company at any time defaults in any payment due to WFUHS, including without limitation a royalty, milestone or other payment, or commits a material breach of any material covenant or undertaking set forth herein, WFUHS shall have the right, in addition to all other remedies available to it, to terminate this Agreement and revoke all or any portion of the License herein granted, by giving the Company thirty (30) days prior written notice of such proposed termination; provided that (i) if the Company cures such default or breach within such thirty (30) day period, then this Agreement shall remain in effect and the License herein granted shall be in full force and effect as if no such default or breach had occurred on the part of the Company and (ii) if at the expiration of such 30-day period, the Company can demonstrate to WFUHS' reasonable satisfaction that it is working diligently and in good faith to cure such default or breach, the Company shall have an additional period, not to exceed ninety (90) days, to cure such breach. If at the expiration of such initial 30-day period or such additional 90-day period, if applicable, the Company fails to cure the breach, WFUHS may terminate this Agreement upon notice of termination to the Company. In the event of termination under this Section 10.3, the Company will continue to be obligated to pay to WFUHS any and all license fees, royalties, milestones or other payments payable at the time of termination.

10.4 The Company will have the right to terminate this Agreement with or without cause at any time on sixty (60) days written notice to WFUHS.

10.5 Upon termination hereof for any reason, nothing herein will be construed to release either party from any obligation accrued prior to the effective date of such termination. Any termination hereof will not relieve the Company of any obligations to make any and all payments for any royalties, milestones or other payments that may have accrued prior to the date of such termination. After the effective date of any termination of this Agreement, the Company, for a sixty (60) day period following such termination, may, unless termination is effected under Section 10.3, 10.6, or 13.1 (last sentence), sell all Licensed Products in the inventory of the Company at the usual sales price of the Company for such Licensed Products; provided that the Company shall pay to WFUHS the royalties thereon as required by Section 3 and submit the reports required by Section 8. Any Licensed Products remaining in inventory of the Company following such sixty (60) day period shall be transferred to WFUHS without charge.

10.6 If, at any time during the term hereof, the Company, directly or indirectly, opposes, or assists any third party to oppose, the grant of any letters patent on any patent application within the Patent Rights or disputes, or directly or indirectly assists any third party to dispute, the validity of any patent within the Patent Rights or any of the claims thereof, WFUHS may, at its sole discretion, exercised within sixty (60) days after WFUHS first has notice of such occurrence, terminate all or any portion of the License upon thirty (30) days prior written notice to the Company.

11. <u>Infringement</u>

11.1 Each party will be obligated to promptly inform the other in writing of any alleged infringement by a third party of any of the patents within the Patent Rights, and provide such other parties with any available evidence of infringement. No party will settle or compromise any claim or action in a manner that imposes any restrictions or obligations on the other party or parties without such other party’s written consent, which shall not be unreasonably withheld.

11.2 During the term hereof, the Company will have the first right, but not the obligation, to (i) prosecute at its own expense any such infringements of the Patent Rights and, in furtherance of such prosecution, to request that WFUHS join as a party plaintiff in any such suit, without expense to WFUHS, and WFUHS’s consent to such request shall not be unreasonably withheld, or (ii) settle the infringement suit, subject to the provisions of Section 11.1, by sublicensing the alleged infringer or by other means.

11.3 In the event that the Company undertakes the enforcement and/or defense of the Patent Rights by litigation, including any declaratory judgment action, the total cost of any such action commenced or defended solely by the Company shall be borne by the Company and the Company shall keep any recovery or damages for past infringement derived therefrom, provided that Company pays to WFUHS any royalties, fees, payment or Other Amounts due and payable to WFUHS pursuant Sections 3 and 4, if any, based on amounts awarded to compensate the Company for lost sales or revenues, including any damages awarded directly in connection with such lost sales or revenues. Subject to Section 11.1, the Company shall be entitled to settle any such litigation by agreement, consent, judgment, voluntary dismissal or otherwise, provided such settlement does not impose any burden, obligation or responsibility on WFUHS.

11.4 If, within six (6) months after having been notified of any alleged infringement, the Company is unsuccessful in persuading the alleged infringer to desist and has not brought or is not diligently prosecuting an infringement action, or if the Company notifies WFUHS at any time prior thereto of its intention not to bring suit against any alleged infringer, then, and only then, WFUHS will have the right to prosecute at its own expense any infringement of the Patent Rights. The total cost of any such infringement action commenced or defended solely by WFUHS will be borne by WFUHS, and WFUHS will keep any recovery or damages for past infringement derived therefrom. Subject to Section 11.1, WFUHS shall be entitled to settle any such litigation by agreement, consent, judgment, voluntary dismissal or otherwise.

11.5 In the event an infringement action is brought against the Company arising from the use of the Patent Rights, the Company will defend such action and will be solely responsible for all attorneys' fees, costs of defense and liability arising out of that action.

11.6 In the event that a declaratory judgment action alleging invalidity or non-infringement of any of the Patent Rights is brought against the Company, the Company will be responsible, at its sole expense, for the defense of the action and the Company will keep any recovery or damages derived therefrom or from any counterclaims asserted therein unless and until WFUHS elects to intervene and participate in the defense of the action in accordance with the next sentence, and provided further that Company pays to WFUHS any and all amounts due and payable to WFUHS pursuant Sections 3 and 4 of this Agreement due, in whole or in part, to any lost sales or revenues and any damages or awards associated therewith or thereto. WFUHS, at its option, will have the right to intervene and participate in the defense of the action at its own expense whereupon WFUHS and the Company will share in any recovery or damages derived therefrom or from any counterclaims asserted therein in proportion to the total out-of-pocket costs contributed by each party.

11.7 In any infringement suit brought or declaratory judgment action defended by any party to protect any of the Patent Rights, the other party will, at the request and expense of the party initiating such suit, cooperate in all respects and, to the extent possible, make its employees available to testify when requested and make available relevant records, papers, information, samples, specimens and the like.

12. Indemnification and Insurance

12.1 Each of the Company, its Affiliates and their respective sublicensees will, at all times during the term hereof and thereafter, indemnify, hold harmless, and defend WFUHS and Wake Forest University and their respective trustees, officers, directors, employees, agents and affiliates from and against any and all claims, losses, damages, liabilities, costs and expenses, including legal expenses and reasonable attorneys' fees actually incurred (all of the foregoing, "Losses"), which arise or may arise at any time out of or in connection with its own activities in connection with its use of the Patent Rights, Invention or WFUHS Know-How in the production, manufacture, sale or use of the Licensed Products or Licensed Processes, except to the extent such Losses arise, directly or indirectly, out of the gross negligence or willful misconduct of WFUHS or its officers, agents or employees. The Company will ensure that any sublicense agreement will contain an indemnity provision to this effect in favor of WFUHS.

12.2 The Company and its Affiliates will, and the Company will require its sublicensees to, carry liability insurance at their own expense, adequate to assure its obligations to WFUHS under Section 12.1 and will provide satisfactory evidence of adequate insurance coverage to WFUHS upon its request.

13. <u>Assignment</u>

13.1 The Company may assign or otherwise transfer this Agreement and the License granted hereby only (i) with the approval of WFUHS or (ii) to the assignee or transferee of the Company's entire business or of that part of the Company's business to which the License granted hereby relates (including, without limitation, by operation of law in a merger); provided, however, that such assignee or transferee agrees in writing to be bound by the terms and conditions hereof. If WFUHS raises no reasonable objection in writing to a proposed assignment or transfer within fifteen (15) days after WFUHS receives notice thereof, then WFUHS shall be deemed to have approved such assignment or transfer so long as the assignee or transferee agrees in writing to be bound by the terms and conditions hereof. If the Company sells or otherwise transfers its entire business or that part of its business to which the License granted hereby relates and the assignee or transferee does not agree in writing to be bound by the terms and conditions hereof within fifteen (15) days of any such request by WFUHS, WFUHS will have the right to terminate this Agreement by providing written notice of termination to such transferee or assignee.

14. <u>Non-Use of Names</u>

14.1 The Company will not use the name of WFUHS or any adaptation thereof in any advertising, promotional or sales activities without the prior written consent of WFUHS, except (i) that the Company may state that it is licensed under one or more of the patents or applications within the Patent Rights or (ii) to the extent required by law, regulation or court order.

15. <u>Export Controls</u>

15.1 It is understood that WFUHS is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes, and other commodities that may require a license from the applicable agency of the United States Government or may require written assurances by the Company that the Company will not export data or commodities to certain foreign countries without prior approval of such agency. WFUHS does not represent that a license will be required or that, if required, will be issued.

16. Survival

16.1 Sections 1, 2.5, 6, 7, 8.1, 8.3, 10, 12, 16, 17 and 18 shall survive expiration or termination of this Agreement for any reason.

17. Payments, Notices and Other Communications

17.1 Any payment, notice or other communication pursuant to this Agreement shall be given in writing and shall be deemed given upon personal delivery, one day after deposit with a nationally recognized overnight delivery service with charges prepaid or two days after deposit with the United States Post Office, by registered or certified mail, postage prepaid, addressed to the applicable party at its address below (or such other address as it designates by written notice given to the other party):

WFUHS: Director, Office of Technology Asset Management
Wake Forest University Health Sciences
Medical Center Boulevard
Winston-Salem, North Carolina 27157-1023

The Company: Targacept, Inc.
200 East First Street, Suite 300
Winston-Salem, North Carolina 27101-4165
Attention: President

18. Miscellaneous Provisions

18.1 This Agreement will be construed, governed, interpreted, and applied in accordance with the laws of the State of North Carolina, U.S.A. without regard to conflicts-of-law rules. Notwithstanding the foregoing, any questions affecting the construction and effect of any patent will be determined by the law of the country in which the patent was granted.

18.2 The parties hereto acknowledge that this Agreement sets forth the entire agreement and understanding of the parties hereto as to the subject matter hereof and supersedes and cancels any and all prior agreements between the parties relating to the subject matter, including without limitation the Option Agreement. This Agreement will not be subject to any change or modification except by the execution of a written instrument signed by the parties hereto.

18.3 The provisions hereof are severable and, in the event that any provision hereof is determined to be invalid or unenforceable under any controlling body of law, such invalidity or unenforceability will not in any way affect the validity or enforceability of the remaining provisions hereof.

18.4 The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition hereof will not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

18.5 This Agreement will be binding and inure to the benefit of the parties hereto and their respective affiliates and permitted successors and assigns.

18.6 The representations, warranties, covenants, and undertakings contained in this Agreement are for the sole benefit of the parties hereto and their permitted successors and assigns and such representations, warranties, covenants, and undertakings will not be construed as conferring any rights on any other party.

18.7 Nothing contained in this Agreement will be deemed to place the parties hereto in a partnership, joint venture or agency relationship and neither party will have the right or authority to obligate or bind the other party in any manner.

18.8 This Agreement may be executed in two counterparts, each of which will be deemed an original and both of which, taken together, shall constitute one and the same instrument.

18.9 In the event of any dispute between the parties that arises from this Agreement, the prevailing party in any legal action that is brought to resolve such dispute will be entitled to recover its attorneys' fees and costs from the other party.

18.10 Any controversy or dispute as to whether the Company is satisfying its obligations under Section 5.1 shall be first referred to arbitration in the City of Winston-Salem, North Carolina, USA, under the auspices of, and conducted in accordance with, the rules of the American Arbitration Association. All arbitration proceedings shall be before a board of three (3) arbitrators who are knowledgeable about biotechnology and pharmaceutical development and the legal, tax and other issues affecting institutions of higher learning, and each party shall select one (1) arbitrator and the selected arbitrators shall select the third arbitrator. The arbitration proceedings shall be conducted in the English language and any award shall be in United States dollars. The cost of the third arbitrator shall be divided equally between the parties and each party shall pay the costs of the arbitrator selected by it. Any award of the arbitrators shall be binding on the parties to this Agreement. For the avoidance of doubt, this Section 18.10 is only applicable to disputes, if any, with respect to compliance with the Company's obligations under Section 5.1.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals and duly executed this License Agreement as of the day and year first set forth above.

Wake Forest University Health Sciences

By: /s/ Spencer Lemons
Spencer Lemons
Director, Technology Asset Management

Targacept, Inc.

By: /s/ J. Donald deBethizy
Dr. J. Donald deBethizy
President and CEO

Exhibit 10.20

[********] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Development and Production Agreement For Active Pharmaceutical Ingredients

Between

SIEGFRIED LTD.
Untere Brühlstrasse 4
4800 Zofingen SWITZERLAND

(hereinafter referred to as "SIEGFRIED")

and

TARGACEPT, INC.
200 East First Street, Suite 300
Winston-Salem, NC 27101-4165 USA

(hereinafter referred to as "TARGACEPT")

RECITALS

This DEVELOPMENT AND PRODUCTION Agreement (the "AGREEMENT") is entered into as of the first (1st) day of February 2004 (the "EFFECTIVE DATE") by and between SIEGFRIED and TARGACEPT.

WHEREAS, TARGACEPT presently owns certain patents and patent applications that disclose the composition, preparation or use of certain pharmaceutically active compounds and intermediates and formulations of such compounds (collectively, "COMPOUNDS").

WHEREAS, SIEGFRIED has expertise and is engaged in the development and preparation of pharmaceutically active compounds and intermediates of such compounds, as well as formulations of such compounds and intermediates.

WHEREAS, TARGACEPT is interested in having SIEGFRIED perform DEVELOPMENT on and/or PRODUCTION of certain COMPOUNDS, and SIEGFRIED is willing to carry out such DEVELOPMENT and PRODUCTION on behalf of and for TARGACEPT under the terms and conditions of this AGREEMENT.

NOW, THEREFORE, in consideration of the mutual covenants and promises contained in this AGREEMENT and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, TARGACEPT and SIEGFRIED agree as follows:

1. DEFINITIONS

For the purpose of this AGREEMENT, the following definitions shall apply:

1.1 "ACT" shall mean the United States Federal Food, Drug and Cosmetics Act and all rules and regulations promulgated thereunder, as the same may be amended from time to time.

1.2 "AFFILIATE" shall mean, with respect to a given party, any business entity controlling, controlled by, or under common control with such party. For the purpose of this definition, the term "control" shall mean the possession of the power to direct or cause the direction of the management and policies of an entity, whether through the ownership of more than fifty percent (50%) of the outstanding voting stock, by contract or otherwise.

1.3 "BATCH" shall mean the material resulting from a single manufacturing order during a specific cycle of PRODUCTION.

1.4 "COMPOUND" shall have the meaning given it in the recitals appearing above.

1.5 "CONFIDENTIAL INFORMATION" shall mean (a) in the case of TARGACEPT,

TARGACEPT IP, NEW IP and any and all information and materials disclosed by TARGACEPT to SIEGFRIED in connection with this AGREEMENT or the activities hereunder and (b) in the case of SIEGFRIED, SIEGFRIED IP and any and all other information and materials, other than NEW IP, disclosed by SIEGFRIED to TARGACEPT in connection with this AGREEMENT or the activities hereunder. In addition, the existence and terms of this AGREEMENT shall be considered CONFIDENTIAL INFORMATION of each party.

1.6 “DEVELOPMENT” shall mean, collectively, the activities pertaining to the development of a synthetic chemical process and/or finished dosage development studies and formulation for a SELECTED COMPOUND to enable PRODUCTION of a PRODUCT (which may include, without limitation, research studies, process optimization, the scale-up of an existing process and delivery of samples of SELECTED COMPOUND) that are described as Phase I – Laboratory under Scope of Work in the mutually agreed upon sub-appendix to Appendix B applicable to that PRODUCT. A separate sequentially numbered sub-appendix (B-1, B-2 and so on) shall be prepared for each SELECTED COMPOUND for which SIEGFRIED undertakes DEVELOPMENT at TARGACEPT’s request hereunder, which sub-appendix shall include the costs chargeable to TARGACEPT for such services (based on the rates specified herein), be dated and signed by an authorized employee of each party, attached hereto and thereupon become a part hereof.

1.7 “EFFECTIVE DATE” shall have the meaning given it in the first sentence of this AGREEMENT.

1.8 “EXCLUSION CONDITIONS” shall mean: (i) with respect to any particular SELECTED COMPOUND or PRODUCT, TARGACEPT (A) licenses or otherwise conveys to a third party the right to manufacture, or to control manufacturing of, such SELECTED COMPOUND or PRODUCT (except where TARGACEPT merely outsources the manufacturing function for such SELECTED COMPOUND OR PRODUCT on a contract basis for its own benefit), (B) enters into a strategic collaboration or partnership, however structured, pursuant to which its collaborator or partner assumes responsibility for, or control of, manufacturing such SELECTED COMPOUND or PRODUCT, or (C) determines, in the exercise of its good faith discretion, that SIEGFRIED’s performance hereunder is sub-standard or otherwise unsatisfactory; or (ii) with respect to any particular task, TARGACEPT determines that SIEGFRIED does not possess the experience, expertise or capability required to perform such task.

1.9 “FDA” shall mean the United States Food and Drug Administration.

1.10 “FULL TIME EQUIVALENT (FTE)” is defined as **[********]** per year of project work as provided by a chemist, pharmaceutical scientist, analytical chemist or regulatory specialist. FTE cost is fully loaded and, without limiting the generality of the foregoing, includes administrative overhead and quality support.

1.11 “GMP” shall mean those practices in the manufacture of pharmaceutical products that are recognized from time to time as the current good manufacturing practices in accordance with FDA regulations, guidelines and other administrative interpretations and rulings in connection therewith, including, but not limited to those regulations cited in 21 C.F.R. §§ 210 and 211 and the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use, Guidance for Industry Q7A Good Manufacturing Practice Guidance for Active Pharmaceutical Ingredients, August 2001.

1.12 “KNOW-HOW” shall mean information and materials, including, without limitation, ideas, concepts, discoveries, inventions, developments, improvements, know-how, expertise, trade secrets, designs, devices, equipment, process conditions, specifications, algorithms, notation systems, works of authorship, computer programs, technologies, formulas, techniques, methods, procedures, assay systems, applications, experimental results, data (including, without limitation, analytical, toxicological, pharmacological, clinical, bioequivalence and stability data), documentation, reports, enzymes, reagents, proteins, peptides, organisms, formulations, chemical compounds and products, whether patentable or otherwise.

1.13 “MASTER PRODUCTION RECORD” shall mean, with respect to any particular PRODUCT, the formal set of instructions for PRODUCTION of such PRODUCT.

1.14 “NEW IP” shall mean all NEW KNOW-HOW and all patents, patent applications, copyrights, trade secrets and other intellectual property rights pertaining to NEW KNOW-HOW.

1.15 “NEW KNOW-HOW” shall mean all KNOW-HOW that pertains solely to one or more SELECTED COMPOUNDS, the DEVELOPMENT of one or more SELECTED COMPOUNDS or the PRODUCTION of one or more SELECTED COMPOUNDS into one or more PRODUCTS that is conceived, developed, made and/or reduced to practice by SIEGFRIED during the TERM. NEW KNOW-HOW shall not include or constitute SIEGFRIED KNOW-HOW.

1.16 “PRODUCT” shall mean a SELECTED COMPOUND with particular SPECIFICATIONS.

1.17 “PRODUCTION” shall mean, collectively, the activities pertaining to the pre-commercial production of PRODUCT (which may include, without limitation, the manufacture, storage and supply of quantities of PRODUCT) that are described as Phase II – Kilo Lab or Pilot Production under Scope of Work in the mutually agreed upon sub-appendix to Appendix B applicable to the particular PRODUCT. A separate sequentially numbered sub-appendix (B-1, B-2 and so on) shall be prepared for each PRODUCT for which SIEGFRIED undertakes PRODUCTION at TARGACEPT’s request, which sub-appendix shall include the costs chargeable to TARGACEPT for such services (based on the rates specified herein), be dated and signed by an authorized employee of each party, attached hereto and thereupon become a part hereof.

1.18 “REGULATORY AUTHORITIES” shall mean those agencies or authorities responsible for marketing approval or regulation of any PRODUCT in the United States (including, without limitation, the FDA) or any foreign jurisdiction.

1.19 “SELECTED COMPOUND” shall mean a COMPOUND (or finished dosage form(s) of a COMPOUND) for which TARGACEPT engages SIEGFRIED to perform DEVELOPMENT or PRODUCTION as specified from time to time in a sub-appendix to Appendix A. A separate sequentially numbered sub-appendix (A-1, A-2 and so on) shall be prepared for each SELECTED COMPOUND, which sub-appendix shall be dated and signed by an authorized employee of each party, attached hereto and thereupon become a part hereof.

1.20 “SIEGFRIED IP” shall mean all SIEGFRIED KNOW-HOW and all patents, patent applications, copyrights, trade secrets and other intellectual property rights controlled by SIEGFRIED pertaining to the SIEGFRIED KNOW-HOW.

1.21 “SIEGFRIED KNOW-HOW” shall mean all KNOW-HOW: (a) not in the public domain and in the possession of SIEGFRIED as of the Effective Date; (b) conceived, developed, acquired, made and/or reduced to practice by SIEGFRIED during the TERM that pertains to development or production technologies applicable to the development or preparation of active pharmaceutical compounds and intermediates (but not any SELECTED COMPOUND or PRODUCT) or of formulations of such compounds and intermediates; or (c) conceived, developed, acquired, made and/or reduced to practice by SIEGFRIED during the TERM that pertains to development and production technologies generally applicable to the development or preparation of a variety of active pharmaceutical compounds and intermediates (at least one of which, but not all of which, is a SELECTED COMPOUND or PRODUCT) or of formulations of such compounds and intermediates. SIEGFRIED KNOW-HOW shall not include or constitute NEW KNOW-HOW.

1.22 “SPECIFICATIONS” shall mean the specifications for particular Product set forth in the applicable sub-appendix to Appendix A, as the same may be amended in accordance with the terms of this AGREEMENT.

1.23 “TARGACEPT IP” shall mean all TARGACEPT KNOW-HOW and all patents, patent applications, copyrights, trade secrets and other intellectual property rights controlled by TARGACEPT pertaining to the TARGACEPT KNOW-HOW.

1.24 “TARGACEPT KNOW-HOW” shall mean all KNOW-HOW not in the public domain and in the possession of TARGACEPT as of the Effective Date, or conceived, developed, acquired, made or reduced to practice by TARGACEPT during the TERM, that pertains to one or more SELECTED COMPOUNDS or PRODUCTS or the DEVELOPMENT or PRODUCTION of one or more SELECTED COMPOUNDS or PRODUCTS. TARGACEPT KNOW-HOW shall not include or constitute NEW KNOW-HOW.

1.25 “TERM” shall have the meaning ascribed to it in Section 9.1.

2. DEVELOPMENT and PRODUCTION

2.1 TARGACEPT hereby engages SIEGFRIED to undertake DEVELOPMENT and/or PRODUCTION as set forth in sub-appendices to this AGREEMENT from time to time, upon the terms and conditions set forth in this AGREEMENT, and SIEGFRIED hereby accepts such engagement.

2.2 With respect to each SELECTED COMPOUND for which TARGACEPT engages SIEGFRIED to undertake DEVELOPMENT, SIEGFRIED shall use all commercially reasonable efforts to complete such DEVELOPMENT in accordance with the Scope of Work set forth as Phase I – Laboratory in the applicable sub-appendix to Appendix B so as to meet the timeline and budget for the completion of such DEVELOPMENT set forth in such sub-appendix.

2.3 With respect to each PRODUCT for which TARGACEPT engages SIEGFRIED to undertake PRODUCTION, SIEGFRIED shall use all commercially reasonable efforts to undertake PRODUCTION in accordance with the Scope of Work set forth as Phase II – Pilot Production in the applicable sub-appendix to Appendix B so as to meet the timeline and budget for the completion of PRODUCTION and the delivery of the quantities of PRODUCT set forth in such sub-appendix.

2.4 TARGACEPT shall evaluate the samples of each SELECTED COMPOUND delivered as part of its DEVELOPMENT and shall evaluate the SPECIFICATIONS and MASTER PRODUCTION RECORD prepared by SIEGFRIED for the PRODUCTION of each PRODUCT. In the event that TARGACEPT is not satisfied with the samples of a SELECTED COMPOUND or the SPECIFICATIONS or the MASTER PRODUCTION RECORD for PRODUCTION of a PRODUCT, SIEGFRIED shall continue to consult with TARGACEPT on the process for the PRODUCTION of such PRODUCT. SIEGFRIED shall not initiate PRODUCTION of any PRODUCT unless and until it shall have received written approval from TARGACEPT of the PRODUCT's SPECIFICATIONS (such approved SPECIFICATIONS to be reflected in a duly executed amendment to the sub-appendix to Appendix A applicable to such PRODUCT) and MASTER PRODUCTION RECORD and, once approved by TARGACEPT, shall not change the PRODUCT's SPECIFICATIONS or MASTER PRODUCTION RECORD without TARGACEPT's prior written approval.

2.5 Laboratory studies conducted as part of any DEVELOPMENT may, but need not, be performed in compliance with GMP; provided that all DEVELOPMENT and PRODUCTION associated with the manufacture or storage of any PRODUCT shall be performed in compliance with GMP, SIEGFRIED'S standard operating procedures (SOPs) for the manufacture, storage and delivery of material in compliance with GMP and all applicable laws, regulations, rules and regulatory guidance (including, without limitation, the ACT). Further, each PRODUCT manufactured hereunder shall meet its SPECIFICATIONS, all PRODUCTION of a PRODUCT shall be in accordance with its MASTER PRODUCTION RECORD and SIEGFRIED warrants compliance with the foregoing to TARGACEPT. Without limiting the generality of the foregoing, SIEGFRIED: (i) shall take all steps necessary to ensure that each PRODUCT that it manufactures pursuant to this AGREEMENT is free of cross-contamination from any other manufacturing or similar activities; (ii) shall complete qualified cleaning procedures approved by TARGACEPT after review of SIEGFRIED's applicable SOPs and carry out product changeover according to SIEGFRIED's applicable SOPs prior to manufacturing any PRODUCT for TARGACEPT; (iii) shall not rework any BATCH without TARGACEPT's prior written consent; and (iv) represents and warrants to TARGACEPT that its standard operating procedures for the manufacture, storage and delivery of material in compliance with GMP conform with best industry practices for the manufacture, storage and delivery of such material for use in human clinical trials.

2.6 SIEGFRIED shall perform all DEVELOPMENT and PRODUCTION at its facility located in Zofingen, Switzerland. SIEGFRIED shall commit the personnel, and shall reserve the development and pilot plant capacity, necessary to carry out its obligations pursuant to each sub-appendix to this AGREEMENT. Each project manager or other employee or personnel assigned by SIEGFRIED to the performance of its obligations hereunder shall be appropriately qualified, trained and experienced for the tasks he or she is to perform. SIEGFRIED's project manager and other technical personnel shall make themselves available to meet with TARGACEPT (in person in Zofingen, Switzerland or by telephone) at such times and at such frequency as TARGACEPT shall reasonably request.

2.7 PRODUCT shall be used by TARGACEPT for stability, preclinical, clinical and other pre-commercial purposes.

3. TRANSFER of INFORMATION and MATERIALS

3.1 TARGACEPT shall be responsible for providing SIEGFRIED with such TARGACEPT KNOW-HOW as is reasonably necessary for SIEGFRIED to conduct the DEVELOPMENT of a particular SELECTED COMPOUND or PRODUCTION of a particular PRODUCT called for by any sub-appendix to this AGREEMENT (including, without limitation, any laboratory-scale process or analytical methods).

3.2 SIEGFRIED shall be responsible (subject to the provisions of Section 10.3) for the procurement of all raw materials as are required for SIEGFRIED to conduct the DEVELOPMENT or PRODUCTION called for by any sub-appendix to this AGREEMENT.

3.3 Upon any expiration of the TERM or termination of this AGREEMENT, for whatever reason, SIEGFRIED shall forward to TARGACEPT, upon TARGACEPT's request, all quantities of raw material supplied by TARGACEPT or purchased by SIEGFRIED pursuant to this AGREEMENT, all quantities of each SELECTED COMPOUND or PRODUCT, and all quantities of any other material produced pursuant to this AGREEMENT (including, without limitation, materials constituting works-in-progress) within sixty (60) days. Notwithstanding the foregoing, SIEGFRIED shall be entitled to retain such samples of the foregoing as are required by law or as are required in order for SIEGFRIED to comply with its SOPs.

4. COLLABORATION and REPORTING; REGULATORY SUPPORT

4.1 SIEGFRIED shall perform all DEVELOPMENT and PRODUCTION in collaboration with TARGACEPT and shall keep TARGACEPT regularly informed with respect to the status of all DEVELOPMENT and PRODUCTION. Without limiting the generality of the foregoing, SIEGFRIED shall provide TARGACEPT with monthly written reports summarizing the progress of the work performed or to be performed in accordance with each outstanding sub-appendix to Appendix B.

4.2 At no cost to TARGACEPT, SIEGFRIED shall assign a project manager reasonably acceptable to TARGACEPT to coordinate and monitor all technical aspects of DEVELOPMENT and PRODUCTION of all SELECTED COMPOUNDS.

4.3 Each party shall appoint one representative to be the primary point of contact for the interaction of the parties in connection with this AGREEMENT and all day-to-day communication between the parties under this AGREEMENT shall be addressed to such representatives. Any notice required under this AGREEMENT must be given in writing in accordance with the terms of this Section 4.3. Any report, approval or notice required or permitted to be given under or in connection with this AGREEMENT shall be in writing and sent by (i) certified or registered mail, return receipt requested, postage prepaid, (ii) a nationally-recognized overnight courier service, or (iii) hand delivery to the representative for such party at the address set forth below. A party may change its representative or address by written notice to the other party given in accordance with this Section 4.3. Notice shall be deemed given on the third business day after being sent in the case of delivery by mail, on the first business day after being sent in the case of delivery by overnight courier, and on the date of delivery in the case of delivery by hand or, in each case, upon actual receipt if earlier.

The addresses of the parties and representatives are as follows:

If to TARGACEPT: TARGACEPT, Inc.
200 East First Street, Suite 300
Winston-Salem, NC 27101-4165

Representative: David Moore
E-Mail: david.moore@targacept.com

If to SIEGFRIED: SIEGFRIED Ltd.
Untere Brühlstrasse 4
4800 Zofingen
Switzerland
Representative: Scott M. Powers
E-Mail: scott.powers@siegfried-usa.com

4.4 SIEGFRIED shall, if requested by TARGACEPT: (i) maintain a complete Drug Master File (DMF) containing all information, data and documentation necessary to complete fully the Chemistry, Manufacturing and Controls (CMC) sections of an investigational new drug application (IND) and new drug application (NDA) for submission to the FDA for each SELECTED COMPOUND; (ii) submit each such DMF to the FDA (and those other REGULATORY AUTHORITIES specified by TARGACEPT) in accordance with applicable law and regulations; (iii) provide TARGACEPT with a letter of authorization to enable the FDA and any comparable REGULATORY AUTHORITY in a foreign jurisdiction to access and reference each such DMF; (iv) prepare and provide to TARGACEPT upon request a dossier that includes all validated analytical methods and stability studies for such SELECTED COMPOUND, if applicable, and for the finished dosage form of such PRODUCT, if applicable, sufficient to enable (A) a competent manufacturer of pharmaceutical products to manufacture the SELECTED COMPOUND into PRODUCT or the final dosage form of such PRODUCT, as the case may be, in commercial quantities and (B) TARGACEPT to obtain requisite FDA approval of an NDA and the requisite approval of other REGULATORY AUTHORITIES of the equivalent outside of the United States; (v) provide to TARGACEPT such other documentation and related information as it determines to be necessary, or as TARGACEPT reasonably requests, in connection with the filing of any IND, NDA or other filing or submission to, or correspondence with, the FDA or any comparable foreign REGULATORY AUTHORITY by or on behalf of TARGACEPT; and/or (vi) otherwise cooperate with TARGACEPT in all reasonable respects to assist TARGACEPT in connection with obtaining FDA approval of an IND or NDA (or the approval of the equivalent of any other REGULATORY AUTHORITY); provided that the reasonable costs actually incurred by SIEGFRIED to perform the services requested by TARGACEPT under this Section 4.4, based on actual time spent and the FTE rate set forth in Section 10.2, may be invoiced by SIEGFRIED to TARGACEPT.

5. DOCUMENTATION and RECORD KEEPING; SAMPLES

5.1 SIEGFRIED shall keep complete and accurate accounts, notes, data and records of all work that it performs under this AGREEMENT (including, without limitation, complete and accurate records pertaining to the methods and facilities used for PRODUCTION of PRODUCT). Without limiting the generality of the foregoing, with respect to each BATCH of each PRODUCT, SIEGFRIED shall maintain and submit to TARGACEPT copies of the completed batch record, deviation reports, out-of-specification records, investigation reports, in-process control raw data, analytical data, a certificate of analysis certifying that the BATCH meets the applicable SPECIFICATIONS and the MASTER PRODUCTION RECORD.

5.2 SIEGFRIED shall retain all raw data for three (3) years from the expiration of the TERM or termination of this AGREEMENT for any reason. After this period, SIEGFRIED shall, upon the timely request of TARGACEPT within sixty (60) days after notification from SIEGFRIED, forward such data to TARGACEPT. Otherwise, SIEGFRIED may destroy such raw data.

5.3 SIEGFRIED shall retain samples of PRODUCT for each BATCH for a period of four (4) years after TARGACEPT's acceptance of such BATCH, each such sample size shall be twice the size necessary to conduct quality control testing. In addition, SIEGFRIED shall retain samples of isolated intermediates, if any, for each BATCH in accordance with SIEGFRIED's SOPs. Upon TARGACEPT's written request, SIEGFRIED shall provide TARGACEPT with up to one-half the original amount of any retained sample of PRODUCT or isolated intermediate at no cost to TARGACEPT.

6. QUALITY ASSURANCE AUDITS and INSPECTIONS

6.1 SIEGFRIED's quality assurance group shall closely monitor and report on the DEVELOPMENT of each SELECTED COMPOUND and the PRODUCTION of each PRODUCT, as applicable, in order to verify compliance with GMP and the ACT.

6.2 TARGACEPT shall have the right to request a quality assurance audit of the DEVELOPMENT of any SELECTED COMPOUND or the PRODUCTION of any PRODUCT in order to verify compliance of DEVELOPMENT and PRODUCTION with the terms of this AGREEMENT. All visits shall be during normal business hours, shall not, either individually or when taken together with all other such visits, unreasonably interrupt the operation of SIEGFRIED, and TARGACEPT shall be responsible for all costs that it incurs in connection with any such visit. Further, all visiting employees and consultants of TARGACEPT shall have executed an appropriate non-disclosure agreement or otherwise be under an obligation of confidentiality consistent with Article 8 and shall comply at all times with all security and other personnel and visitor procedures of SIEGFRIED.

6.3 Unless required by law, SIEGFRIED shall have no contact or communication with any REGULATORY AUTHORITY regarding any DEVELOPMENT or PRODUCTION without the prior written consent of TARGACEPT, and TARGACEPT shall be solely responsible for all such contacts and communications. In the event that SIEGFRIED receives any contact or communication from any REGULATORY AUTHORITY pertaining to any DEVELOPMENT or PRODUCTION, SIEGFRIED shall notify TARGACEPT immediately and shall provide TARGACEPT with copies of any tangible manifestations of any such contact or communication within one (1) business day thereafter. TARGACEPT shall be entitled to participate with

SIEGFRIED in the preparation and submission of a response to any such contact or communication. SIEGFRIED shall allow inspections by REGULATORY AUTHORITIES of its facilities or resources involved or to be involved in any DEVELOPMENT and PRODUCTION. In such event, SIEGFRIED shall inform TARGACEPT prior to such inspection if at all possible or, if not possible, immediately following such inspection. TARGACEPT shall be entitled to (i) be present during any such inspection for which SIEGFRIED receives prior notice that (A) is limited to facilities or resources devoted solely to SELECTED COMPOUNDS, DEVELOPMENT or PRODUCTION or (B) could not reasonably be expected to result in TARGACEPT having access to confidential or proprietary information of any third party and (ii) participate with SIEGFRIED, whether or not SIEGFRIED receives prior notice, in the preparation and submission of a response to any contact or communication received from a REGULATORY AUTHORITY following such inspection.

7. RIGHTS, INVENTIONS and PATENTS

7.1 All TARGACEPT IP shall be and remain the exclusive property of TARGACEPT. All SIEGFRIED IP shall be and remain the exclusive property of SIEGFRIED. All NEW IP shall be “works made for hire” and shall be the exclusive property of TARGACEPT. Further, all records of work performed by SIEGFRIED under this AGREEMENT and all reports delivered or required to be delivered by SIEGFRIED to TARGACEPT under this AGREEMENT shall be “works made for hire” and shall be the exclusive property of TARGACEPT. Notwithstanding the foregoing, solely to the extent necessary to comply with applicable laws and regulations, SIEGFRIED shall have the right to keep one (1) copy, or if so required one (1) original, of such records and reports, such records and reports not be used for any commercial purposes whatsoever.

7.2 In the event that TARGACEPT, or its designee, seeks patent protection for any NEW KNOW-HOW, TARGACEPT, or its designee, shall bear the costs, including, but not limited to, attorneys fees, associated with preparing, filing and prosecuting such patent applications and for maintaining such patent protection as may be granted. SIEGFRIED hereby: (i) agrees to promptly disclose, and deliver all information related to, all NEW KNOW-HOW to TARGACEPT; (ii) represents and warrants to TARGACEPT that each of its employees or other personnel that participates in any aspect of DEVELOPMENT or PRODUCTION has taken all necessary steps to irrevocably assign to SIEGFRIED any and all rights that he or she may have in such NEW KNOW HOW or any related NEW IP; (iii) assigns to TARGACEPT any rights it may have or acquire in such NEW KNOW HOW and any related NEW IP; and (iv) agrees to execute such documents and to provide TARGACEPT with such other reasonable assistance at TARGACEPT’s reasonable expense as TARGACEPT may request to assist it in its acquisition and enforcement of NEW IP in any or all countries.

7.3 TARGACEPT hereby grants to SIEGFRIED and its AFFILIATES a non-exclusive, non-sublicensable, royalty-free license under the TARGACEPT IP and NEW IP solely to conduct during the TERM DEVELOPMENT and PRODUCTION requested by TARGACEPT hereunder.

7.4 SIEGFRIED hereby grants to TARGACEPT a non-exclusive, worldwide, perpetual irrevocable, sublicensable, royalty-free license under SIEGFRIED IP conceived, developed, acquired made and/or reduced to practice by SIEGFRIED, in whole or in part, in the performance of DEVELOPMENT or PRODUCTION hereunder to develop, make, have made, use, sell, have sold, offer for sale, import and have imported compounds (and intermediates and formulations of compounds or intermediates) and otherwise to exploit such SIEGFRIED IP in connection therewith. SIEGFRIED hereby agrees to promptly disclose, and deliver all information related to, such SIEGFRIED IP to TARGACEPT.

7.5 The license granted to TARGACEPT under Section 7.4 is subject to TARGACEPT's payment of all amounts due to SIEGFRIED and not subject to a good faith dispute.

8. CONFIDENTIALITY

8.1 Each party agrees (i) to retain in strict confidence and not to disclose, divulge or otherwise communicate to any other person or entity any CONFIDENTIAL INFORMATION of the other party, whether disclosed prior to or after the Effective Date hereof, and (ii) not to use any such CONFIDENTIAL INFORMATION for any purpose, except pursuant to, and in order to carry out, the terms and objectives of this AGREEMENT, provided that each party (A) may disclose CONFIDENTIAL INFORMATION of the other party to its or any of its AFFILIATE'S officers, directors, employees, agents, consultants, permitted subcontractors or other representatives (the "Representatives"), who, in each case, need to know such CONFIDENTIAL INFORMATION for purposes of its implementation of, and performance of its obligations under, this AGREEMENT, and (B) shall be liable for any breach of this Article 8 caused by any of its Representatives.

8.2 Each party agrees to use at least the same standard of care to safeguard the other party's CONFIDENTIAL INFORMATION as it uses to protect its own proprietary or confidential information of comparable sensitivity (but not less than reasonable care).

8.3 Each party warrants that each of its Representatives to whom any CONFIDENTIAL INFORMATION is revealed shall previously have been informed of the confidential nature of the CONFIDENTIAL INFORMATION and shall be legally obligated to maintain its confidentiality under terms at least as stringent as those contained herein.

8.4 The provisions of Sections 8.1-8.3 shall not apply to any CONFIDENTIAL INFORMATION which:

a) was known by the receiving party prior to its disclosure to the receiving party by the other party, as evidenced by the prior written records of the receiving party (provided that this clause a) shall not apply to NEW IP); or

b) either before or after the date of disclosure to the receiving party by the other party is lawfully disclosed to the receiving party by an independent, unaffiliated third party rightfully in possession of the CONFIDENTIAL INFORMATION; or

c) either before or after the date of disclosure to the receiving party by the other party becomes published or generally known to the public through no fault or omission on the part of the receiving party; or

d) is developed independently by the receiving party without use of CONFIDENTIAL INFORMATION of the other party, as evidenced by the written records of the receiving party; or

e) is required to be disclosed by the receiving party to comply with applicable laws, to defend or prosecute litigation, or to comply with governmental laws or regulations, provided that the receiving party (i) provides prior written notice of such disclosure to the other party, (ii) limits such disclosure to only that necessary to satisfy its legal obligations and (iii) to the extent practicable under the circumstances, provides the other party with a reasonable opportunity to obtain an appropriate protective order or otherwise to contest such disclosure.

8.5 Notwithstanding anything herein to the contrary, the parties agree that neither disclosure or use by TARGACEPT nor use by SIEGFRIED of CONFIDENTIAL INFORMATION of the other party as reasonably necessary in the exercise of the respective licenses granted in Sections 7.3 and 7.4 shall be a violation of any term or condition contained in this Article 8.

8.6 Except as otherwise set forth in this AGREEMENT, nothing herein shall be construed as giving either party any right, title, interest in or ownership of the CONFIDENTIAL INFORMATION of the other party. For the purposes of this AGREEMENT, any specific item disclosed as part of CONFIDENTIAL INFORMATION shall not be deemed to be in the public domain or in the prior possession of the receiving party merely because it is embraced by more general information in the public domain or by more general information in the prior possession of the receiving party.

8.7 The confidentiality obligations of the parties contained in this Article 8 shall remain binding on both parties during the TERM and for a period of seven (7) years after the expiration or termination of this AGREEMENT, regardless of the cause of such expiration or termination. The parties acknowledge that any breach of this Article 8 would cause irreparable harm to the other party and that the non-breaching party shall be entitled to specific performance or injunctive relief to prevent such breach or threatened breach, in addition to whatever remedies such party may otherwise be entitled to at law or in equity.

9. TERM and TERMINATION; SURVIVAL

9.1 The initial term of the AGREEMENT shall commence on the EFFECTIVE DATE and continue for a period of three (3) years (the “Initial Term”), renewable in two (2) year increments thereafter (each a “Renewal Term” and, together with the Initial Term, the “TERM”). Unless either party gives the other notice of its intention not to renew this AGREEMENT by the date twelve (12) months prior to the expiration of the Initial Term or the then-current Renewal Term, as the case may be, this AGREEMENT shall be deemed to be automatically extended for a Renewal Term.

9.2 Either party shall be entitled to terminate the AGREEMENT at any time after twenty-four (24) months upon not less than twelve (12) months written notice; provided that (i) either party shall be entitled to terminate the AGREEMENT immediately in the event of a material breach by the other party that is not cured within thirty (30) days after written notice of such breach and (ii) TARGACEPT shall be entitled to terminate the AGREEMENT upon written notice in the event SIEGFRIED (A) increases its rates applicable in any Renewal Term (or in any portion of any Renewal Term) **[********]** and (B) did not notify TARGACEPT of such increased rates at least **[********]** prior to the date by which TARGACEPT was required pursuant to Section 9.1 to give notice of non-renewal with respect to the Renewal Term in which such increased rates are to take effect. The effective date of any such termination shall be the last day of the TERM.

9.3 Upon termination of the AGREEMENT: (i) all work in process at the time notice of termination is given shall be terminated as soon as practicable thereafter; (ii) SIEGFRIED’s deliverables obligations pursuant to this AGREEMENT (including any and all outstanding sub-appendices to this AGREEMENT) shall survive with respect to all DEVELOPMENT and PRODUCTION completed as of the effective date of such termination; (iii) SIEGFRIED shall promptly deliver to TARGACEPT any and all PRODUCT in its possession; and (iv) SIEGFRIED may invoice TARGACEPT for its costs, determined as provided herein, (i) for all DEVELOPMENT and PRODUCTION actually performed as of such termination date and (ii) incurred directly to terminate performance hereunder (including, without limitation, any materials necessary to terminate performance, like a reagent) unless TARGACEPT terminates this AGREEMENT for material breach by SIEGFRIED.

9.4 The provisions of Sections 2.5, 3.3, 4.3, 6.3, 7.1 7.2, 7.4, 7.5, 9.3, 9.4, 10.6 (second sentence only), 12.2, 13.2 (second sentence only), 13.3, 13.4, 13.5, 13.6, 13.7, 13.8, 13.9 and Articles 1 (to the extent of definitions specified therein are used in a surviving provision), 5, 8, 14, 15, 16 shall survive any expiration of the TERM or termination of this AGREEMENT for any reason.

10. PURCHASE COMMITMENT, PAYMENT and DELIVERIES

10.1 TARGACEPT shall (i) engage SIEGFRIED to perform a minimum of **[********]** in DEVELOPMENT during 2004 and (ii) not during the TERM engage any party other than SIEGFRIED to develop a synthetic chemical process or finished dosage development studies and formulation for a SELECTED COMPOUND or to effect pre-commercial production of PRODUCT unless an EXCLUSION CONDITION applies. If practicable, TARGACEPT shall use commercially reasonable efforts to communicate its DEVELOPMENT commitments during the TERM to SIEGFRIED on or before December of the year preceding its anticipated expenditures. TARGACEPT agrees to consider in good faith engaging SIEGFRIED for development of COMPOUNDS in the TARGACEPT development pipeline.

10.2 For all DEVELOPMENT requested by TARGACEPT, SIEGFRIED shall charge TARGACEPT an industry discounted Full Time Equivalent (FTE) rate of **[********]** for laboratory work, including all chemicals and services such as analytical method development and dossier preparation.

10.3 For all PRODUCTION requested by TARGACEPT, SIEGFRIED shall charge: (a) a discounted kilo lab rate of **[********]**; (b) a discounted pilot plant rate of **[********]**; and (c) **[********]**.

10.4 If, during the course of DEVELOPMENT, it becomes reasonably apparent to SIEGFRIED that (a) circumstances exist which could not have been foreseen by the parties and (b) such circumstances render the completion of the DEVELOPMENT and PRODUCTION materially more costly than had been foreseen by the parties, SIEGFRIED shall notify TARGACEPT in writing and the parties shall negotiate in good faith in furtherance of mutually acceptable amendment(s) to the appropriate portion(s) of the applicable sub-appendix to Appendix B.

10.5 SIEGFRIED shall invoice TARGACEPT for the DEVELOPMENT and PRODUCTION of each SELECTED COMPOUND at the completion of mutually agreed upon project milestones specified in, or as otherwise specified in, the applicable sub-appendix to Appendix B. Each such invoice will be payable by TARGACEPT thirty (30) days after its receipt.

10.6 Delivery of SELECTED COMPOUND and PRODUCT shall be “FCA ZOFINGEN” as defined in the current INCOTERMS, except that SIEGFRIED shall be responsible for loading SELECTED COMPOUND and PRODUCT onto the carrier. SIEGFRIED shall monitor shipments, shall notify TARGACEPT of shipments and shipment delays, and shall work diligently with TARGACEPT to resolve any shipment problems of all SELECTED COMPOUNDS and PRODUCTS.

10.7 If the AGREEMENT extends beyond the Initial Term, the rates provided in Sections 10.2 and 10.3 shall be subject to increase by SIEGFRIED at any time and from time to time on thirty (30) days prior written notice to TARGACEPT.

11. COMMERICAL SUPPLY OF PRODUCT

11.1 With respect to any PRODUCT for which TARGACEPT has filed or determines it is likely to file an NDA or its equivalent outside the United States, SIEGFRIED and TARGACEPT shall negotiate in good faith in furtherance of a commercially reasonable Supply Agreement with terms customary for such agreements and that would provide for: (i) SIEGFRIED or one of its affiliates to provide to TARGACEPT such PRODUCT, produced under cGMP conditions in SIEGFRIED's pilot plant or elsewhere as mutually agreed upon (including, without limitation, Siegfried (USA)'s location in Pennsville New Jersey), and in such quantities as TARGACEPT may request from time to time (the PRODUCT and quantity subject to each such request, a "Commercial Supply"), each such deliverable to be in accordance with timelines, specifications and other requirements communicated by TARGACEPT prior to SIEGFRIED commencing production of a particular Commercial Supply; and (ii) TARGACEPT to commit, for a multi-year period, to engage SIEGFRIED to manufacture at least **[********]** of the aggregate amount of such PRODUCT contracted for manufacture by or on behalf of TARGACEPT in each year in such period; provided that TARGACEPT's obligations under this Section 11.1 shall: (i) not apply if an EXCLUSION CONDITION applies; and (ii) be subject to Section 11.2. Should an EXCLUSION CONDITION of the type specified in clause (i) of the definition of EXCLUSION CONDITION (but not any other clause of the definition) apply with respect to a particular PRODUCT, TARGACEPT shall recommend SIEGFRIED as commercial manufacturer to the party with responsibility for or control of commercial manufacture of such PRODUCT.

11.2 If TARGACEPT obtains or receives from a reputable source an offer to supply PRODUCT in like quantity and quality and under similar terms and conditions as required by TARGACEPT from SIEGFRIED at a price **[********]** than the then proposed Supply Agreement price, then TARGACEPT shall so notify SIEGFRIED in writing and provide documentation of the price it has received from the reputable source; provided, however, that TARGACEPT shall be permitted to delete the identity of the source in any documentation provided. Within fifteen (15) days of the date of TARGACEPT'S notice, SIEGFRIED shall notify TARGACEPT in writing of its decision as to match the price offered from the reputable source. If TARGACEPT does not receive such notice from SIEGFRIED prior to the expiration of the fifteen (15) day response period, then TARGACEPT shall be free to discontinue negotiations on such the Supply Agreement for such PRODUCT and pursue other options for supply thereof at its own discretion.

12. WARRANTIES

12.1 Each party represents and warrants that it has the power and authority to enter into the AGREEMENT and to perform its obligations hereunder and that, as of the Effective Date, it is not (and will not hereafter become) a party to any agreement, contract or arrangement with any third party, or under any obligation or restriction (including, without limitation, pursuant to its charter documents or bylaws), which in any way limits or conflicts with its ability to fulfill any of its obligations under this AGREEMENT.

12.2 SIEGFRIED makes no representation or warranty that (i) the processes used in DEVELOPMENT OR PRODUCTION of any SELECTED COMPOUND or PRODUCT or (ii) the production, use or importation of SELECTED COMPOUND or PRODUCT will not infringe any patent or other proprietary right belonging to a third party. Notwithstanding the foregoing, SIEGFRIED represents and warrants to TARGACEPT that, as of the Effective Date, (A) it has not received any notice from any third party that the practice of the SIEGFRIED IP infringes any patent or other proprietary rights of any third party and (B) SIEGFRIED has no knowledge of any third party patent or proprietary rights that might be infringed by the practice of the SIEGFRIED IP. Further, SIEGFRIED covenants with TARGACEPT that it will not knowingly use any infringing or misappropriated SIEGFRIED IP in any DEVELOPMENT or PRODUCTION.

13. PRODUCT QUALITY, INDEMNIFICATION, LIMITATION OF LIABILITY and INSURANCE

13.1 In the case of a material error by SIEGFRIED (or other situation over which SIEGFRIED has control) which results in an inability to meet the parameters, budgets or timelines for DEVELOPMENT or PRODUCTION set forth in a particular sub-appendix to Appendix B, SIEGFRIED shall inform TARGACEPT immediately and shall exercise diligent efforts to remedy the situation so that such parameters, budgets and timelines are achieved as soon as possible thereafter.

13.2 In the event that TARGACEPT believes it is justified in rejecting PRODUCT because it does not meet the requirements of Section 2.5, TARGACEPT shall inform SIEGFRIED accordingly with a written notice delivered within forty-five (45) days from the date of its receipt of the PRODUCT, and SIEGFRIED shall use its best efforts to replace the rejected PRODUCT with compliant PRODUCT as soon as possible thereafter. Without prejudice to the foregoing obligation, if SIEGFRIED does not agree with the basis for TARGACEPT’s rejection, the parties shall repeat the sampling and analysis of the rejected PRODUCT. Should TARGACEPT still believe it is justified in rejecting the PRODUCT following such repeated sampling and analysis, TARGACEPT shall have the right to engage an independent third party to perform the sampling and analysis of the rejected PRODUCT. Should the independent third party determine that the PRODUCT does not meet the requirements of Section 2.5, SIEGFRIED shall be responsible for the costs of replacement of the rejected PRODUCT and the sampling and analysis conducted by the independent third party, which replacement and payment of sampling and analysis costs shall, in addition to TARGACEPT’s right of termination under Section 9.2, be TARGACEPT’s exclusive remedies hereunder in connection therewith.

13.3 Subject to Sections 13.6, 13.7 and 13.8, TARGACEPT shall, at all times during the TERM and for three (3) years thereafter, indemnify, defend and hold harmless SIEGFRIED, and its directors, officers, employees and AFFILIATES (the “Other SIEGFRIED Indemnified Parties”), from and against any and all third party claims, proceedings, demands and liabilities of any kind whatsoever (all of the foregoing, collectively, “CLAIMS”), including reasonable attorneys’ fees and other legal expenses, arising out of the death of or injury to any person or out of any damage to property resulting from the use or consumption of any SELECTED COMPOUND for which SIEGFRIED provided DEVELOPMENT or any PRODUCT for which SIEGFRIED provided PRODUCTION pursuant to this AGREEMENT, unless such CLAIM results from (i) the failure of the PRODUCT (if applicable) to meet the requirements of Section 2.5 or otherwise from the breach of this AGREEMENT by SIEGFRIED or (ii) the negligence or misconduct of SIEGFRIED or any Other SIEGFRIED Indemnified Party.

13.4 Subject to Sections 13.6, 13.7 and 13.8, SIEGFRIED shall, at all times during the TERM and for three (3) years thereafter, indemnify, defend and hold harmless TARGACEPT, and its directors, officers, employees and AFFILIATES, from and against any and all CLAIMS, including reasonable attorneys’ fees and legal expenses, arising out of the death of or injury to any person or out of any damage to property resulting from the production, use or consumption of any SELECTED COMPOUND for which SIEGFRIED provided DEVELOPMENT or any PRODUCT for which SIEGFRIED provided PRODUCTION pursuant to this AGREEMENT if such CLAIM results from (i) the failure of the PRODUCT (if applicable) to meet the requirements of Section 2.5 or otherwise from a breach of this AGREEMENT by SIEGFRIED or (ii) the negligence or misconduct of SIEGFRIED or any Other SIEGFRIED Indemnified Party.

13.5 Subject to Sections 13.6, 13.7 and 13.8, TARGACEPT shall, at all times during the TERM and for three (3) years thereafter, indemnify, defend and hold harmless SIEGFRIED and the Other SIEGFRIED Indemnified Parties, from and against any and all CLAIMS, including reasonable attorneys’ fees and legal expenses, arising out of any alleged infringement of any patent or other intellectual property right held by a third party in connection with the DEVELOPMENT, use or importation of any SELECTED COMPOUND for which SIEGFRIED provided DEVELOPMENT or the PRODUCTION, use or importation of any PRODUCT for which SIEGFRIED provided PRODUCTION pursuant to this AGREEMENT (but in each case specifically excluding any CLAIM alleging infringement as a result of the exploitation of SIEGFRIED IP or NEW IP).

13.6 Any party seeking to enforce its rights under this Article 13 (an “Indemnified Party”) shall notify the party against which enforcement is sought (the “Indemnity Obligor”) in writing of the applicable CLAIM promptly (but in any event within ten (10) days after receipt of written notice thereof), specifying in reasonable detail the nature of the CLAIM, and shall provide to the Indemnity Obligor as promptly as practicable thereafter all information and documentation reasonably requested by the Indemnity Obligor to verify the CLAIM asserted. The failure of an Indemnified Party to notify the Indemnity Obligor on a timely basis will not relieve the Indemnity Obligor of any liability that it may have to the Indemnified Party, except to the extent that the Indemnity Obligor’s defense of such CLAIM is materially prejudiced by the Indemnified Party’s failure to give such notice on a timely basis.

13.7 The Indemnity Obligor may, by giving written notice to the Indemnified Party within fifteen (15) days following its receipt of the notice of the CLAIM, elect to assume the defense or the prosecution thereof, including the engagement of counsel and other advisors at its cost and expense. The Indemnified Party shall have the right to engage counsel separate from counsel engaged by the Indemnity Obligor in any such action and to participate therein, but the fees and expenses of such counsel shall be at the Indemnified Party's own expense. Whether or not the Indemnity Obligor chooses so to defend or prosecute such claim, all of the parties hereto shall cooperate in the defense or prosecution thereof and shall furnish such records, information and testimony and shall attend such conferences, discovery proceedings and trials as may be reasonably requested in connection therewith. The Indemnity Obligor shall not be liable for settlement of any such Claim effected without its prior written consent, which shall not be unreasonably withheld.

13.8 NO PARTY SHALL BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER UNDER THEORY OF CONTRACT (INCLUDING, WITHOUT LIMITATION, UNDER THIS ARTICLE 13), TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE.

13.9 At all times during the TERM and for three (3) years thereafter, each of TARGACEPT and SIEGFRIED shall maintain at its own expense a policy or policies of insurance of a type and amount sufficient to satisfy its obligations pursuant to this Article 13. Without limiting the generality of the foregoing, SIEGFRIED represents and warrants to, and covenants with, TARGACEPT that, at all times during the TERM and for three (3) years thereafter, it shall maintain comprehensive general liability insurance (or errors and omissions insurance), in each case with limits of not less than one million dollars ($1,000,000) per occurrence and three million dollars ($3,000,000) in the aggregate, and workers' compensation insurance with such limits as are required by applicable law. Either party shall, upon request, provide the other party with reasonable evidence of such insurance.

14. CHOICE OF LAW

SIEGFRIED subsidiaries and affiliates conduct a portion of their businesses, including particularly production, in the United Sates, principally in New Jersey. Since TARGACEPT is also located in the United States (in North Carolina), the parties believe that it is most convenient and efficient for this AGREEMENT to be governed by United States federal and Delaware state law. Accordingly, this AGREEMENT shall be governed and interpreted in accordance with the laws of the State of Delaware without reference to principles of conflicts of laws, and the parties agree the United Nations Convention On Contracts For The International Sale Of Goods shall not apply to this AGREEMENT.

15. DISPUTE RESOLUTION

Any dispute arising out of or relating to this contract, including the breach, termination or validity thereof, shall first be submitted to mediation and, if not settled during mediation, shall be finally resolved by arbitration in accordance with the CPR Institute for Dispute Resolution Rules for Non-Administered Arbitration by a sole arbitrator experienced in pharmaceutical manufacturing; provided that, notwithstanding the foregoing, a party shall have the right to seek a judicial temporary restraining order, preliminary injunction or similar short-term equitable relief in respect of any alleged breach or threatened breach of Article 8, which relief may be made permanent by the arbitrator(s). The arbitration shall be governed by the Federal Arbitration Act, 9 U.S.C. §§ 1-16, shall be conducted in English and judgment upon the award rendered by the arbitrator, which shall be binding, shall be in U.S. dollars may be entered by any court having jurisdiction thereof. The place of the arbitration shall be in Washington D.C. The arbitrators shall have no power to add to, subtract from or modify any of the terms or conditions of this AGREEMENT, shall base any award on applicable laws and judicial precedent and include in such award a statement of the reasons upon which the award is based. The parties consent to service of process by registered or certified mail at their respective addresses specified herein or to such other addresses of which notice hereunder shall be given. All applicable statutes of limitation and defenses based upon the passage of time shall be tolled while the procedures specified in this Section 15 are pending, and the parties shall take such action, if any, required to effectuate such tolling. Each party is required to continue to perform its obligations under this AGREEMENT pending final resolution of any dispute arising out of or relating to this AGREEMENT.

16. MISCELLANEOUS

16.1 The working language for DEVELOPMENT and PRODUCTION under this AGREEMENT, the execution of this AGREEMENT, and the interpretation of the terms of this AGREEMENT shall be the English language.

16.2 Neither this AGREEMENT, nor any of the rights or obligations hereunder, may be assigned by either party without the prior written consent of the other party, except that either party may assign this AGREEMENT without such consent, to a third party who acquires all or substantially all of the assets of the assigning party or otherwise acquires all or substantially all of the business of the assigning party to which this AGREEMENT relates.

16.3 Either party shall be excused from performing its obligation under this AGREEMENT if its performance is delayed or prevented by any cause beyond such party's control, including but not limited to, act of God, fire, explosion, weather, disease, war, insurrection, civil strife, riots, government action, or power failure. Performance shall be excused only to the extent of and during the reasonable continuance of such disability. Any deadline or time for performance specified in an appendix to this AGREEMENT that falls due during or subsequent to the occurrence of any of the causes referred to herein shall be automatically extended for a period of time equal to the period of such cause. SIEGFRIED shall immediately notify TARGACEPT if, by reason of any of the causes referred to herein, SIEGFRIED is unable to meet any deadline or time for performance specified in a sub-appendix to this AGREEMENT. The foregoing shall not be construed to alter each party's rights under the first sentence of Section 9.2.

16.4 Nothing herein or in any sub-appendix to this AGREEMENT, shall be deemed or construed to constitute or create between the parties hereto a partnership, joint venture, agency, or other relationship other than as expressly set forth herein. Neither party shall have authority to speak for, represent or obligate the other party in any way without prior written authority from the other party.

16.5 This AGREEMENT and the appendices (and sub-appendices) to this AGREEMENT, which appendices (and sub-appendices) are deemed to be a part of this AGREEMENT for all purposes, contain the complete agreement of the parties with respect to the subject matter hereof and supersede all prior understandings and agreements relating thereto. No waiver, alteration, amendment or modification of any of the provisions hereof shall be binding unless made in writing and signed by the parties; provided that, notwithstanding the foregoing, each of TARGACEPT AND SIEGFRIED acknowledges and agrees that TARGACEPT may, by written notice to SIEGFRIED, unilaterally modify and amend at any time any sub-appendix hereto applicable to a particular SELECTED COMPOUND or PRODUCT to remove application of this AGREEMENT to such SELECTED COMPOUND or PRODUCT, or to provide for termination of any or all DEVELOPMENT or PRODUCTION activities with respect to such SELECTED COMPOUND, if (i) an EXCLUSION CONDITION applies or (ii) TARGACEPT discontinues or suspends development of such SELECTED COMPOUND or PRODUCT.

16.6 In the event that any term of this AGREEMENT shall violate any applicable statute, ordinance or rule of law in any jurisdiction in which it is used, or otherwise be unenforceable, such provision shall be ineffective to the extent of such violation without invalidating any other provision hereof.

16.7 If during the term of this AGREEMENT, performance of the AGREEMENT should lead to unreasonable hardship for the one or the other Party, taking the interests of both Parties into account, both Parties shall undertake reasonable endeavors to agree amicably to amend this AGREEMENT in the light of the change in circumstances.

16.8 The waiver by the parties of any breach, covenant or condition herein contained shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant or condition herein.

16.9 This AGREEMENT may be executed in two counterparts (which may be exchanged by facsimile), each of which shall be deemed an original and both of which together shall constitute but one and the same AGREEMENT.

[The remainder of this page is left blank intentionally.]

In **WITNESS WHEREOF**, the parties have had this AGREEMENT signed by their duly authorized representatives, all as of the effective date.

For and on behalf of

SIEGFRIED LTD.

NAME: /s/ B. Vuenburg

BY: B. Vuenburg

TITLE: SVP Marketing & Development

DATE: 4 Feb. 2004

Witnesseth:

NAME: /s/ Dennis P. Bauer

BY: Dennis P. Bauer

TITLE: VP – Sales & Marketing (USA)

DATE: February 4, 2004

For and on behalf of

TARGACEPT, INC.

NAME: /s/ J. Donald deBethizy

BY: J. Donald deBethizy

TITLE: President and CEO

DATE: 1/29/04

Witnesseth:

NAME: /s/ Peter Zorn

BY: Peter A. Zorn

TITLE: Corporate Counsel

DATE: 1/29/04

APPENDIX A

SELECTED COMPOUNDS

APPENDIX A-1

[insert SELECTED COMPOUND here]

[insert specification detail here]

For and on behalf of

TARGACEPT, INC.	**SIEGFRIED LTD.**
NAME: ____________	NAME: ____________
BY: ____________	BY: ____________
TITLE: ____________	TITLE: ____________
DATE: ____________	DATE: ____________

APPENDIX B

SCOPE of WORK for SELECTED COMPOUNDS

APPENDIX B-1

Scope of work - Phase I – Laboratory

[insert detail here]

Scope of work - Phase II – Kilo Lab or Pilot Production

[insert detail here]

For and on behalf of

TARGACEPT, INC.	**SIEGFRIED LTD.**
NAME:	NAME:
BY:	BY:
TITLE:	TITLE:
DATE:	DATE:

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the reference to our firm under the caption "Experts" and to the use of our reports dated February 4, 2005, in the Registration Statement (Form S-1) and related Prospectus of Targacept, Inc. dated January 17, 2006.

Ernst & Young LLP

Greensboro, North Carolina
January 13, 2006