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

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2014

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from to

Commission File Number: 000-51173

Targacept, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**56-2020050**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
100 North Main Street, Suite 1510	
Winston-Salem, North Carolina	**27101**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (336) 480-2100
Securities registered pursuant to Section 12(b) of the Exchange Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.001 par value per share	**The NASDAQ Stock Market LLC (NASDAQ Global Select Market)**

Securities registered pursuant to Section 12(g) of the Exchange Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☐ Yes ☒ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. ☐ Yes ☒ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). ☒ Yes ☐ No

Indicate by check mark if disclosure of delinquent filers pursuant to Rule 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐	Accelerated filer ☒	Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ Yes ☒ No

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant as of June 30, 2014, was approximately $101,556,374, based on the price at which the registrant's common stock was last sold on June 30, 2014 ($4.51).

As of February 28, 2015, the registrant had 33,793,735 shares of common stock, $0.001 par value per share, outstanding.

TARGACEPT, INC.

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Cautionary Note Regarding Forward-Looking Statements

This annual report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, which we refer to as the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, which we refer to as the Exchange Act. For this purpose, any statement contained in this annual report, other than statements of historical fact, regarding, among other things:

- the plans, strategies, and objectives of management with respect to the approval and closing of our proposed merger transaction with Catalyst Biosciences, Inc.;
- the progress, scope or duration of the development of TC-6499 or any of our other product candidates or programs, such as the target indication(s) for development, the size, design, population, location, conduct, objective, duration or endpoints of any clinical trial, or the timing for initiation or completion of or availability of results from any clinical trial, for submission or approval of any regulatory filing, for interactions with regulatory authorities;
- the benefits that may be derived from any of our product candidates or the commercial opportunity in any target indication;
- our operations, financial position, revenues, costs or expenses; or
- our strategies, prospects, plans, expectations or objectives

is a forward-looking statement made under the provisions of the Private Securities Litigation Reform Act of 1995. In some cases, words such as “may,” “will,” “could,” “would,” “should,” “expect,” “intend,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue,” “ongoing,” “scheduled” or other comparable words identify forward-looking statements. Actual results, performance or experience may differ materially from those expressed or implied by any forward-looking statement as a result of various important factors, including our critical accounting policies and risks and uncertainties relating, among other things, to:

- whether our proposed merger transaction with Catalyst Biosciences, Inc. may be fully realized or takes longer to realize than expected; whether the businesses may be combined successfully or in a timely and cost-efficient manner; whether the transaction will close due to, among other things, the need to obtain shareholder approval; and whether business disruption relating to the merger may be greater than expected;
- whether our previous findings from clinical and nonclinical studies and assessments of TC-6499 in indications other than diabetic gastroparesis are predictive of a benefit for TC-6499 as a treatment for diabetic gastroparesis;
- the conduct and results of clinical trials and non-clinical studies and assessments of TC-6499 or any of our other product candidates, including the performance of third parties engaged to execute them, delays resulting from any changes to the applicable protocols or difficulties and delays in subject enrollment and data analysis;
- our ability to protect our intellectual property; and
- the timing and success of submission, acceptance and approval of regulatory filings for our product candidates.

These and other risks and uncertainties that we face are described in greater detail under the caption “Risk Factors” in Item 1A of Part I of this annual report and in other filings that we make with the Securities and Exchange Commission, or SEC. As a result of the risks and uncertainties to which our business is subject, the results or events indicated by any forward-looking statement may not occur. We caution you not to place undue reliance on any forward-looking statement.

In addition, any forward-looking statement in this annual report represents our views only as of the date of this annual report and should not be relied upon as representing our views as of any later date. We anticipate that subsequent events and developments may cause our views to change. Although we may elect to update these forward-looking statements publicly at some point in the future, we specifically disclaim any obligation to do so, except as required by applicable law. Unless explicitly stated otherwise, our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make or any future strategic alliances, collaborations or licensing or other comparable arrangements that we may enter into.

PART I

Item 1. Business.

Overview

We are a biopharmaceutical company that historically has been engaged in the development of novel NNR Therapeutics™ to treat patients suffering from serious nervous system and gastrointestinal/ genitourinary diseases and disorders. Our NNR Therapeutics selectively target a class of receptors known as neuronal nicotinic receptors, which we refer to as NNRs. NNRs are found on nerve cells throughout the nervous system and serve as key regulators of nervous system activity. However, in light of recent clinical trial disappointments in our development programs for TC-5214, TC-1734 and TC-5619, and our decision to discontinue the development of those compounds, we have shifted our strategic emphasis to external business opportunities not related to NNRs.

On March 5, 2015, we announced our entry into a definitive Agreement and Plan of Merger (the "Merger Agreement") with Catalyst Biosciences, Inc. ("Catalyst"), pursuant to which, among other things, subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, a wholly-owned subsidiary of ours will be merged with and into Catalyst, with Catalyst continuing as the surviving corporation and a wholly-owned subsidiary of ours (the "Proposed Merger"). Immediately following the effective time of the Proposed Merger, existing Catalyst equity holders are expected to own approximately 65% of the capital stock of the combined company, and existing Targacept equity holders are expected to own approximately 35% of the capital stock of the combined company. Prior to the closing of the Proposed Merger, we also expect to distribute to our stockholders a dividend of approximately $37 million in aggregate principal amount of redeemable convertible notes and approximately $20 million in cash (the "Pre-Closing Dividend"). The notes will be convertible into shares of common stock of the combined company at a conversion price of $1.31 per share, which represents 130% of the negotiated per-share value of our assets following the anticipated Pre-Closing Dividend. If, in the future, the redeemable convertible notes are fully converted into Targacept common stock, Targacept stockholders would own approximately 49% of the outstanding capital stock of the combined company on a pro forma basis as of the anticipated closing date. Targacept stockholders who are entitled to the Pre-Closing Dividend will also be entitled to any net proceeds received as a result of any disposition of Targacept's NNR compounds and related assets that occurs within up to two years after the closing of the Proposed Merger, unless those assets are sold prior to the closing of the Proposed Merger.

We expect to consummate the Proposed Merger in the second quarter of 2015.

Catalyst is a biopharmaceutical company focused on discovering and developing novel biopharmaceutical products based on engineered human proteases. Catalyst has designed its proteases to regulate the coagulation (to promote hemostasis) and complement cascades (to prevent inflammation). In collaboration with Pfizer, Catalyst's lead Factor VII product candidate PF-05280602/CB 813d has successfully completed a Phase 1 trial in hemophilia patients. In addition, Catalyst's pipeline includes promising drug candidates for Hemophilia B (FIX), pro-coagulation (FXa) and complement disorders (anti-C3).

Based on years of focused research in the NNR area, and notwithstanding our clinical development setbacks, we continue to believe that compounds that interact selectively with specific NNR subtypes have the potential to achieve positive medical effects by modulating their activity. We have built a patent estate covering the structure or therapeutic use of small molecules designed to regulate activity in the body by selectively affecting specific NNR subtypes. We do not have current plans to continue development of any of our NNR programs internally. Instead, we would seek to out-license or sell those assets to one or more third parties. Our most advanced clinical-stage NNR product candidates are described briefly below.

TC-6499

TC-6499 is a novel small molecule that modulates the activity of the a3ß4 and other NNRs as an agonist. We are currently conducting an exploratory study of TC-6499 as a treatment for diabetic gastroparesis, a disorder

which is often debilitating and chronic, and that slows or stops the passage of food from the stomach to the small intestine.

TC-6683 (formerly AZD1446)

TC-6683 is a novel small molecule that modulates the activity of the a4ß2 NNR. TC-6683 was subject to a collaboration agreement with AstraZeneca AB, or AstraZeneca, that AstraZeneca terminated effective January 2015. Upon termination of the agreement, all rights to TC-6683 reverted to Targacept. We do not have current plans to pursue additional development of TC-6683.

TC-5619 and TC-6987

TC-5619 and TC-6987 are novel small molecules that are highly selective for the a7 NNR. The a7 NNR has been shown to play a role in a variety of biological pathways associated with various diseases and disorders. We previously conducted clinical studies of TC-5619 as a potential treatment for schizophrenia, Alzheimer's disease and attention deficit hyperactivity disorder and exploratory studies of TC-6987 as a treatment for inflammatory disorders. We do not have plans to pursue additional development of these compounds in these therapeutic areas.

TC-1734

TC-1734 (also referred to in previous filings as AZD3480) is a wholly-owned novel small molecule that modulates the activity of the a4ß2 NNR. In July 2014, we announced that our Phase 2b clinical trial of TC-1734 as a treatment for mild to moderate Alzheimer's disease did not meet its primary endpoint. We have no further plans for development of TC-1734.

TC-5214

TC-5214 acts as an antagonist on the a3ß4 NNR. We previously conducted clinical studies of TC-5214 as a treatment for major depressive disorder and for overactive bladder. Most recently, in July 2014, we announced that a Phase 2b trial of TC-5214 as a treatment for overactive bladder did not meet one of the trial's two co-primary endpoints. We do not have plans to pursue additional development of this compound in these therapeutic areas.

Our business activities are conducted by one operating segment for which we provide information about revenues, profits and losses in our consolidated financial statements.

Role of NNRs in the Body

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 include 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 modulate their activity have the potential to restore this balance and therefore have promise as treatments for these diseases and disorders.

In addition, NNRs located within various target organ systems in the body are involved in transmitting signals between those systems and the spinal cord and brain. As such, these receptors are thought to play a role in a variety of physiological functions, including heart rate, digestion, respiration, salivation and uro-genital function such as urination and sexual arousal.

NNRs are comprised of five protein subunits that are arranged like staves of a barrel around a central pore. Each 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 conditions and that mutations of genes that are associated with specific NNR subunits can increase susceptibility to some diseases and disorders.

Pfizer's smoking cessation product Chantix, which acts on several NNR subtypes as well as other molecular targets in the body and is known outside of the United States as Champix, is currently the only product marketed in the United States that is believed to act predominantly by affecting NNRs. Beyond Chantix, many published studies have described beneficial effects of nicotine in humans and animals and the higher prevalence of diseases such as Alzheimer's disease and Parkinson's disease in non-smokers as compared to smokers, suggesting the therapeutic potential of compounds that interact with NNRs. However, despite their beneficial 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 in groups of nerve cells known as 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 years of focused research in the NNR area, we have been 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

We seek to provide superior treatment options for complex diseases and disorders to improve the lives of patients by developing innovative new medicines. In the light of the disappointing outcomes of our NNR studies to date, we have identified and assessed a broad range of strategic options, culminating in our decision to enter into the merger agreement with Catalyst.

- *Expand our pipeline of product candidates deliberatively.* To grow our business in the long term, we will need to expand our pipeline. After considering opportunities to broaden our NNR pipeline, in-license novel programs, or acquire another platform technology, we decided to enter into an agreement with respect to the Proposed Merger with Catalyst. Assuming the merger is consummated as planned in the second quarter of 2015, the combined company will focus its development on human engineered protease therapeutics.
- *Seek value for our pipeline of NNR Therapeutics.* Whether or not our Proposed Merger with Catalyst is completed as planned, we are seeking to monetize our NNR assets and have no plans to pursue any further NNR development ourselves.

Our Product Development Pipeline

The following table summarizes our most advanced clinical-stage NNR product candidates.

Product Candidate	Planned Target Indication(s)	Status of Development	Commercial Rights
TC-6499	Diabetic gastroparesis	Exploratory study ongoing	Targacept
TC-6683	To be determined	Inactive (Phase 2)	Targacept
TC-5619	To be determined	Inactive (Phase 2)	Targacept
TC-6987	To be determined	Inactive (Phase 2)	Targacept
TC-1734	To be determined	Inactive (Phase 2)	Targacept
TC-5214	To be determined	Inactive (Phase 2)	Targacept

Information regarding our research and development expenses for the fiscal years ended December 31, 2014, 2013 and 2012 is included under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this annual report. All of our long-lived assets are located in the United States.

TC-6499

TC-6499 is a novel small molecule that modulates the activity of the a3ß4 and other NNRs. The a3ß4 NNR is located in the gastrointestinal tract and, based on observations from previous Phase 1 development of TC-6499 in contemplation of later-stage development as a treatment for pain, we believe TC-6499 may have potential as a treatment for gastrointestinal disorders.

Ongoing Exploratory Study in Diabetic Gastroparesis

Our ongoing exploratory study of TC-6499 in diabetic gastroparesis is a double blind, placebo controlled, randomized, four-way crossover study that is being conducted at sites in the United States. The study was designed to enroll approximately 23 subjects, who receive one of four treatments (2mg, 5mg and 10mg of TC-6499 and placebo) in a randomized, crossover manner on each of four treatment visits, with each dosing period separated by approximately seven days. The primary endpoint of the study is change in gastric emptying half-time, as measured by a carbon labeled gastric emptying breath test, for each active treatment relative to placebo.

Completed Exploratory Study in Constipation-Predominant Irritable Bowel Syndrome

In an exploratory four-week study of TC-6499 that we completed in 24 subjects with constipation-predominant irritable bowel syndrome at a single site in 2011, TC-6499 outperformed placebo on an objective secondary efficacy outcome measure, the number of spontaneous bowel movements per week, but not on the primary efficacy outcome measure (a subjective subject rating of global symptom relief).

TC-6683 (formerly AZD1446)

TC-6683 is a novel small molecule that modulates the activity of the a4ß2 NNR. We discovered and advanced TC-6683 as part of a now completed preclinical research collaboration that we and AstraZeneca conducted under our 2005 collaboration agreement. AstraZeneca terminated that agreement in October 2014, effective January 2015. Upon termination of the agreement, all rights to TC-6683 reverted to Targacept. We do not have current plans to pursue additional development of TC-6683.

TC-5214

TC-5214 acts potently on a3ß4 and other NNRs. TC-5214 is one of the two enantiomers of the racemate mecamylamine hydrochloride. Enantiomers are mirror images of each other that have the same chemical but

potentially different biological properties and together form a chemical mixture known as a racemate. We have completed Phase 2 clinical trials of TC-5214 in various indications and, under a now terminated collaboration agreement with AstraZeneca, Phase 3 co-development in major depressive disorder (MDD). We currently do not have plans to pursue additional development with TC-5214.

Completed Phase 2b Clinical Trial in Overactive Bladder

We completed in July 2014 a Phase 2b clinical trial of TC-5214 in overactive bladder. The trial was a double blind, placebo controlled, randomized, parallel group trial conducted in the United States. The term “double blind” means that neither the subjects nor the investigators in the trial know which subjects receive the investigational drug (in this case, TC-5214) and which subjects receive placebo. The study, which enrolled 768 patients, included a 3- to 5-week screening period followed by a 12-week treatment period during which patients received either one of three doses of TC-5214 (0.5mg, 1mg or 2mg) or placebo twice daily. The study’s co-primary endpoints were change in urination frequency per 24 hours and change in urinary incontinence episodes per 24 hours, in each case from baseline to 12 weeks. In the trial, TC-5214 demonstrated mixed results on the co-primary endpoints by providing a statistically significant reduction in urination frequency per 24 hours and an improvement that did not reach statistical significance on episodes of urinary incontinence episodes per 24 hours. Upon completion of the study, we announced that the results did not support continuing development of TC-5214 as a treatment for overactive bladder.

Completed Clinical Program in MDD

We and AstraZeneca previously conducted a multi-clinical trial Phase 3 program for TC-5214 as an adjunct therapy, and a Phase 2b clinical trial of TC-5214 as a “switch” monotherapy, in each case in adults with MDD who do not respond adequately to initial therapy. None of these clinical trials met its primary endpoint (as used in this annual report, the terms “endpoint” and “outcome measure” have the same meaning). In the first quarter of 2012, we and AstraZeneca announced that, based on the totality of the results of the Phase 3 program, a regulatory filing for TC-5214 as an adjunct therapy for MDD would not be pursued and we reported the discontinuation of a “switch” monotherapy trial. AstraZeneca subsequently terminated our collaboration agreement for TC-5214, effective in May 2012.

TC-6987

TC-6987 is a novel small molecule that modulates the activity of the a7 NNR. Previously, we completed two exploratory Phase 2 clinical trials of TC-6987, one in asthma and one in Type 2 diabetes. We currently do not have plans to pursue additional development with TC-6987.

TC-5619

TC-5619 is a novel small molecule that modulates the activity of the a7 NNR. We have completed Phase 2 clinical trials of TC-5619 in various indications. We currently do not have plans to pursue additional development with TC-5619.

Completed Phase 2b Clinical Trial in Negative Symptoms and Cognitive Dysfunction in Schizophrenia

We completed in December 2013 a Phase 2b clinical trial of TC-5619 in negative symptoms and cognitive dysfunction in schizophrenia. The trial was a double blind, placebo controlled, parallel group study conducted at sites in Eastern Europe and the United States. The trial enrolled 477 subjects with stable psychotic symptoms and taking an approved atypical antipsychotic medication. The trial design provided for a four-week screening period, followed by a 24-week treatment period during which subjects received either one of two daily doses of TC-5619 (5mg or 50mg) or placebo together with continued treatment with an atypical antipsychotic.

The primary outcome measure in the trial was change from baseline on the Scale for the Assessment of Negative Symptoms, or SANS, at the end of the treatment period with TC-5619 as compared to placebo. SANS is an investigator assessment of improvement on the negative symptoms of schizophrenia. The key secondary outcome measures for the trial were the composite score on the CogState Schizophrenia Battery, or CSB, a computerized battery of neuropsychiatric tests that assess specific cognitive domains, and the University of California, San Diego Performance-Based Skills Assessment, brief version.

TC-5619 did not meet the primary outcome measure and did not demonstrate improvement on the key secondary measures.

Completed Phase 2 Clinical Trial in Cognitive Dysfunction in Schizophrenia

Previously, we completed a Phase 2 clinical trial of TC-5619 in cognitive dysfunction in schizophrenia. The trial was a double blind, placebo controlled, multi-center study conducted in the United States and India. In the trial, 185 subjects with schizophrenia who had stable psychotic symptoms were randomly assigned to receive either TC-5619 or placebo, together with continued treatment with an atypical antipsychotic (either quetiapine, marketed as Seroquel, or risperidone, marketed as Risperdal), for 12 weeks. Approximately half of the subjects were users of tobacco products. Subjects who received TC-5619 received a 1mg daily dose for the first four weeks, a 5mg daily dose for the next four weeks and a 25mg daily dose for the last four weeks. This type of scheduled dosing adjustment is sometimes referred to as “forced titration.”

The primary outcome measure of the trial was change from baseline on the Groton Maze Learning task of the CSB on each of three measurement dates for TC-5619 as compared to placebo. The Groton Maze Learning task is designed to assess executive function. The trial protocol defined a positive outcome on the Groton Maze Learning task as superiority (one-sided p-value < 0.10) for the TC-5619 dose group as compared to the placebo dose group after adjusting statistically to account for multiple comparisons.

In the trial, the results on the Groton Maze Learning task met the pre-defined success criteria (adjusted p-value = 0.054), as well as at two of the trial’s three measurement dates (at 4 weeks, unadjusted p-value = 0.018; and at 12 weeks, unadjusted p-value = 0.041), and were favorable for tobacco users as compared to non-tobacco users (where there was no activity on this measure) and for subjects at study sites in the United States as compared to subjects at study sites in India. Each of the p-values noted above was derived after data log transformation, a commonly utilized statistical technique where the data does not follow a normal distribution.

In addition, we observed encouraging signals (one-sided p-value < 0.10 on one of the measurement dates) in the trial on several secondary efficacy outcome measures, including SANS, Clinical Global Impression—Global Improvement, an investigator assessment of overall response, Subject Global Impression—Cognition scale, a subject self-assessment of cognitive change, and two of six computer-based items of the CSB. Other secondary efficacy outcome measures of the trial, including a composite measure of the CSB and Clinical Global Impression—Severity of Illness, an investigator assessment of severity of illness based on total clinical experience, did not demonstrate a drug effect in the dataset that included all subjects and occasionally statistically favored placebo over TC-5619 (including on the verbal memory item of the CSB after four weeks).

Completed Phase 2 Clinical Trials in Adults with ADHD and Adults with ADHDi

Previously, we completed a Phase 2 clinical trial of TC-5619 in adults with attention deficit/hyperactivity disorder, or ADHD, and a subsequent Phase 2 clinical trial of TC-5619 in adults with inattentive-predominant attention deficit/hyperactivity disorder, or ADHDi. The ADHD trial was a double blind, placebo controlled, forced titration, multi-center, 12-week study conducted in the United States. Each subject in the trial was randomly assigned to receive a daily dose of either TC-5619, beginning with 1mg and increasing to 5mg and then to 25mg, or placebo. TC-5619 did not meet the primary outcome measure of the trial, but showed encouraging signals on some of the trial’s efficacy measures in the subpopulation of subjects with ADHDi. The ADHDi trial was a double blind, placebo controlled, parallel group, multi-center, 12-week study conducted in the

United States. Subjects in the trial were randomly assigned to receive a daily dose of 5mg TC-5619, 25mg TC-5619 or placebo. TC-5619 did not meet the primary outcome measure of the trial, and we are not pursuing further development of TC-5619 in ADHD or ADHDi.

TC-1734

TC-1734 is a novel small molecule that modulates the activity of the a4ß2 NNR. We have completed Phase 2 clinical trials of TC-1734 in various indications. We currently do not have plans to pursue additional development with TC-1734.

Completed Phase 2b Clinical Trial in Mild to Moderate Alzheimer's Disease Conducted by Targacept

We completed in July 2014 a Phase 2b clinical trial of TC-1734 as a treatment for mild to moderate Alzheimer's disease. The trial was a potential registration study that was the subject of a Special Protocol Assessment agreement with the U.S. Food and Drug Administration, or FDA. It was a double blind study designed to evaluate TC-1734 head-to-head against donepezil, which is marketed as Aricept and is the medication most often prescribed for mild to moderate Alzheimer's disease. In the trial, 293 subjects diagnosed with probable Alzheimer's disease classified as mild or moderate in severity were randomly assigned to receive donepezil or a fixed 30mg dose of TC-1734 daily over 52 weeks. We conducted the study at sites predominantly in Eastern Europe and in the United States. The study had co-primary outcome measures, change from baseline after 12 months of treatment with TC-1734 as compared to donepezil on the Alzheimer's Disease Assessment Scale-cognitive subscale, or ADAS-Cog, and on a functional measure. The functional measure for European sites is the Alzheimer's Disease Cooperative Study—Activities of Daily Living Inventory, and the functional measure for U.S. sites is the Clinician's Interview Based Impression of Change Plus Caregiver Input, each of which assesses subjects' ability to perform typical day-to-day activities. In the trial, TC-1734 did not meet the objective of showing superiority to donepezil after the 52 weeks of treatment.

The study was the second clinical trial of TC-1734 in mild to moderate Alzheimer's disease. The first was conducted by AstraZeneca under our 2005 collaboration agreement with them, which terminated effective January 2015, and its outcome was inconclusive. In March 2013, AstraZeneca exercised its right to terminate TC-1734 from the now terminated collaboration agreement. As a result, all rights and licenses for TC-1734 that we granted under the agreement to AstraZeneca terminated and reverted to us effective June 2013. Previously, we received $6.2 million in nonrefundable payments from AstraZeneca in connection with our ongoing clinical trial.

Completed Phase 2b Clinical Trial in Mild to Moderate Alzheimer's Disease Conducted by AstraZeneca

In 2008, AstraZeneca completed a Phase 2b double blind, placebo controlled, dose finding, multi-center clinical trial of TC-1734 in mild to moderate Alzheimer's disease, known as the "Sirocco" trial. The Sirocco trial was conducted at sites in Western Europe, Eastern Europe and Canada. In the trial, 567 subjects diagnosed with probable Alzheimer's disease classified as mild or moderate in severity were randomly assigned to one of three dose groups of TC-1734, to donepezil, or to placebo and dosed over a 12-week period. The primary outcome measure of the trial was change from baseline on ADAS-Cog after 12 weeks of treatment with TC-1734 as compared to placebo. Some of the secondary outcome measures of the trial included the Alzheimer's Disease Cooperative Study—Clinical Global Impression of Change, or ADCS-CGIC, which is a 7-point clinician assessment of change in behavior and the ability to function, the Mini Mental State Examination, or MMSE, which is a quantitative, 30-point cognition scale, and a computer-based test battery developed by CDR Ltd. to test cognitive function.

The results of the Sirocco trial were inconclusive in that the active comparator, donepezil, did not meet the trial's criteria for statistical significance versus placebo on the primary outcome measure. TC-1734 also did not meet the trial's criteria for statistical significance versus placebo on the primary outcome measure. However, in an analysis conducted post hoc in which the most mildly impaired subjects (MMSE = 25 or 26) were excluded,

the middle dose of TC-1734 tested achieved a favorable outcome (one-sided p-value = 0.04) and donepezil showed a strong trend (one-sided p-value = 0.065).

Subjects dosed with TC-1734 showed an improvement on ADCS-CGIC and the MMSE, two of the trial's secondary outcome measures, at two of the three doses tested as compared to subjects dosed with placebo. Of the three TC-1734 doses evaluated, subjects in the middle dose group showed the most improvement on both measures as compared to subjects dosed with placebo, with a 0.5 point advantage on ADCS-CGIC and a 0.9 point advantage on the MMSE. Subjects dosed with donepezil also showed an improvement as compared to subjects dosed with placebo on ADCS-CGIC, with a 0.2 point advantage, and the MMSE, with a 1.0 point advantage. No improvement was shown in any domain of the CDR test battery in the pooled dataset of all subjects in the donepezil dose group or any of the TC-1734 dose groups as compared to the placebo dose group.

Completed Clinical Trials in Other Indications

In addition to the previous trial in Alzheimer's disease, we or AstraZeneca have completed Phase 2 clinical trials of TC-1734 in various other indications characterized by cognitive impairment. These studies have generated a range of efficacy results, including: (1) achievement of the primary outcome measure(s) (in age associated memory impairment, or AAMI, a common condition characterized by gradual memory loss or other cognitive impairment that generally occurs with normal aging, and in adults with ADHD); (2) encouraging signals (in early-stage trials in AAMI and mild cognitive impairment, or MCI); and (3) failure to achieve the primary outcome measure (in cognitive dysfunction in schizophrenia). These trials are summarized below.

AAMI (later study)	• a double blind, placebo controlled, multi-center study that we conducted in the United States • subjects were between the ages of 50 and 80 and classified with AAMI based on inclusion criteria reflecting both subjective and objective memory impairment • there were three co-primary endpoints, change from baseline on the Power of Attention and Episodic Memory factors of the CDR test battery and on the Subject Global Impression—Cognition scale at the end of 16 weeks of dosing with TC-1734 as compared to placebo • TC-1734 met all three co-primary endpoints ($p < 0.05$) at 50mg and met the Power of Attention endpoint at 25mg
Adults with ADHD	• a double blind, placebo controlled crossover design study that we and AstraZeneca conducted at a single site in the United States in which each subject served as his or her own control • two doses of TC-1734 tested • the primary outcome measure was change from baseline on the CAARS-INV total score after two weeks dosing with TC-1734 as compared to placebo, and the result was statistically significant in favor of one of the doses (50mg TC-1734, $p < 0.01$) on an intent to treat basis
AAMI (earlier study); MCI	• two double blind, placebo controlled, crossover design Phase 2 studies that we conducted, one in each indication, assessing the effects of multiple doses of TC-1734 at various time points using the CDR test battery • TC-1734 demonstrated positive effects in the AAMI study at some, but not all, dose levels and measures tested, with the results most favorable at 50mg • the results of the MCI trial were more favorable at 100mg TC-1734 and did not favor 50mg TC-1734 on any measure

Cognitive Dysfunction in Schizophrenia	• a double blind, placebo controlled, dose finding, multi-center study that AstraZeneca conducted in the United States and Canada • subjects were clinically stable schizophrenics who were active smokers and taking a marketed atypical antipsychotic • TC-1734 did not meet pre-defined success criteria on the primary endpoints, change from baseline on scores for attention/vigilance, working memory, verbal learning, speed of processing and reasoning and problem solving as measured by a computerized test battery after 12 weeks of treatment with TC-1734 as compared to placebo

Medical Need and Commercial Opportunity in Our Target Indication

Gastroparesis, also referred to as delayed gastric emptying, is a debilitating, chronic disorder that slows or stops the passage of food from the stomach to the small intestine. The most common symptoms of gastroparesis are nausea, a feeling of fullness after eating only a small amount of food, vomiting, gastroesophageal reflux, abdominal pain and bloating. Gastroparesis affects an estimated 5% to 12% of patients with diabetes and can cause a significant reduction in quality of life. Complications from the disorder may lead to hospitalizations and emergency room visits, which can have significant economic impact on individuals and society.

Preclinical Assets and Pentad Drug Discovery Technologies

In addition to our clinical-stage product candidates, we have a library of discovery or preclinical stage compounds. The most advanced of these compounds is a late-preclinical compound included in our Parkinson's disease program, which is not currently active. We have previously been awarded three grants from The Michael J. Fox Foundation for Parkinson's Research. Two of the grants were to test the potential of compounds with novel NNR pharmacologies to address abnormal involuntary movements, or dyskinesias, that are a side effect of a treatment commonly used to treat the motor deficits of Parkinson's disease called levodopa. The third grant was to identify compounds that bind to specific NNRs and can be radiolabeled and used as imaging agents to better understand any relationship between those NNRs and Parkinson's disease.

We also have sophisticated proprietary computer-based molecular design methodologies and extensive biological and chemical data for a library of diverse compounds developed and collected over more than 25 years. We refer to these technologies collectively as Pentad. In our previous drug discovery activities, we used Pentad to assess 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 and pharmaceutical profiles.

Discontinued Product

As a result of increased fees charged by the FDA and declining prescriptions, we discontinued the commercialization of Inversine®, which is currently our only approved product, effective as of September 30, 2009. Inversine® is approved in the United States for the management of moderately severe to severe essential hypertension and uncomplicated cases of malignant hypertension, which are high blood pressure disorders. Inversine® was first approved for marketing in 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.

Prior Collaborations

AstraZeneca AB

In December 2005, we entered into a collaborative research and license agreement with AstraZeneca AB. The agreement became effective in January 2006 and was initially focused in cognitive disorders. As amended

the agreement permitted AstraZeneca to pursue development and commercialization of compounds that it has licensed from us in any therapeutic area. AstraZeneca terminated the agreement effective January 2015. Upon termination of the collaboration agreement, all remaining rights and licenses to compounds granted by Targacept under the collaboration agreement to AstraZeneca terminated and reverted to Targacept, including the rights and license relating to TC-6683.

Our agreement with AstraZeneca initially included a number of different elements, including a multi-year preclinical research collaboration that we and AstraZeneca conducted until January 2010. TC-6683 is the most advanced compound that arose from the research collaboration.

In addition, we granted to AstraZeneca under the agreement a license to develop and commercialize TC-1734. In March 2013, AstraZeneca exercised its right to terminate TC-1734 from the agreement. As a result, all rights and licenses for TC-1734 that we granted under the agreement to AstraZeneca terminated and reverted to us effective June 2013. AstraZeneca also had the right under the agreement to license TC-5619 following completion of our prior Phase 2 clinical trial in cognitive dysfunction in schizophrenia. In 2011, AstraZeneca elected not to exercise this license right.

Payment Terms. AstraZeneca paid us a total of $88.1 million, including an initial fee, milestone and other product candidate-related payments, and research support payments, under the agreement.

Completed Preclinical Research Collaboration. The agreement provided for a preclinical research collaboration that we and AstraZeneca conducted between January 2006 and January 2010 to discover and develop additional compounds that act on the a4ß2 NNR. AstraZeneca paid us research fees based on an agreed reimbursement rate for research services rendered by us in the collaboration.

Development and Commercialization Costs. AstraZeneca was responsible for the clinical development and commercialization of TC-6683 and any other licensed compounds that arose from the research collaboration that it elected to advance and for funding substantially all associated costs. In addition, we received $6.2 million in payments from AstraZeneca in connection with events associated with our clinical trial of TC-1734 in mild to moderate Alzheimer's disease, which was completed in July 2014.

In December 2009, we entered into a collaboration and license agreement with AstraZeneca AB for the global development and commercialization of TC-5214 in MDD. Following completion of a Phase 3 clinical program for TC-5214 conducted under the agreement, we and AstraZeneca announced that a regulatory filing for TC-5214 as an adjunct therapy for MDD would not be pursued and we reported the discontinuation of a "switch" monotherapy trial. AstraZeneca subsequently terminated the agreement effective in May 2012. As a result of the termination, all rights and licenses for TC-5214 that we granted under the agreement to AstraZeneca terminated and reverted to us.

Patents and Proprietary Rights

We have actively sought to protect the proprietary NNR 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 forms of naturally-expressed receptors, in the United States and other jurisdictions internationally that we consider key pharmaceutical markets. We also rely upon trade secrets and contracts to protect our proprietary information. If we consummate the Proposed Merger with Catalyst, we do not anticipate that the combined company will continue to invest in protecting the intellectual property related to the NNR assets, except to the extent that such protections are necessary to enhance the opportunity to monetize the relevant assets in the short term.

As of February 28, 2015, our issued patents and pending patent applications in the United States and foreign counterparts 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.

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

Product Candidate	Patent Scope	Patent Expiration
TC-5214	Pharmaceutical composition of TC-5214	January 2020
	Methods of use of TC-5214 in overactive bladder	March 2033
TC-1734	Composition of matter for the preferred salt form of TC-1734	August 2026
TC-6683 (formerly AZD1446)	Composition of matter for TC-6683	August 2028
	Composition of matter for a family of compounds that includes TC-6683	January 2028
TC-6499	Composition of matter for TC-6499	February 2024
	Composition of matter for the preferred salt form of TC-6499	September 2032
TC-5619	Composition of matter for a racemic mixture that includes TC-5619	March 2019
	Composition of matter for a family of racemic compounds that includes a racemic mixture that includes TC-5619	August 2019
	Composition of matter for a sub-family of racemic compounds that includes a racemic mixture that includes TC-5619	December 2018
	Composition of matter for specific salt forms of TC-5619, including the preferred salt	January 2029
	Composition of matter for single enantiomer TC-5619 and salts	August 2028
	Commercial method and composition of matter for synthetic intermediates for manufacture of TC-5619	August 2028
TC-6987	Composition of matter for a family of racemic compounds that includes a racemic mixture that includes TC-6987	August 2019
	Composition of matter for a sub-family of racemic compounds that includes a racemic mixture that includes TC-6987	December 2018
	Composition of matter for single enantiomer TC-6987 and salt forms, including the preferred salt	November 2030

In addition to these patents, for some of these product candidates, we have later-expiring patents and patent applications that cover the product candidate, its use as part of combination therapy or otherwise, or methods for synthesis or composition of matter coverage for synthetic intermediates. These patents, including any patents that issue from other pending applications, could provide additional protection or a longer period of protection. We also have issued patents and pending patent applications with equivalent or substantially comparable protection for our product candidates in jurisdictions internationally that we consider key pharmaceutical markets.

The patent expiration dates referenced above do not reflect any potential patent term extension that we may receive under The United States Drug Price Competition and Patent Term Restoration Act of 1984, known as the

Hatch-Waxman Act. The Hatch-Waxman Act generally permits a patent extension term of up to five years as compensation for patent term lost during the FDA regulatory review process. Patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of FDA approval. The patent term restoration period is generally one-half of the time between the effective date of an investigational new drug application, or IND, and the submission date of a new drug application, or NDA, plus the time between the submission date and approval date of an NDA. Only one patent applicable to an approved drug is eligible for an extension, and, with limited exceptions, 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.

License Agreements

We consider the following license agreements to be important to any ongoing activity related to our NNR assets.

University of South Florida Research Foundation

Pursuant to a license agreement with University of South Florida Research Foundation, or USFRF, we hold an exclusive worldwide license under patents and patent applications owned by USFRF to develop and commercialize TC-5214, mecamylamine hydrochloride and other specified compounds. The licensed patent rights include issued patents covering the pharmaceutical composition of TC-5214.

Under the license agreement with USFRF, we are obligated to pay to USFRF:

- an annual license fee of $50,000 until we or a sublicensee files an NDA or foreign equivalent for use of a product subject to the license;
- an annual fee of $20,000 to maintain our right of first refusal to acquire rights under the licensed patents and patent applications beyond the scope of our current license;
- royalties on net sales of products subject to the license or, if less, a percentage of royalties that we receive from a sublicensee;
- aggregate payments of up to $200,000 based on the achievement of specified regulatory milestones; and
- 10% of other amounts, including milestone payments, that we may receive for a sublicense from a sublicensee, subject to increase to a higher percentage in specified circumstances.

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 one or more products subject to the license. In particular, we are required to spend a specified minimum amount on research and development of products subject to the license over each consecutive three-year period during the term of the agreement until we or a sublicensee file an NDA or foreign equivalent for use of a product subject to the license. If USFRF believes that we are not meeting our diligence obligation, it is entitled to terminate the agreement if we do not cure our failure within a specified cure period. If we do not agree with USFRF’s determination and specified initial dispute resolution procedures are unsuccessful, we can submit the matter to binding arbitration.

We may terminate the agreement at any time. USFRF may terminate the agreement if we fail to make a required royalty payment when due, or commit a material breach of the agreement, and do not cure the failure or breach within specified cure periods. If not earlier terminated, the agreement will terminate upon expiration of the last to expire of the licensed patent rights that includes a valid claim.

University of Kentucky Research Foundation

Pursuant to a sponsored research agreement, University of Kentucky Research Foundation, or UKRF, agreed to assign its rights to inventions that resulted in patents related to TC-1734 to R.J. Reynolds Tobacco Company. These patents were subsequently assigned by R.J. Reynolds Tobacco Company 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 for a license to these patents from any licensee.

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. We seek to protect our proprietary information, in part, by using confidentiality agreements with our commercial partners, collaborators, employees and consultants and invention assignment agreements with our employees.

Sales and Marketing

We currently have limited sales, marketing and distribution experience with respect to pharmaceutical products and no internal sales or distribution capabilities. Our current strategy is to selectively seek alliances and collaborations, particularly for target indications for which a potential collaborator has unique expertise or that involve large primary care markets that must be served by large sales and marketing organizations. In entering into these alliances and collaborations, our goal will generally be to maintain co-promotion or co-commercialization rights in the United States and, potentially in the future, other markets. To be successful if we exercise these rights, we would have to develop a specialized sales and marketing organization with sufficient technical expertise.

Manufacturing

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

We have relied and may continue to rely on a number of contract manufacturers to manufacture our product candidates for use in any preclinical research and to manufacture our product candidates in accordance with current good manufacturing practices, or cGMP, for use in clinical trials. We may 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 FDA and other governmental regulation.

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.

There is substantial competition from therapies designed to target NNRs. Pfizer’s product Chantix, which is known outside of the United States as Champix, acts on several NNR subtypes as well as other molecular targets in the body. Chantix is approved as an aid to smoking cessation treatment. In addition, we believe that several pharmaceutical and biotechnology companies have product candidates in development that target NNRs, including AbbVie, Merck & Co., Forum Pharmaceuticals, Vanda Pharmaceuticals, Asmacure, Bionomics, Saniona, Savant HWP, Alpharmagen (a joint venture formed by CoMentis and Anvyl), Extab, SK Biopharmaceuticals and Neuroderm.

We believe the primary competitive products for treating diabetic gastroparesis, which we are targeting with our lead product candidate, TC-6499, include the dopamine receptor antagonist metoclopramide. Metoclopramide is widely available generically under various trade names and was originally branded and marketed as Reglan by Alaven Pharmaceutical.

Several pharmaceutical, biopharmaceutical and biotechnology companies are currently developing additional treatments for the indications we have targeted 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 and favorable side effect profiles of our products. 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 into products and to exploit these products 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 favoring the use of lower priced generic products over branded products.

Regulatory Matters

Government Regulation and Product Approval

Government authorities in the United States, at the federal, state and local level, and in other countries extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, recordkeeping, promotion, advertising, distribution, marketing and export and import of drugs such as our product candidates. Our product candidates must be approved by the FDA through the NDA process before they may be legally marketed in the United States.

U.S. Drug Development Process

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or FDCA, and implementing regulations. The process of obtaining regulatory approvals and complying with applicable federal, state, local and foreign laws and regulations require the expenditure of substantial time and financial resources. Failure to comply with United States requirements at any time during the product development process, the approval process or after approval may subject a company to administrative or judicial sanctions. These sanctions could include the FDA's refusal to approve pending applications, withdrawal of an approval, a clinical hold, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement, civil or criminal penalties, and criminal prosecution.

The process required by the FDA before a drug may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests, animal studies and formulation studies conducted in accordance with good laboratory practices and other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled human clinical trials conducted in accordance with regulations and guidelines establishing good clinical practices to establish the safety and efficacy of the drug for its intended use;
- submission to the FDA of an NDA in a form and content that the FDA deems to be acceptable for filing;

- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the drug is produced to assess compliance with cGMP in order to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity; and
- FDA review and approval of the NDA.

The testing and approval processes require substantial time, effort and financial resources.

Once a drug is identified for development it enters the nonclinical testing stage. Nonclinical tests include laboratory evaluations of chemistry, toxicity and formulation, as well as animal studies to assess the characteristics and potential effects of the drug and may continue throughout the entire drug development process. The conduct of the nonclinical tests must comply with federal regulations and requirements, including good laboratory practices, or GLP. The results of nonclinical testing are submitted to the FDA, along with other information about drug chemistry, manufacturing and controls and a proposed clinical trial protocol, as part of an IND. The IND becomes effective 30 days after receipt by the FDA, unless within the 30-day time period the FDA places the subject clinical trial on a clinical hold. In such a case, the company responsible for the clinical trial (the sponsor) and the FDA must resolve any outstanding concerns before the clinical trial can begin. Clinical holds also may be imposed by the FDA at any time before or during studies due to safety concerns or non-compliance with applicable law or regulation.

All clinical trials must be conducted under the supervision of one or more qualified investigators. Clinical trials must be conducted: (i) in compliance with federal regulations, including regulations requiring that all research subjects provide informed consent; (ii) in compliance with good clinical practice, or GCP, an international standard meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, administrators, and monitors; as well as (iii) under protocols detailing, among other things, the objectives of the trial, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. Further, an institutional review board, or IRB, for each institution participating in a clinical trial must review and approve the plan for the clinical trial before it commences at the institution. An IRB considers, among other things, whether the risks to individuals participating in the trials are minimized and reasonable in relation to the anticipated benefits. The IRB also approves the information regarding the trial and the consent form that must be provided to each trial subject or his or her legal representative and monitors the study until completed. An IRB may impose conditions to the initiation or continued conduct of trial at the institution for which the IRB is responsible. Each new clinical protocol must be submitted to the IND for FDA review and to the applicable IRBs for approval.

Clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- *Phase 1:* Involves one or more clinical trials in healthy subjects to evaluate safety, dosage tolerance, absorption, metabolism, distribution and excretion. In the case of some drugs for severe or life-threatening diseases, the initial human testing may be conducted in patients, particularly where the drug may be too inherently toxic to administer ethically to healthy subjects;
- *Phase 2:* Involves one or more clinical trials in a limited patient population to identify possible adverse effects and safety risks, to evaluate preliminarily the efficacy of the drug for specific targeted diseases and to determine dosage tolerance and optimal dosage; and
- *Phase 3:* Involves one or more clinical trials to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed study sites. These trials are intended to establish the overall risk-benefit ratio of the drug and provide, if appropriate, an adequate basis for product labeling.

Progress reports detailing the results of clinical trials must be submitted at least annually to the FDA and safety reports must be submitted to the FDA and the investigators for serious and unexpected adverse events. Any clinical trial, whether Phase 1, Phase 2 or Phase 3, may fail to be completed successfully within any specified period, or at all. The FDA or the sponsor may suspend a clinical trial at any time on various grounds,

including a finding that the trial participants are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug under investigation has been associated with unexpected serious harm to patients.

During the development of a new drug, companies have opportunities to meet with the FDA at certain times, typically prior to submission of an IND, after Phase 2 development and before an NDA is submitted. Meetings at other times may also be requested. These meetings provide an opportunity for the company developing the drug to share information about the data gathered to date, for the FDA to provide advice, and for the company and the FDA to reach agreement on the next phase of development. Companies sometimes use the end-of-Phase 2 meeting to discuss their Phase 2 clinical trial results and present their plans for the pivotal clinical trials that they believe will support marketing approval.

If a Phase 2 clinical trial is the subject of discussion at an end-of-Phase 2 meeting with the FDA, a company may be able to request a Special Protocol Assessment, or SPA, the purpose of which is to reach agreement with the FDA on the protocol design and statistical analysis for the pivotal clinical trials that will form the primary basis of an efficacy claim. The FDA is required to evaluate the protocol within 45 days of the request to assess whether the proposed trial is adequate; however, the evaluation may result in discussions and a request for additional information that may extend the timeline to establish agreement beyond 45 days. An SPA request must be made before the proposed trial begins, and all open issues must be resolved before the trial begins. If an agreement is reached, it will be documented, made part of the administrative record, be binding on the FDA and not be changed unless the company fails to follow the agreed-upon protocol, data supporting the request are found to be false or incomplete or the FDA determines that a substantial scientific issue essential to determining the safety or effectiveness of the drug was identified after the testing began. Even if an SPA is agreed to, approval of the NDA is not guaranteed because a final determination that an agreed-upon protocol satisfies a specific objective, such as the demonstration of efficacy, or supports an approval decision, will be based on a complete review of all the data in the NDA.

If a drug is intended to treat a serious or life threatening condition for which there is an unmet medical need, a company may request that the FDA consider the drug for a fast track development program at the time of submitting its IND or at any time prior to receiving marketing approval. The fast track program is designed to facilitate the development and expedite the review of drugs for the treatment of specific conditions.

The Food and Drug Administration Safety and Innovation Act, which was enacted in 2012, enables a sponsor to request that a drug be designated as a breakthrough therapy. Breakthrough therapy designation is intended to expedite the development and review of drugs for serious or life-threatening conditions. The request is submitted concurrently with or as an amendment to an IND. The request must include supporting information, including the basis for considering the drug as intended to treat a serious condition and a summary of the preliminary clinical evidence that the drug may demonstrate substantial improvement over available therapies. A sponsor must describe the preliminary clinical evidence, including, for example, justification for the clinical study endpoint used and a brief description of statistical analyses. The FDA will make a determination whether or not to grant the request within 60 days after receipt of the submission.

Concurrently with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the drug and finalize a process for manufacturing the drug as a product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the drug, and, among other things, the manufacturer must develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product does not undergo unacceptable deterioration over its shelf life.

U.S. Review and Approval Processes

The results of product development, nonclinical studies and clinical trials, along with descriptions of the manufacturing process, analytical chemistry tests, proposed labeling, and other relevant information, are submitted to the FDA as part of an NDA requesting approval to market the product. FDA approval of the NDA is required before marketing of the product may begin in the United States. The cost of preparing and submitting an NDA is substantial. Under federal law, the submission of most NDAs is additionally subject to a substantial application user fee and the manufacturer or sponsor under an approved NDA is also subject to annual establishment registration and product listing fees. These fees are typically increased annually. A waiver or reduction of the fees may be obtained under specified limited circumstances.

In addition, under the Pediatric Research Equity Act, or PREA, an NDA or supplement to an NDA must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the drug is safe and effective. The FDA may grant a deferral for submission of data or a full or partial waiver. Unless otherwise required by regulation, PREA does not apply to any drug for an indication for which orphan designation, as described below, has been granted.

The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of NDAs. Most such applications for standard review drug products are reviewed within ten to twelve months; most applications for priority review drugs are reviewed in six to eight months. Priority review can be applied to drugs that the FDA determines offer major advances in treatment, or provide a treatment where no adequate therapy exists. The review process for both standard and priority review may be extended by FDA for three additional months to consider certain late-submitted information, or information intended to clarify information already provided in the submission.

The FDA may also refer applications for novel drug products, or drug products that present difficult questions of safety or efficacy, to an advisory committee—typically a panel that includes clinicians and other experts—for review, evaluation, and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. Before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the drug is manufactured. The FDA will not approve the product unless compliance with current good manufacturing practice, or GMP—a quality system regulating manufacturing—is satisfactory and the NDA contains data that provide substantial evidence that the drug is safe and effective in the indication studied.

After FDA evaluates the NDA and the manufacturing facilities, it issues either an approval letter or a complete response letter. A complete response letter generally outlines the deficiencies in the submission and may require substantial additional testing, or information, in order for the FDA to reconsider the application. If, or when, those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA will issue an approval letter. FDA has committed to reviewing such resubmissions in two or six months depending on the type of information included.

An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications. As a condition of NDA approval, the FDA may require a risk evaluation and mitigation strategy, or REMS, to help ensure that the benefits of the drug outweigh the potential risks. REMS can include medication guides, communication plans for healthcare professionals, and elements to assure safe use, or ETASU. ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, dispensing only under certain circumstances, special monitoring, and the use of patient registries. The requirement for a REMS can materially affect the potential market and profitability of the drug. Moreover, product approval may require substantial post-approval testing and surveillance to monitor the drug's safety or

efficacy. Once granted, product approvals may be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing.

Changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new NDA or NDA supplement before the change can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements as it does in reviewing NDAs.

If a drug is the subject of an approved NDA, it may become 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 listed drug. This means, among other things, that it has the same active ingredient(s), route of administration, dosage form and strength, as well as the same labeling, with certain exceptions, and that the labeling must prescribe conditions of use that have been previously approved for the listed drug. If the generic drug product has a different route of administration, dosage form, or strength, the FDA must grant a suitability petition approving the difference(s) from the listed drug before the ANDA may be filed. The ANDA must also contain data and information demonstrating that the generic drug product is bioequivalent to the listed drug or, if the application is submitted pursuant to an approved suitability petition, information to show that the listed drug and the generic drug product can be expected to have the same therapeutic effect as the listed drug when administered to patients for a proposed condition of use. There is generally no requirement, other than the requirement for evidence of bioequivalence, for an ANDA applicant to conduct or submit results of nonclinical tests or clinical trials to establish the safety or efficacy of its generic 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.

Marketing Exclusivity

Market exclusivity provisions under the FDCA also can delay the submission or the approval of certain applications. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to gain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other drug containing the same active moiety, which is generally the molecule or ion responsible for the action of the drug. During the exclusivity period, the FDA may not accept for review an ANDA or a Section 505(b)(2) NDA submitted by another company for another version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification that the listed patents for the approved drug are invalid or not infringed. The FDCA also provides three years of marketing exclusivity for an NDA, Section 505(b)(2) NDA or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application. This may include, for example, new indications for, or new dosages or strengths of, an existing drug. This three-year exclusivity covers only the conditions associated with the new clinical investigations and does not prohibit the FDA from approving ANDAs for drugs containing the original active agent. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA; however, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the nonclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Pediatric exclusivity is another type of exclusivity in the United States. Pediatric exclusivity, if granted, provides an additional six months to an existing exclusivity or statutory delay in approval resulting from a patent certification. This six-month exclusivity, which runs from the end of other exclusivity, whether statutory or patent, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued “Written Request” for the study.

Post-Approval Requirements

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further FDA review and approval. Drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and applicable state agencies and are subject to periodic unannounced inspections for compliance with cGMP and other laws and regulations.

Any products manufactured or distributed by us pursuant to FDA approvals are subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the drug, providing the FDA with updated safety and efficacy information, drug sampling and distribution requirements, complying with certain electronic records and signature requirements, and complying with FDA promotion and advertising requirements. The FDA strictly regulates labeling, advertising, promotion and other types of information on products on the market. Products may be promoted only for the approved indications and in accordance with the provisions of the approved label.

As part of the sales and marketing process, pharmaceutical companies frequently provide samples of approved drugs to physicians. The Prescription Drug Marketing Act, or the PDMA, imposes requirements and limitations upon the provision of drug samples to physicians and prohibits states from licensing distributors of prescription drugs unless the licensing program meets federal guidelines that include minimum standards for storage, handling and record keeping. The PDMA sets forth civil and criminal penalties for violations.

From time to time, legislation is drafted, introduced and passed by the U.S. Congress that could significantly change the statutory provisions governing the approval, manufacturing and marketing of products regulated by the FDA.

Foreign Regulation

In addition to regulations in the United States, we are subject to a variety of foreign regulations governing clinical trials of our product candidates and commercial sales and distribution of any products. Whether or not we obtain FDA approval for a product candidate or product, we must obtain approval by the comparable regulatory authorities of foreign countries, or of economic areas such as the European Union, before we can commence clinical trials of the product candidate or marketing of the product in those countries or areas. The approval process and requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from place to place, and the time required may be longer or shorter than the time required for FDA approval.

Under European Union regulatory systems, we may submit marketing authorization applications either under a centralized or a decentralized procedure. The centralized procedure, which provides for the grant of a single marketing authorization that is valid for all European Union member states, is compulsory for medicines produced by biotechnology or intended to treat AIDS, cancer, neurodegenerative disorders or diabetes and optional for medicines that are highly innovative. For drugs without approval in any member state, the decentralized procedure provides for approval by one or more other, or concerned, member states of an assessment of an application performed by one member state, which is known as the reference member state. Under this procedure, an applicant submits an application, or dossier, and related materials (including a draft summary of product characteristics, draft labeling and package leaflet) to the reference member state and concerned member states. The reference member state prepares a draft assessment and drafts of the related materials within 120 days after receipt of a valid application. Within 90 days of receiving the reference member state’s assessment report, each concerned member state must decide whether to approve the assessment report and related materials. If a member state cannot approve the assessment report and related materials on the

grounds of potential serious risk to public health, any disputed issues may eventually be referred to the European Commission and the decision of the European Commission would be binding on all member states.

As in the United States, we may apply for designation of a product as an orphan drug for the treatment of a specific indication in the European Union before the application for marketing authorization is made. Orphan drugs in Europe receive economic and marketing benefits, including up to 10 years of market exclusivity for the approved indication unless another applicant can show that its product is safer, more effective or otherwise clinically superior to the orphan-designated product.

Reimbursement

Sales of pharmaceutical products depend in significant part on the availability of third-party reimbursement. Third-party payors include government health programs such as Medicare and Medicaid, managed care providers, private health insurers and other organizations. These third-party payors are increasingly challenging the price and examining the cost-effectiveness of medical products and services, including prescription drugs. In addition, significant uncertainty exists as to the reimbursement status of newly approved prescription drugs and other healthcare products. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the cost-effectiveness of any of our products that is successfully developed and approved. Our product candidates may not be considered cost-effective. It is time consuming and expensive to seek reimbursement from third-party payors. Reimbursement may not be available or sufficient to allow the sale of any of our products that is successfully developed and approved on a competitive and profitable basis.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the MMA, established the Medicare Part D program to provide a voluntary prescription drug benefit to Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities to provide coverage of outpatient prescription drugs. Part D plans include both stand-alone prescription drug benefit plans and prescription drug coverage as a supplement to Medicare Advantage plans. Unlike Medicare Parts A and B, Part D coverage is not standardized. Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each Part D prescription drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, although not necessarily all of the drugs within each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee.

It is not clear what long-term effect the MMA will have on the prices paid for currently approved drugs and the pricing options for newly approved drugs. Government payment for some of the costs of prescription drugs may increase demand for any of our products that is successfully developed and approved. However, any negotiated prices for our products covered by a Part D prescription drug plan will likely be lower than the prices we might otherwise obtain. Moreover, although the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Accordingly, any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payors.

We expect that there will continue to be a number of federal and state proposals to implement governmental pricing controls and limit the growth of healthcare costs, including the cost of prescription drugs. Currently, Medicare is prohibited from negotiating directly with pharmaceutical companies for drugs. However, the U.S. Congress may in the future consider legislation that would lift the ban on federal negotiations.

The American Recovery and Reinvestment Act of 2009 provides funding for the federal government to compare the effectiveness of different treatments for the same illness. A plan for the research would be developed by the Department of Health and Human Services, the Agency for Healthcare Research and Quality and the National Institutes of Health, and periodic reports on the status of the research and related expenditures

would be made to the U.S. Congress. Although the results of the comparative effectiveness studies are not intended to mandate coverage policies for public or private payors, it is not clear whether research would have any effect on the sales of any of our products that is successfully developed and approved, if the product or the condition that it is intended to treat becomes the subject of a study. It is also possible that comparative effectiveness research demonstrating benefits of a competitor's product could adversely affect the sales of any of our products that is successfully developed and approved. If third-party payors do not consider our products to be cost-effective compared to other available therapies, they may not cover our products after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products on a profitable basis.

The Patient Protection and Affordable Care Act, or the ACA, as amended by the Health Care and Education Affordability Reconciliation Act of 2010, has had and is expected to have a significant impact on the health care industry. The ACA expanded coverage for the uninsured while at the same time containing overall healthcare costs. Among other things, the ACA expanded and increased industry rebates for drugs covered under Medicaid programs and made changes to the coverage requirements under the Medicare Part D program. We cannot predict the full impact of the ACA on pharmaceutical companies because many of the ACA's reforms require the promulgation of detailed regulations to implement the statutory provisions, which has not yet occurred. In addition, although the United States Supreme Court has upheld the constitutionality of most of the ACA, some states have indicated that they intend not to implement certain sections of the ACA and some members of the U.S. Congress are still working to repeal the ACA. These challenges add to the uncertainty of the effects of the ACA.

The Physician Payment Sunshine Act, or Sunshine Act, which was enacted as part of ACA, requires covered manufacturers of drugs covered under Medicare, Medicaid or the Children's Health Insurance Program to report annually to the Secretary of the Department of Health and Human Services payments or other transfers of value made by that entity, or by a third party as directed by that entity, to physicians and teaching hospitals, or to third parties on behalf of physicians or teaching hospitals, during the course of the preceding calendar year. The final rule implementing the Sunshine Act, published on February 8, 2013, required data collection on payments to begin on August 1, 2013. Failure to submit required information may result in civil monetary penalties of up to $150,000 per year (up to $1 million per year for "knowing failures") for all payments, transfers of value or ownership or investment interests not reported in an annual submission.

If not preempted by the ACA, several states require pharmaceutical manufacturers to report expenses relating to the marketing and promotion of pharmaceutical products and to report gifts and payments to individual physicians in the states. Other states prohibit providing various other marketing related activities. Still other states require the posting of information relating to clinical studies and their outcomes. In addition, some states, such as California, Nevada and Massachusetts, require pharmaceutical manufacturers to implement compliance programs or marketing codes. Currently, several additional states are considering similar proposals. Compliance with these laws is difficult and time consuming, and companies that do not comply with these state laws face civil penalties.

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 provides options for its member states to restrict the range of medicinal products for which their respective national health insurance systems provide reimbursement and 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. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products for which we receive marketing approval. Historically, the price structures for products launched in the European Union do not follow those of the United States and tend to be significantly lower.

Employees

As of February 28, 2015, we had 19 full-time employees. Our management believes that relations with our employees are good. None of our employees is represented under a collective bargaining agreement.

Our Corporate Information

We were incorporated in Delaware in 1997 as a wholly-owned subsidiary of R.J. Reynolds Tobacco Company. In August 2000, we became an independent company when we issued and sold stock to venture capital investors. Our principal executive offices are located at 100 North Main Street, Suite 1510, Winston-Salem, North Carolina 27101 and our telephone number is (336) 480-2100.

Our internet address is www.targacept.com. The information contained on, or that can be accessed through, our website is not incorporated by reference into this annual report. We have included our website address as a factual reference and do not intend it as an active link to our website. Our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and all amendments to those reports, are available to you free of charge through the Investor Relations page of our website as soon as reasonably practicable after such materials have been electronically filed with, or furnished to, the SEC.

Targacept®, Pentad™ and NNR Therapeutics™ are trademarks of ours. Other service marks, trademarks and trade names appearing in this annual report are the properties of their respective owners.

Item 1A. Risk Factors.

Risks Related to the Proposed Merger

The market price of Targacept common stock following the Proposed Merger may decline as a result of the transaction.

The market price of Targacept common stock may decline as a result of the Proposed Merger for a number of reasons, including if:

- investors react negatively to the prospects of the combined company's business and prospects; or
- the performance of the combined company's business or its future prospects are not consistent with the expectations of financial or industry analysts.

Targacept stockholders will have a reduced ownership and voting interest in, and will exercise less influence over the management of, the combined company following the consummation of the merger.

After the consummation of the Proposed Merger, the current stockholders of Targacept will own a significantly smaller percentage of the combined company than their ownership of Targacept prior to the merger. At the effective time of the merger, Targacept stockholders will collectively own approximately 35% of the outstanding shares of the combined company. In addition, the seven-member Board of Directors of the combined company will initially be comprised of four current Catalyst directors and three current Targacept directors. Consequently, stockholders of Targacept will be able to exercise less influence over the management and policies of the combined company than they currently exercise over the management and policies of Targacept.

Targacept stockholders may not realize a benefit from the Proposed Merger commensurate with the ownership dilution they will experience in connection with the merger.

If the combined company is unable to realize the full strategic and financial benefits anticipated from the Proposed Merger, Targacept stockholders will have experienced substantial dilution of their ownership interests

without receiving any commensurate benefit, or only receiving part of the commensurate benefit to the extent the combined company is able to realize only part of the strategic and financial benefits currently anticipated from the Proposed Merger.

Failure to complete the Proposed Merger may adversely affect the common stock price of Targacept and future business and operations of the Company.

If the Proposed Merger is not completed, Targacept is subject to the following risks:

- if the Merger Agreement is terminated under certain circumstances, Targacept will be required to pay Catalyst a termination fee of $3.22 million, and/or to reimburse Catalyst for up to $1.25 million in certain transaction expenses;
- the attention of management of Targacept will have been diverted to the Proposed Merger instead of being directed solely to its own operations and the pursuit of other opportunities that may have been beneficial to the Company;
- the loss of time and resources of Targacept;
- the price of Targacept stock may decline and remain volatile; and
- costs related to the Proposed Merger, such as legal, accounting and transaction agent fees, some of which must be paid even if the Proposed Merger is not completed.

In addition, if the Merger Agreement is terminated and the board of directors of Targacept determines to seek another business combination, there can be no assurance that Targacept will be able to find a transaction that is superior or equal in value to the Proposed Merger.

We may fail to realize the anticipated benefits of the merger.

The success of the merger will depend on, among other things, the combined company's ability to achieve its business objectives, including the successful development of its product candidates. If the combined company is not able to achieve these objectives, the anticipated benefits of the merger may not be realized fully, may take longer to realize than expected, or may not be realized at all.

Targacept and Catalyst have operated and, until the completion of the merger, will continue to operate independently. It is possible that the integration process could result in the loss of key employees, the disruption of each company's ongoing business or inconsistencies in standards, controls, procedures or policies that could adversely affect our ability to maintain relationships with third parties and employees or to achieve the anticipated benefits of the merger. Integration efforts between the two companies will also divert management's attention and resources. Any delays in the integration process or inability to realize the full extent of the anticipated benefits of the merger could have an adverse effect on our business and the results of our operations. Such an adverse effect on our business may impact the value of the shares of the combined company's common stock after the completion of the merger.

In addition, Catalyst could be materially adversely affected prior to the closing of the merger, which could have a material adverse effect on the combined company if Targacept is required to complete the merger. For example, Targacept is required under the Merger Agreement to complete the merger despite any changes in general economic or political conditions or the capital or securities markets in general to the extent they do not disproportionately affect Catalyst; any changes in or affecting the industries in which Catalyst operates, to the extent they do not disproportionately affect Catalyst; any changes, effects or circumstances resulting from the announcement or pendency of the Merger Agreement or the consummation of the contemplated transactions or compliance with the terms of the Merger Agreement; any changes in laws or applicable accounting principles, or interpretations thereof; and the commencement, continuation or escalation of war, terrorism or hostilities, or

natural disasters or political events. If any such adverse changes occur and the Proposed Merger is still consummated, the combined company's stock price may suffer. This in turn may reduce the value of the merger to the stockholders of Targacept.

During the pendency of the merger, Targacept may not be able to enter into a business combination with another party at a favorable price because of restrictions in the Merger Agreement, which could adversely affect its business.

Covenants in the Merger Agreement generally prohibit Targacept and Catalyst from entering into certain extraordinary transactions with any third party, including mergers, purchases or sales of assets, or other business combinations, subject to certain exceptions relating to fiduciary duties, or from completing other transactions that are not in the ordinary course of business pending completion of the Proposed Merger, including transactions that may be favorable to the companies or their stockholders. As a result, if the Proposed Merger is not completed, our business may be adversely impacted by our inability to pursue other beneficial opportunities during the pendency of the Proposed Merger.

Provisions of the Merger Agreement may discourage third parties from submitting alternative acquisition proposals, including proposals that may be superior to the Proposed Merger.

The terms of the Merger Agreement prohibit Targacept from soliciting alternative takeover proposals or cooperating with persons making unsolicited takeover proposals, except in limited circumstances when Targacept's board of directors determines in good faith that an unsolicited alternative takeover proposal is or is reasonably likely to succeed, to lead to a superior takeover proposal and that failure to pursue such proposal would be considered a breach of the board's fiduciary duties. If Targacept terminates the Merger Agreement because it enters into an alternative superior transaction, Targacept would be required to pay a termination fee of $3.22 million to Catalyst. Such termination fee may discourage third parties from submitting alternative takeover proposals to Targacept, and may cause the board of directors to be less inclined to recommend an alternative proposal.

The lack of a public market for Catalyst shares makes it difficult to determine the fair market value of Catalyst, and the merger consideration to be issued to Catalyst securityholders may exceed the actual value of Catalyst.

The outstanding capital stock of Catalyst is privately held and is not traded on any public market, which makes it difficult to determine the fair market value of Catalyst. Although Targacept's board of directors believes it has taken all reasonable steps to reach an accurate determination of Catalyst's value, there can be no assurances that the merger consideration to be issued to Catalyst securityholders does not exceed the actual value of Catalyst.

If the redeemable convertible notes are redeemed for cash instead of converted for stock, the combined company may need to raise additional dilutive capital.

In connection with the Proposed Merger, Targacept stockholders will receive a Pre-Closing Dividend consisting of approximately $37 million in aggregate principal amount of redeemable convertible notes, as well as cash. The notes will be convertible at any time for two years following closing into shares of the combined company at a conversion price of $1.31 per share, which represents 130% of the negotiated per-share value of the Company's assets following the anticipated Pre-Closing Dividend. The combined company is expected to have a cash balance of approximately $77 million upon closing of the Proposed Merger. If all of the notes are redeemed for cash and not converted into stock of the combined company, the approximately $37 million of cash required to satisfy the redemption will not be available to fund the ongoing operations of the combined company. If a substantial amount of the cash balance of the combined company is required to satisfy note redemptions, the combined company may need to raise additional dilutive capital in the future to fund operations.

If the merger is not completed, the Pre-Closing Dividend will not be paid to Targacept stockholders.

Payment of the Pre-Closing Dividend to the Targacept stockholders is contingent upon the completion of the Proposed Merger. If the Proposed Merger does not occur, the Targacept stockholders will not be paid the Pre-Closing Dividend, and there is no assurance the Targacept board of directors will declare or pay any dividends on the Targacept common stock in the future.

Targacept may not be able to complete the Proposed Merger and may elect to pursue another strategic transaction similar to the Proposed Merger, which may not occur on commercially reasonably terms or at all.

Targacept cannot assure you that it will complete the Proposed Merger in a timely manner or at all. The Merger Agreement is subject to many closing conditions and termination rights. Targacept's assets currently consist primarily of cash, cash equivalents and marketable securities, and its listing on the NASDAQ Global Select Market. If Targacept does not consummate the Proposed Merger, its board of directors may elect to attempt to complete another strategic transaction similar to the Proposed Merger. Such attempts will likely be costly and time consuming, and Targacept cannot make any assurances that a future strategic transaction will occur on commercially reasonable terms or at all.

If the Proposed Merger is not completed, Targacept may elect to liquidate its remaining assets, and there can be no assurances as to the amount of cash available to distribute to stockholders after paying its debts and other obligations.

If Targacept does not complete the Proposed Merger, the board of directors may elect to take the steps necessary to liquidate all remaining assets of Targacept in light of the risks of reestablishing an operating business. The process of liquidation may be lengthy and Targacept cannot make any assurances regarding the timing of completing such a process. In addition, Targacept would be required to pay all of its debts and contractual obligations, and to set aside certain reserves for potential future claims. There can be no assurance as to the amount of available cash that will be available to distribute to stockholders after paying Targacept's debts and other obligations and setting aside funds for reserves, nor as to the timing of any such distribution.

If the Proposed Merger is not completed, and Targacept fails to acquire or develop other products or product candidates on commercially reasonable terms, or at all, Targacept may be unable to reestablish a viable operating business.

If the Proposed Merger is not completed, Targacept could be required to rely on in-licensing as the source of any of future product candidates for development and commercialization. Due to Targacept's history, its current limited operational and management capabilities, and the intense competition for pharmaceutical product candidates, even if Targacept finds promising product candidates and generates interest in a collaborative or strategic arrangement to acquire such product candidates, it may not be able to acquire rights to additional product candidates or approved products on commercially reasonable terms that it finds acceptable, or at all. Proposing, negotiating and implementing an economically viable product acquisition or license is a lengthy and complex process. Targacept competes for collaborative arrangements and license agreements with pharmaceutical and biotechnology companies and academic research institutions. Targacept's competitors may have stronger relationships with third parties with whom we may be interested in collaborating, or they may have greater financial, development and commercialization resources or more established histories of developing and commercializing products than Targacept. As a result, such competitors may have a competitive advantage over Targacept in entering into collaborative arrangements.

Targacept expects that any product candidate to which it acquires rights will require additional development and regulatory efforts prior to commercial sale, including extensive clinical testing and approval by the FDA and other non-U.S. regulatory authorities. All product candidates are subject to the risks of failure inherent in

pharmaceutical product development, including the possibility that the product candidate will not be shown to be sufficiently safe and effective for approval by regulatory authorities and the possibility that, due to strategic considerations, Targacept will discontinue research or development with respect to a product candidate for which it has already incurred significant expense. Even if the product candidates receive regulatory approval, Targacept cannot be sure that such product candidates would be capable of economically feasible production or commercial success.

We will incur substantial transaction-related costs in connection with the Proposed Merger.

We have incurred, and expect to continue to incur, a number of non-recurring transaction-related costs associated with completing the Proposed Merger and combining the two companies. These fees and costs have been, and will continue to be, substantial. Non-recurring transaction costs include, but are not limited to, fees paid to legal, financial and accounting advisors, severance and benefit costs, filing fees and printing costs. Additional unanticipated costs may be incurred in the integration of the businesses of Targacept and Catalyst which may be higher than expected and could have a material adverse effect on the combined company's financial condition and operating results.

A failure by Targacept to comply with the initial listing standards of the NASDAQ Global Select Market may subject its stock to delisting from the NASDAQ Global Select Market, which listing is a condition to the consummation of the merger.

Targacept's common stock is currently listed for trading on the NASDAQ Global Select Market. Immediately prior to the consummation of the merger, Targacept will be required to meet the initial listing requirements to maintain the listing and continued trading of its shares on the NASDAQ Global Select Market. These initial listing requirements are more difficult to achieve than the continued listing requirements under which Targacept is now trading. Based on information currently available to Targacept, Targacept anticipates that it will be unable to meet the $4.00 minimum bid price initial listing requirement at the closing of the merger unless it effects a reverse stock split. If Targacept is unable to satisfy these requirements, NASDAQ may notify Targacept that its stock will be subject to delisting from the NASDAQ Global Select Market. It is a condition to Catalyst's obligation to consummate the merger that Targacept maintain the listing of its common stock on NASDAQ. In addition, oftentimes a reverse stock split will not result in a trading price for the affected common stock that is proportional to the ratio of the split. Targacept believes that a reverse stock split will be in the best interest of the combined company and its stockholders. However, Targacept cannot assure you that the implementation of the reverse stock split will have a positive impact on the price of its common stock.

We may become involved in securities class action litigation that could divert management's attention and harm the company's business and insurance coverage may not be sufficient to cover all costs and damages.

In the past, securities class action litigation often follows certain significant business transactions, such as the sale of a business division or announcement of a merger. The combined company may become involved in this type of litigation in the future. Litigation often is expensive and diverts management's attention and resources, which could adversely affect the combined company's business.

Risks Related to our Business

We currently have only one product candidate in clinical development, and our recent clinical trials have resulted in significant clinical pipeline attrition. As we have closed our laboratory operations and no longer have the capability to discover new product candidates internally, we may not be able to overcome this attrition without purchasing or relying on other sources for new product candidates.

In 2012, we completed two workforce reductions and closed our laboratory operations. Following these actions, we do not have internal discovery and research capabilities to identify and discover new product candidates. We have no current plan to resume discovery or research activities. If in the future we were to resume these activities, we would need to recruit additional scientific and technical personnel and obtain access to laboratory facilities.

We currently have only one product candidate in clinical trials and, without internal discovery and research, we will not be able to expand our pipeline with internal candidates. If we are unable to expand our portfolio of product candidates through acquisitions or in-licensing, which we may be unable to do on reasonable terms or at all, our business would be materially and adversely affected.

A small number of our stockholders beneficially own a substantial amount of our common stock and have substantial control over us; therefore, your ability to influence corporate matters may be limited.

Significant stockholders, acting together, have the ability to affect matters submitted to our stockholders for approval, including the approval of significant transactions, like the Proposed Merger. This concentration of ownership may have the effect of delaying, deferring or preventing a strategic transaction, even if such a transaction would benefit other stockholders.

Our ability to use net operating loss and tax credit carryforwards and certain built-in losses to reduce future tax payments is limited by provisions of the Internal Revenue Code, and may be subject to further limitation as a result of prior or future offerings of our stock or other transactions.

Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, contain rules that limit the ability of a company that undergoes an ownership change, which is generally an increase in the ownership percentage of certain stockholders in the stock of a company by more than 50 percent over a three-year period, to utilize its net operating loss and tax credit carryforwards and certain built-in losses recognized in years after the ownership change. These rules generally operate by focusing on ownership changes involving stockholders owning directly or indirectly 5% or more of the stock of a company and any change in ownership arising from a new issuance of stock by the company. Generally, if an ownership change as defined by Section 382 occurs, the yearly taxable income limitation on the use of net operating loss and tax credit carryforwards and certain built-in losses is equal to the product of the applicable long term tax exempt rate and the value of the company's stock immediately before the ownership change. The Proposed Merger may result in such an ownership change. If any of our past or future transactions are determined to have caused one or more Section 382 ownership changes, we generally would not be able to use our pre-change loss or credit carryovers or certain built-in losses prior to such ownership change to offset future taxable income in excess of the annual limitations imposed by Sections 382 and 383, which may result in the expiration of a portion of our tax attributes before utilization.

Risks Related to Our Financial Results

We have a substantial accumulated deficit and may incur losses for future periods. We may not achieve profitability for any future period or, if we do achieve profitability for a future period, we may not sustain or grow our profitability.

As of December 31, 2014, we had an accumulated deficit of $313.3 million. We had a net loss of $32.6 million for the year ended December 31, 2014, and net losses of $46.7 million and $7.0 million for the years ended December 31, 2013 and 2012, respectively. Our losses for other periods have historically 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 may incur losses for future periods as we progress our programs and invest in or evaluate additional strategic opportunities. As a result, we will need to generate significant revenues to achieve profitability in the future or, if we do achieve profitability for any particular period, to sustain or grow our profitability on a quarterly or annual basis.

We derived a substantial portion of our revenue for 2013 and 2012 from our strategic alliances and collaborations, which have all terminated. We do not currently have any source of product revenue. We expect that a substantial portion of our operating cash flow in the next few years will depend on the following:

- whether we establish additional strategic alliances, collaborations or licensing or other comparable arrangements, or whether we complete the merger with Catalyst or another significant corporate transaction, and, if we do, the associated terms in each case; and
- the scope, progress, duration, results and cost of clinical trials, as well as non-clinical studies and assessments, of our product candidates and programs.

Sources that have contributed to our revenue for any particular year may not continue. For example, we received $245 million in aggregate payments under two collaborations with global pharmaceutical companies that are now terminated and no longer sources of future revenue. Additionally, we do not currently have any source of product revenue.

If we are unable to develop and commercialize one or more of our product candidates, if development is delayed or if revenue from sales of any product candidate that receives marketing approval is insufficient, we may not achieve profitability in the future. Even if we are profitable for any particular period, we may not be able to sustain or grow our profitability on a quarterly or annual basis.

Our failure to obtain additional capital when needed could force us to delay, reduce or eliminate our product development programs or future commercialization efforts.

Successful drug development and commercialization requires significant amounts of capital. It is foreseeable that we will in the future require substantial additional capital in order to continue to conduct the development and regulatory activities necessary to bring our product candidates to market (or, where applicable for a particular product candidate, to the stage of development when a potential future collaborator may assume responsibility under the terms of the applicable agreement for funding further development and subsequent commercialization) and potentially to establish sales and marketing capabilities. Our future capital requirements are difficult to forecast and will depend on many factors, including:

- the scope, progress, duration, results and costs of clinical trials, as well as non-clinical studies and assessments, of our product candidates and programs;
- whether we establish additional strategic alliances, collaborations or licensing or other comparable arrangements, or whether we pursue and complete any merger, acquisition or other significant corporate transaction, and, if we do, the associated terms in each case;
- the extent to which we retain development or commercialization rights or responsibilities for our product candidates and incur associated development costs, manufacturing costs or costs to establish sales and marketing functions;

- the number and characteristics of product candidates that we pursue and programs that we conduct;
- the costs to satisfy our obligations under potential future alliances and collaborations;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending patents and other intellectual property rights;
- the costs of manufacturing-related services for our product candidates in development;
- the costs, timing and outcomes of regulatory reviews or other regulatory actions;
- the timing, receipt and amount of sales or royalties, if any, from our potential products;
- the extent of our general and administrative expenses; and
- the rate of technological advancements for the indications that we target.

In addition, we may seek additional capital, whether through offerings of securities utilizing our currently effective Registration Statement on Form S-3, our at the market sales agreement or otherwise, if the conditions for raising capital are favorable or based on 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, the ownership interests of our stockholders may be diluted, and the terms of the securities may include liquidation or other preferences that materially and adversely affect the rights of our stockholders. 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 alliance, collaboration or 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.

We had approximately $111 million of cash, cash equivalents and investments at December 31, 2014, which, based on our current scope of operations, would be sufficient to fund our current operations for several years. However, there is substantial uncertainty associated with our ongoing evaluation of strategic alternatives and the potential costs associated with those alternatives, which may fundamentally change our business and capital requirements. As a result, we may need additional funds sooner than planned to meet operational needs and capital requirements to fund strategic transactions, pipeline diversification or other business and corporate development initiatives. Our ability to raise additional funds if and when needed on terms that are acceptable to us, or at all, is uncertain.

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

TC-6499 has not yet demonstrated efficacy in clinical trials in diabetic gastroparesis, and our previous findings from clinical and nonclinical studies and assessments may not be predictive of a benefit for TC-6499 as a treatment for diabetic gastroparesis. If our ongoing and any future clinical trials of TC-6499 in diabetic gastroparesis are not successful, we will not obtain the regulatory approvals required to market and sell TC-6499.

We are conducting an exploratory study of TC-6499 as a treatment for diabetic gastroparesis. Our decision to conduct this study was based primarily on various findings from a previous clinical trial of TC-6499 in another indication and nonclinical studies and assessments of TC-6499 that we believe may indicate potential benefits of TC-6499 as a diabetic gastroparesis therapy. We have not previously conducted any clinical trials of TC-6499 in patients with diabetic gastroparesis, and our previous findings may not be predictive of clinical success in this patient population. If our ongoing and any future clinical trials of TC-6499 in diabetic gastroparesis are not successful, we will not obtain the regulatory approvals required to market and sell TC-6499 as a treatment for diabetic gastroparesis.

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 nonclinical 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 FDA and other federal, state and local governmental and regulatory 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 nonclinical 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 drug development and 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 or foreign governmental or regulatory authorities may from time to time change approval policies or adopt new laws or regulations that 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.

A Phase 1 clinical trial program typically takes several months to complete, a Phase 2 clinical trial program typically takes several months to two years to complete and a Phase 3 clinical trial program typically takes one to four years to complete. Moreover, Phase 3 clinical trials may not follow successful completion of Phase 2 clinical trials directly, as additional non-clinical assessments or clinical trials may first be required. Industry sources have reported that the preparation and submission of an NDA, which is required for regulatory approval in the United States, generally takes six months to one year to complete after completion of pivotal clinical trials. However, additional clinical trials may be required by the FDA or foreign regulatory authorities following completion of pivotal clinical trials and prior to seeking approval. Precise estimates vary, but a great majority of investigational drugs that enter clinical trials will never 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;
- clinical trial results may indicate that the product candidate is not effective, whether because the product candidate does not have its intended effects in the clinical trial, because subjects given an inactive comparator (i.e., placebo) in the clinical trial experience benefits comparable to the benefits experienced by subjects given the product candidate, which obscures the effects of the product candidate, or for any other reason;
- the product candidate may not have a favorable risk/benefit profile;
- the FDA (or any advisory committee on which the FDA relies) may interpret results of clinical trials or manufacturing or other non-clinical studies or assessments to indicate that the product candidate is not safe, effective or acceptable for commercial use, even if we interpret the same results differently;
- the FDA may require development of a Risk Evaluation and Mitigation Strategy, or REMS, as a condition of approval;
- the FDA may deem the processes or facilities that we, our collaborators or our third-party manufacturers propose to use in connection with the manufacture of the product candidate to be unacceptable, or the facilities of our third party manufacturers may not pass inspection by the FDA; or
- the FDA may change its approval policies or adopt new regulations.

If we obtain the requisite regulatory approval for a particular product candidate, the approval may not extend to all indications for which approval was sought, which could limit the use of the product and materially and adversely impact our revenue.

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. This process is likely to cause delays in the marketing of any of our product candidates that receives approval and could materially and adversely impact our revenue 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 nonclinical 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. Nonclinical 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 clinical trials of any of our product candidates could occur at any stage of testing. For example, TC-5214 did not achieve the primary endpoint in multiple Phase 3 clinical trials in major depressive disorder completed in 2011 and 2012, nor did it meet one of the co-primary endpoints in the Phase 2b clinical trial in overactive bladder in 2014. As a consequence, we no longer have plans to pursue additional development of this compound in these therapeutic areas. If we experience failures in our ongoing or future clinical trials, or if we are not able to design clinical trials to establish the safety and efficacy of our product candidates and otherwise achieve the objectives of the trials, 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, applicable foreign regulatory authorities or the institutional review boards at our intended investigational sites to commence or complete our clinical trials. Before the initial clinical trial for a product candidate may commence in the United States, we must submit an IND containing nonclinical 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 a clinical trial is commenced, we, the FDA, applicable foreign regulatory authorities and 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 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 or applicable foreign 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.

Our product candidates target diseases or disorders that are not well understood. For example, there is only limited scientific understanding of the causes of diabetic gastroparesis. In addition, there are no approved drugs that target NNRs to treat diabetic gastroparesis, and there is only limited scientific understanding of the relationships between diabetic gastroparesis and the pathway targeted by our product candidates. These uncertainties increase the risk that our ongoing and future clinical trials will not be successful.

If clinical trials for any of our product candidates are prolonged or delayed, we would experience a delay in the commercialization of the affected product candidates, which may require us to incur additional costs and delay our receipt of any revenue from potential product sales.

We cannot predict whether we will encounter problems with any ongoing or planned clinical trials of our product candidates 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 those described below, could delay the initiation or completion of any ongoing or planned clinical trial of any of our product candidates or otherwise negatively impact our ability to obtain regulatory approval for, and to market and sell, the product candidate:

- conditions imposed on us by the FDA or any foreign regulatory authority regarding the scope or design of the clinical trial;
- delays in recruiting and enrolling subjects into the clinical trial;
- delays in obtaining, or our inability to obtain, required approvals from institutional review boards, ethics committees or other reviewing entities at clinical sites selected for participation in the clinical trial;
- insufficient supply or deficient quality of the product candidate or other materials necessary to conduct the clinical trial;
- lower than anticipated retention rate of subjects in the clinical trial;
- negative or inconclusive results from the clinical trial, or results that are inconsistent with earlier results, that necessitate additional study;
- serious and unexpected drug-related side effects experienced by subjects in the clinical trial; 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 subject enrollment, which is a function of many factors—including the size of the patient population, the extent to which other clinical trials are being conducted concurrently that involve the same patient population, the number of participating clinical sites, the proximity of subjects to clinical sites, the nature of the trial protocol, the availability of effective treatments for the relevant disease, the eligibility criteria for the clinical trial and the emphasis placed on ensuring a rigorous adherence to the eligibility criteria. Delays in subject enrollment can result in increased costs and longer development times. The failure to enroll subjects in a clinical trial could delay the completion of the clinical trial beyond our current expectations.

In addition, the FDA or foreign regulatory authorities could require us to conduct clinical trials for any of our product candidates with a larger number of subjects than we project. We may not be able to enroll a sufficient number of subjects in a timely or cost-effective manner. Furthermore, enrolled subjects may drop out of clinical trials, which could impair the validity or statistical analysis of those clinical trials.

We do not know whether any clinical trial of any of our product candidates will begin as planned, will need to be restructured or will be completed on schedule, if at all. Delays in clinical trials may 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.

Each of our product candidates will remain subject to ongoing regulatory review even if it receives marketing approval. If we fail to comply with continuing regulations or if patients taking our products experience adverse health effects, we could lose the approval or the sale of the affected products could be suspended or otherwise adversely affected.

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. In addition, if any of our product candidates becomes an approved product, 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. We may be slow to adapt, or may never adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements. If we fail to comply with the requirements of the FDA and other applicable U.S. or foreign governmental or regulatory authorities or previously unknown problems with our products or product candidates, 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 or untitled 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.

We may apply our finite resources to pursue a particular product candidate or indication, fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success, or relinquish valuable rights to our disadvantage.

Because we have finite financial and managerial resources, we must focus on product candidates and 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. Furthermore, if we do not accurately evaluate the commercial potential or target market for a particular product candidate, or if we incorrectly conclude that utilizing the expertise and resources of a collaborator in the development or potential commercialization of a particular product candidate would benefit us, we may relinquish valuable rights to that product candidate through strategic alliances, collaborations or licensing or other comparable arrangements in cases in which it would have been advantageous for us to retain sole development and commercialization rights. Any of these decisions or conclusions could have a material adverse effect on our business.

Risks Related to Our Dependence on Third Parties

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

We may selectively enter into alliances and collaborations, particularly for target indications for which a potential collaborator has unique expertise or that represent large primary care markets that must be served by large sales and marketing organizations. Our ability to generate revenue from our alliances and collaborations 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 alliances and collaborations involving our product candidates pose many risks to us, including:

- collaborators have significant discretion in determining the amount and timing of efforts and resources that they will apply to these alliances and collaborations or to the development of our licensed product candidates;
- collaborators may interpret clinical trial or non-clinical study results differently than we do, may pursue further development and commercialization of our product candidates for indications that we do not believe are optimal, may not pursue further development and commercialization of our product candidates at all or may elect not to continue or renew research and development programs based on nonclinical 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;
- collaborators 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 collaborators that result in the delay or termination of the research, development or commercialization of our product candidates, that result in costly litigation or arbitration that diverts management attention and resources or that, if resolved unfavorably to us, result in adverse financial consequences for us under the terms of the applicable agreements; and
- alliances and collaborations may be terminated, either in their entirety or as to particular product candidates or programs, which may result in a need for a reallocation of internal funds or additional capital to pursue further development of the applicable product candidates. As examples, we previously had a collaborative research and license agreement with AstraZeneca which included a multi-year preclinical research collaboration and a license granted to AstraZeneca to develop and commercialize TC-1734, an additional collaboration agreement with AstraZeneca for the development and commercialization of TC-5214 in major depressive disorder, and a product development and commercialization agreement with GlaxoSmithKline that have all been terminated. Some of these terminations caused us to reallocate internal resources.

Alliances and collaborations may not lead to development of product candidates or commercialization of products in the most efficient manner or at all.

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 alliances and 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 seeking alliances and collaborations to assist us in furthering development and potential commercialization of some of our product candidates. We intend to do so particularly for target indications for which a potential collaborator has unique expertise or that involve large primary care markets that must be served by large sales and marketing organizations.

We face significant competition in seeking appropriate alliances and collaborations. Alliances and collaborations are complex and time-consuming to negotiate and document. We may not be able to negotiate them on acceptable terms, or at all. If we cannot, 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 any 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 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 many 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 and foreign regulatory authorities require us to comply with regulations and guidelines, commonly referred to as good clinical practice, or GCP, 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. These risks may be heightened for clinical trials that we conduct outside of North America and Western Europe. In particular, we have previously conducted trials of multiple product candidates at sites in India and Eastern Europe, as well as in the United States.

Language barriers and the limited experience of some clinical investigators in Eastern Europe or other countries in conducting clinical trials in accordance with standards set forth by the FDA and applicable regulatory authorities may increase the risk of non-compliance. The failure of third parties to carry out their obligations could impair the credibility or reliability of the data generated in clinical trials of our product candidates, require a trial to be repeated and increase the overall cost of a development program, delay or prevent the development, approval and commercialization of our product candidates or result in enforcement action against us.

If the performance of our contract manufacturers or any present or future collaborator of ours with manufacturing responsibility for a particular product candidate 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 no longer have internal manufacturing capability. We have historically manufactured our product candidates only in small quantities for early-stage preclinical testing and have contracted with third parties to manufacture, in collaboration with us, our product candidates for clinical trials. 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 our now discontinued product Inversine and its active ingredient.

For each of our product candidates, we typically rely on single third-party contract manufacturers for manufacturing in drug substance form and single third-party contract manufacturers for manufacturing in a formulation for use in clinical trials. We intend to continue to rely on third-party manufacturers (or, where applicable, potential future collaborators) 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 or collaborators 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 receipt of regulatory approvals or the commercialization of our products or result in higher costs or lost product revenue. In particular, any contract manufacturer or applicable collaborator of ours could:

- encounter difficulties in achieving volume production, laboratory testing, quality control or quality assurance or suffer shortages of qualified personnel, any of which could result in its inability to manufacture sufficient quantities to meet clinical timelines for a particular product candidate, obtain approval to market and sell the product candidate or to commercialize the product candidate; or
- fail to establish and follow cGMP or fail to document its adherence to cGMP, 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.

In addition, any contract manufacturer could:

- terminate or not renew its manufacturing agreement with us, based on its own business priorities, at a time that is costly or inconvenient for us; or
- breach or fail to perform as agreed under the applicable manufacturing agreement.

We expect to rely initially on a single contract manufacturer for any product candidate that we successfully bring to market. Changing any manufacturer that we 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 are described in an NDA or supplement that typically must be reviewed and approved by the FDA or foreign regulatory authorities and the facilities typically must pass inspection by the FDA or foreign regulatory authorities before such approval. 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, contract manufacturers located in foreign countries may be subject to import limitations or bans. As a result, if any contract manufacturer is unable, for whatever reason, to supply the contracted amounts of any product that is successfully brought to market, a shortage would result which would have a negative impact on our revenue.

Drug manufacturers are subject to ongoing periodic unannounced inspection by the FDA, the U.S. Drug Enforcement Administration (in the case of controlled substances) and corresponding state and foreign agencies to ensure strict compliance with cGMP, other government regulations and corresponding foreign standards.

While we are ultimately responsible for ensuring the quality of any products manufactured by third party contractors and obligated to audit the performance of such third-party contractors, we do not have control over third-party manufacturers' compliance with these regulations and standards. Failure by us or any third-party manufacturers 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.

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, pharmaceutical compositions, formulations and uses in the treatment of diseases and disorders.

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 product candidates and technology will depend on the success that we have in obtaining valid 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. 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. If we are unable to obtain, enforce or defend the patents with respect to our product candidates, our ability to commercialize our product candidates would be materially and adversely affected and our business would suffer.

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. The Leahy-Smith America Invents Act was signed into U.S. law September 26, 2011, and includes significant changes to patent law. One of the most notable changes is the transition from a "first-to-invent" to a "first-inventor-to-file" patent system. This is effective for patent applications filed on or after March 16, 2013. 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 invent the inventions claimed in our issued U.S. patents or patent applications filed on or before March 16, 2013, or that we were or will be the first to file for protection of the inventions claimed in any of our U.S. patent applications filed after March 16, 2013 or in any of our issued foreign patents or pending foreign 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 patent covering one of our product candidates may expire before the product candidate can be commercialized or remain in force for only a short period following initial commercialization. In either case, any

advantages of the patent would be limited. 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 either in patent laws or in interpretations or enforcement 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. For example, we generally do not seek patent protection for the computer-based molecular design technologies that form part of Pentad and instead seek to maintain those technologies as trade secrets.

To maintain the confidentiality of trade secrets and proprietary information, we generally enter into confidentiality agreements with our employees, consultants, contractors and collaborators 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 that 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 and, if we have sublicensed our license rights to a third party, the loss of the license rights may breach our obligations to our sublicensee.

We are a party to various license agreements. As an example, we license patent rights covering the pharmaceutical composition and methods of use of TC-5214 from University of South Florida Research Foundation. 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, whether as a result of actions or inactions by us or by any potential future collaborator of ours to which we out-license patent rights that we have in-licensed from a third party, the licensor may have the right to terminate the license, in which event we may 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 specific method of use or indication. If a third party were to obtain approval of a particular compound for use in a different indication, we could be subject to competition arising from off-label use.

Although we generally seek the broadest patent protection available for our 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. 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 of any compound for which we rely on method of use patent coverage 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 foreign regulatory authorities. Even if we have patent protection for the indication for which the product is prescribed, as a practical matter, we would have little recourse as a result of this off-label use. In that event, our revenue from the commercialization of the compound would likely be materially and 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 similarly be sued by third parties. We may also become subject to interference, review 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, regardless of their merit, lack of merit or eventual outcome, would be costly and a significant diversion of our technical personnel's and management's attention from conducting our business, which would harm 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 material 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 and development, manufacturing or sales of any infringing product in the country or countries covered by the patent allegedly 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 allegedly 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 materially and 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 material 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 and sale, our product candidates may not gain market acceptance and may fail to generate significant revenue.

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.

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 foreign regulatory authorities.

We currently have limited sales, marketing and distribution experience and no internal sales or distribution capabilities. If we are unable to enter into alliances and collaborations or other arrangements with third parties to market and sell our product candidates or to develop our own internal marketing capability, or if we enter into such arrangements with third parties who do not perform well, we may not be successful in commercializing any products for which we receive regulatory approval.

We currently have limited sales, marketing and distribution experience and no internal sales or distribution capabilities. 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. 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 would 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. We may also have little control over the performance of potential future collaborators, any of which may fail to devote the necessary resources and attention to sell, market or distribute our products effectively.

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

Successful commercialization of any of our product candidates for which regulatory approval is obtained will depend in part on the extent to which coverage and adequate payment is available from government health programs, such as Medicare and Medicaid, 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 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 cannot yet determine their cost-effectiveness. We may need to conduct expensive studies in order to demonstrate cost-effectiveness. Moreover, third-party payors frequently require that pharmaceutical

companies provide predetermined discounts from list prices and frequently challenge the prices charged for medical products. Because our product candidates are in the development stage, we do not yet know the level of reimbursement, if any, for any product candidates 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 or sustain profitability could be materially and adversely affected.

We believe that the government and third party payors will continue to look for ways to contain or reduce the cost of health care in ways that are likely to affect the business and financial condition of pharmaceutical companies. We cannot predict the impact of these efforts on the coverage of, or prices for, any of our product candidates if they are approved.

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 revenue.

The development and commercialization of new drugs is highly competitive. Our business is characterized by extensive research and development 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, biopharmaceutical, biotechnology and other companies and research institutions, many of which have greater financial, technical and other resources and personnel and more experience in research and development, regulatory and drug commercialization than we have. Our competitors may:

- develop products that are more effective, safer, more tolerable, more convenient, less costly or otherwise more competitive than our product candidates;
- obtain FDA or foreign regulatory approval for their products more rapidly than we do;
- adapt more quickly to new technologies and scientific advances than we do;
- initiate or withstand substantial price competition more successfully than we do;
- have greater success in recruiting skilled scientific workers from the limited pool of available talent than we do;
- obtain more effective intellectual property protection than we do;
- 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.

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.

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, lack of merit or eventual outcome, would be a significant diversion of our management's attention from conducting our business and could be costly or materially and adversely affect our reputation or the demand for our products.

We have secured product liability insurance coverage in amounts that we believe to be appropriate for our current operations. 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 expect that we will expand our coverage with respect to any products for which we successfully 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.

If any promotional activities that we undertake fail to comply with the regulations and guidelines of the FDA and applicable foreign 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 foreign regulatory authorities. 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 may in some jurisdictions and 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. If we undertake any promotional activities in the future for any product candidate for which we receive regulatory approval 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

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 team, including our President and Chief Executive Officer, Stephen A. Hill, as well as our other scientific, technical and managerial personnel. Our key personnel, including Dr. Hill, can terminate their employment with us at any time. The loss of the services of any of our senior management team or other key personnel may significantly delay or prevent the achievement of product development and other business objectives. In addition, we rely on consultants and advisors, including scientific and clinical advisors, from time to time 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 consulting or advisory contracts with other organizations or other commitments that could limit their availability or otherwise affect their ability to contribute to us.

Potential future growth of our business and replacement of any key personnel that may terminate their employment with us will depend on our ability to identify, recruit and retain the appropriate personnel. We may have difficulty attracting senior management, scientific and technical personnel as a result of previous workforce reductions and a perceived risk of future workforce reductions. We face intense competition for skilled executives and individuals with relevant scientific and technical expertise in our industry, and this competition is likely to continue. We may not be able to continue to attract and retain personnel with the advanced qualifications necessary for the success of our business.

Risks Related to Our Common Stock

The market price of our common stock has historically been highly volatile and the Proposed Merger may result in significant stock price and trading volume fluctuations.

The trading price of our common stock has historically been highly volatile, and the Proposed Merger may result in significant stock price and trading volume fluctuations. We cannot predict precisely the impact the announcement, pendency or consummation of the Proposed Merger will have on our stock price. Additionally, the stock market in general has experienced extreme price and volume fluctuations. The market prices of securities of pharmaceutical, biopharmaceutical and biotechnology companies have been extremely volatile and have experienced fluctuations that have often been unrelated or disproportionate to operating performance. The Proposed Merger and 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 shares held by any stockholder.

If our operating results fluctuate significantly, our stock price may decline.

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:

- the scope, progress, duration, results and cost of clinical trials, as well as non-clinical studies and assessments, of our product candidates and programs;
- our inability, or the inability of any current or potential future collaborator, to successfully complete clinical trials or non-clinical studies and assessments 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;
- whether we establish additional strategic alliances, collaborations or licensing or other comparable arrangements, or whether we pursue and complete any merger, acquisition or other significant corporate transaction, and, if we do, the associated terms in each case;
- the expiration or termination of agreements with any potential future collaborator;
- the cost, timing and outcomes of regulatory approvals or other regulatory actions;
- the extent of our general and administrative expenses;
- general and industry-specific economic conditions that may affect the research and development expenditures of any potential future collaborator of ours; and
- general conditions in the pharmaceutical, biopharmaceutical or biotechnology industries or in the U.S. or global credit or financial markets.

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

Our current trading volumes are modest, and sales of a substantial number of shares of our common stock in the public market 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. 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 owned by our stockholders and available for sale in the public market is limited only to the extent provided under applicable federal securities laws. In addition, we may, in the future, issue additional shares of our common stock as compensation to our employees, directors or consultants, in connection with strategic alliances, collaborations, acquisitions or other transactions 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.

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

Provisions of our certificate of incorporation and bylaws could discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. As a result, stockholders who wish to participate in these transactions may not have the opportunity to do so. 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. Furthermore, these provisions could also 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 are 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 or otherwise 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 for the stockholders 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.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

We lease approximately 18,300 square feet of office space in the building located at 100 North Main Street in Winston-Salem, North Carolina pursuant to a sublease. The term of our sublease expires December 30, 2015. The monthly payment under our sublease is approximately $23,000, subject to an annual escalation of approximately 3% during the term. We also lease approximately 4,100 square feet of storage space in the same building pursuant to a separate sublease. We believe our leased space is suitable for its intended purpose.

Item 3. Legal Proceedings.

We are not currently a party to any material pending legal proceedings or aware of any contemplated proceeding against us by any governmental authority.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information

Our common stock currently trades on the NASDAQ Global Select Market under the symbol "TRGT." The following table sets forth, for the periods indicated, the high and low sales prices for our common stock:

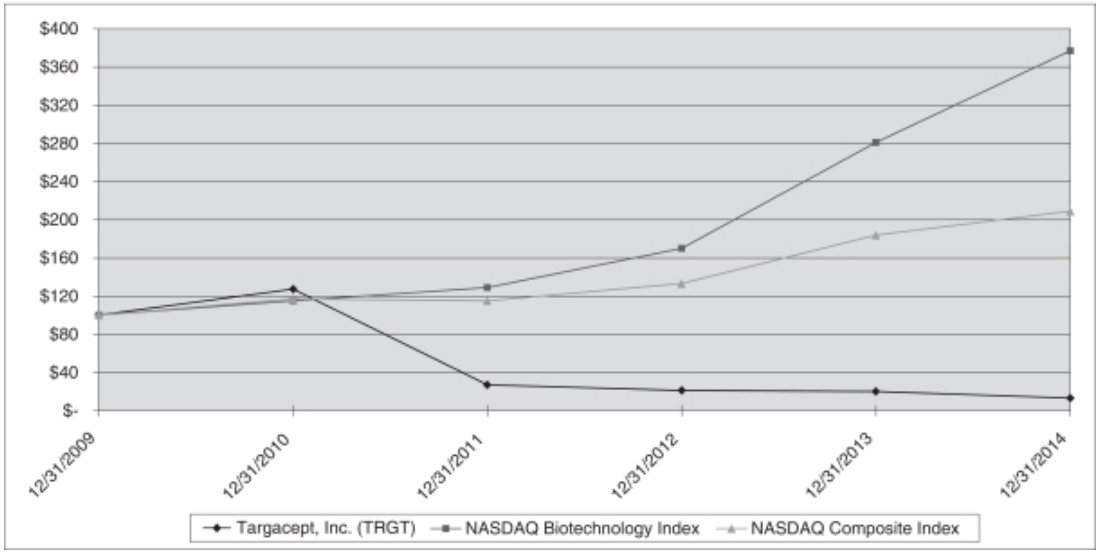
	Common Stock	
	High	*Low*
2013:		
First Quarter	$4.83	$4.19
Second Quarter	$5.77	$4.06
Third Quarter	$5.84	$4.28
Fourth Quarter	$6.11	$3.75
2014:		
First Quarter	$5.23	$4.04
Second Quarter	$4.88	$3.52
Third Quarter	$4.68	$2.47
Fourth Quarter	$2.85	$2.25

Comparative Stock Performance Graph

The following graph and related information shall not be deemed "soliciting material" or to be "filed" with the SEC or subject to Regulation 14A or 14C, other than as provided in Item 201 of Regulation S-K, or to the liabilities of Section 18 of the Exchange Act, nor shall such information be incorporated by reference into any future filing under the Securities Act or the Exchange Act, except to the extent that we specifically incorporate it by reference into such a filing.

The following graph compares the cumulative total stockholder return for our common stock with the cumulative total stockholder return of the NASDAQ Composite Index and the NASDAQ Biotechnology Index. The comparison assumes the investment of $100 on December 31, 2009 in each of our common stock, the NASDAQ Composite Index and the NASDAQ Biotechnology Index and the reinvestment of any dividends. We have not paid any dividends on our common stock and do not include dividends in the representation of our performance. The performance shown for any prior period does not predict the performance to be expected for any future period.

Comparison of Cumulative Total Return
Among Targacept, Inc., the NASDAQ Composite Index
and the NASDAQ Biotechnology Index



	12/31/09	12/31/10	12/31/11	12/31/12	12/31/13	12/31/14
Targacept, Inc.	$ 100	$ 127	$ 27	$ 21	$ 20	$ 13
NASDAQ Biotechnology Index	$ 100	$ 115	$ 129	$ 170	$ 281	$ 377
NASDAQ Composite Index	$ 100	$ 117	$ 115	$ 133	$ 184	$ 209

Stockholders

As of March 4, 2015, there were approximately 44 holders of record of our common stock. Because many of our shares are held by brokers or other nominees on behalf of beneficial owners, we are unable to determine precisely the total number of beneficial owners represented by the holders of record. As of March 4, 2015, we estimate the total number of beneficial owners of our common stock whose shares are held by brokers or other nominees on their behalf to be approximately 3,005.

Dividends

We have never declared or paid cash dividends on any of our shares of capital stock. With the exception of the Pre-Closing Dividend that may be distributed in connection with the Proposed Merger discussed above, we currently intend to retain future earnings, if any, to finance the expansion and growth of our business and 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.

Securities Authorized for Issuance Under Equity Compensation Plans

The response to this item is incorporated by reference from the discussion responsive thereto under the caption “Stock-Based Incentive Plans” in the notes to Financial Statements.

Calculation of Aggregate Market Value of Non-Affiliate Shares

For purposes of calculating the aggregate market value of shares of our common stock held by non-affiliates as set forth on the cover page of this annual report, we have assumed that all outstanding shares as of the determination date were held by non-affiliates, except for shares held by our executive officers, directors and their affiliated entities, and stockholders that held 10% or more of our outstanding common stock as of the determination date and are not affiliated with a director if there are facts and circumstances that indicate that the 10% or greater stockholder exercises control over us. This assumption is not intended to constitute an admission that all executive officers and directors, and any 10% or greater stockholder treated as an affiliate for this purpose, are, in fact, our affiliates or that there are no other persons who may be deemed to be our affiliates.

Unregistered Sales of Securities; Use of Proceeds from Registered Securities; Issuer Purchases of Equity Securities

None.

Item 6. Selected Financial Data.

You should read the following selected financial data together with our financial statements and the related notes included in this annual report and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this annual report. The selected financial data in this section are not intended to replace our financial statements.

We derived the statements of comprehensive income data for the years ended December 31, 2014, 2013 and 2012 and the balance sheet data as of December 31, 2014 and 2013 from our audited financial statements included in this annual report. We derived the statements of comprehensive income data for the years ended December 31, 2011 and 2010 and the balance sheet data as of December 31, 2012, 2011 and 2010 from our audited financial statements not included in this report. Our historical results for any prior period are not necessarily indicative of the results to be expected for any future period. You should read the notes to our financial statements for an explanation of the method used to determine the number of shares used in computing basic and diluted net loss per share.

	Year Ended December 31,				
	2014	2013	2012	2011	2010
	(in thousands, except share and per share data)				
Statement of Operations Data:					
Net operating revenues	$ 275	$ 3,629	$ 57,860	$ 97,637	$ 85,713
Operating expenses:					
Research and development	19,499	38,840	49,087	95,215	64,546
General and administrative	10,172	12,005	13,193	12,167	8,052
Reduction in force	318	—	3,718	—	—
Total operating expenses	29,989	50,845	65,998	107,382	72,598
(Loss) income from operations	(29,714)	(47,216)	(8,138)	(9,745)	13,115
Interest income	585	784	1,070	1,348	1,463
Gain (loss) on sale of property and equipment	13	(213)	55	—	—
Interest expense	(23)	(53)	(86)	(132)	(153)
(Loss) income before income taxes	(29,139)	(46,698)	(7,099)	(8,529)	14,425
Income tax (expense) benefit	(3,484)	(7)	101	—	(3,526)
Net (loss) income	$ (32,623)	$ (46,705)	$ (6,998)	$ (8,529)	$ 10,899
Basic net (loss) income per share	$ (0.97)	$ (1.39)	$ (0.21)	$ (0.27)	$ 0.38
Diluted net (loss) income per share	$ (0.97)	$ (1.39)	$ (0.21)	$ (0.27)	$ 0.36
Weighted average common shares outstanding—basic	33,780,433	33,640,323	33,476,316	31,637,283	28,543,408
Weighted average common shares outstanding—diluted	33,780,433	33,640,323	33,476,316	31,637,283	30,150,324

	As of December 31,				
	2014	2013	2012	2011	2010
	(in thousands)				
Balance Sheet Data:					
Cash, cash equivalents and investments	$ 110,803	$ 143,777	$ 184,927	$ 249,270	$ 252,509
Working capital	105,227	82,627	116,394	119,606	119,422
Total assets	111,999	145,873	189,579	258,126	262,787
Long-term debt, net of current portion	—	283	1,136	1,986	1,349
Accumulated deficit	(313,256)	(280,633)	(233,928)	(226,930)	(218,401)
Total stockholders' equity	109,085	134,611	175,915	174,288	91,847

Item 7. 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 included in this annual report. In addition to historical information, the following discussion contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results, performance or experience could differ materially from what is indicated by any forward-looking statement due to various important factors, risks and uncertainties, including, but not limited to, those set forth under "Cautionary Note Regarding Forward-Looking Statements," which precedes Part I of this annual report, and under "Risk Factors" in Item 1A of Part I of this annual report.

Overview

Background

We are a biopharmaceutical company that has historically been engaged in the development of novel NNR Therapeutics™ to treat patients suffering from serious nervous system and gastrointestinal/ genitourinary diseases and disorders. Our NNR Therapeutics selectively target a class of receptors known as neuronal nicotinic receptors, which we refer to as NNRs. NNRs are found on nerve cells throughout the nervous system and serve as key regulators of nervous system activity. However, in light of recent clinical trial disappointments in our development programs for TC-5214, TC-1734 and TC-5619, and our decision to discontinue the development of those compounds, we have shifted our strategic emphasis to external business opportunities not related to NNRs.

On March 5, 2015, we announced our entry into a definitive Agreement and Plan of Merger (the "Merger Agreement") with Catalyst Biosciences, Inc. ("Catalyst"), pursuant to which, among other things, subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, a wholly-owned subsidiary of ours will be merged with and into Catalyst, with Catalyst continuing as the surviving corporation and a wholly-owned subsidiary of ours (the "Proposed Merger"). Immediately following the effective time of the Proposed Merger, existing Catalyst equity holders are expected to own approximately 65% of the capital stock of the combined company, and existing Targacept equity holders are expected to own approximately 35% of the capital stock of the combined company. Prior to the closing of the Proposed Merger, we also expect to distribute to our stockholders a dividend of approximately $37 million in aggregate principal amount of redeemable convertible notes and approximately $20 million in cash (the "Pre-Closing Dividend"). The notes will be convertible into shares of common stock of the combined company at a conversion price of $1.31 per share, which represents 130% of the negotiated per-share value of our assets following the anticipated Pre-Closing Dividend. If, in the future, the redeemable convertible notes are fully converted into Targacept common stock, Targacept stockholders would own approximately 49% of the outstanding capital stock of the combined company on a pro forma basis as of the anticipated closing date. Targacept stockholders who are entitled to the Pre-Closing Dividend will also be entitled to any net proceeds received as a result of any disposition of Targacept's NNR compounds and related assets that occurs within up to two years after the closing of the Proposed Merger, unless those assets are sold or otherwise disposed of prior to the closing of the Proposed Merger.

We expect to consummate the Proposed Merger in the second quarter of 2015.

Catalyst is a biopharmaceutical company focused on discovering and developing novel biopharmaceutical products based on engineered human proteases. Catalyst has designed its proteases to regulate the coagulation (to promote hemostasis) and complement cascades (to prevent inflammation). In collaboration with Pfizer, Catalyst's lead Factor VII product candidate PF-05280602/CB 813d has successfully completed a Phase 1 trial in hemophilia patients. In addition, Catalyst's pipeline includes promising drug candidates for Hemophilia B (FIX), pro-coagulation (FXa) and complement disorders (anti-C3).

Our business activities are conducted by one operating segment for which we provide information about revenues, profits and losses in our consolidated financial statements.

Based on years of focused research in the NNR area, and notwithstanding our clinical development setbacks, we continue to believe that compounds that interact selectively with specific NNR subtypes have the potential to achieve positive medical effects by modulating their activity. We have built a patent estate covering the structure or therapeutic use of small molecules designed to regulate activity in the body by selectively affecting specific NNR subtypes. We do not have current plans to continue development of any of our NNR programs internally. Instead we would seek to out-license or sell those assets to one or more third parties.

Our most advanced NNR product candidates are TC-6499, TC-6683 (formerly AZD1446), TC-5619, TC-6987, TC-1734 and TC 5214, and they are discussed under the caption “Business” in Item 1 of Part I of this annual report.

We were party to a collaboration agreement with AstraZeneca focused on compounds that act on the a4ß2 NNR, which AstraZeneca terminated in October 2014, effective January 2015. Under the agreement AstraZeneca was granted an exclusive license to TC-6683 and an earlier-stage compound that arose from the preclinical research collaboration conducted under the agreement from January 2006 to January 2010. The rights to TC-6683 and the other compound reverted to Targacept upon effectiveness of termination of the collaboration agreement in January 2015.

Under a second collaboration agreement with AstraZeneca, which we refer to in this annual report as our “MDD agreement with AstraZeneca,” we had been co-developing TC-5214 as a treatment for major depressive disorder, or MDD. Upon entering into the agreement, we received a $200.0 million upfront payment. Thereafter, AstraZeneca was responsible for 80%, and we were responsible for 20%, of the cost of the completed clinical program for TC-5214 in MDD, except that AstraZeneca was responsible for 100% of development costs that were required only for countries outside the United States and the European Union. Following completion of a Phase 3 clinical program for TC-5214 conducted under the agreement, we and AstraZeneca announced that a regulatory submission for TC-5214 as an adjunct therapy for MDD would not be pursued and the “switch” monotherapy trial was discontinued. AstraZeneca subsequently terminated the agreement, effective in May 2012. As a result of the termination, all rights and licenses for TC-5214 that we granted under the agreement to AstraZeneca terminated and reverted to us.

Since our inception, we have had limited revenue from product sales and have funded our operations principally through public and private offerings of equity securities, payments under collaboration and alliance agreements, grants and equipment financing. We have historically devoted substantially all of our resources to the discovery and development of our product candidates and technologies, including the design, conduct and management of nonclinical and clinical studies and related manufacturing, regulatory and clinical affairs, as well as intellectual property prosecution.

In the second quarter of 2012, we completed a reduction in force as part of a plan to focus our resources on our more advanced programs. In October 2012, we announced a second reduction in force, as well as our plan to close our laboratory operations. We completed the second reduction in force and the laboratory closings in December 2012 and are no longer devoting resources to drug discovery or nonclinical research activities. We sold virtually all of our laboratory equipment after we closed our laboratories. We completed a further reduction in force in the fourth quarter of 2014, decreasing the number of our employees by 26% to 20 in order to align our resources with our short-term operating needs.

Except for a small number of periods in which we generated net income due primarily to the recognition into revenue of amounts received under collaboration agreements, we have not been profitable. As of December 31, 2014, we had an accumulated deficit of $313 million. We expect that we will incur losses in future periods as we incur merger related expenses, as our product candidates advance into later-stage development and as we progress our programs and invest in additional product opportunities. Drug development, including clinical trials in particular, is time-consuming, expensive and may never yield a product that will generate revenue.

As a clinical-stage company, our revenues, expenses and results of operations are likely to fluctuate significantly from quarter to quarter and year to year. We believe that period-to-period comparisons of our results of operations should not be relied upon as indicative of our future performance.

Revenue

In January 2010, we received the $200.0 million upfront payment under our MDD agreement with AstraZeneca, which we recorded as deferred revenue and began recognizing into revenue on a straight-line basis over the estimated period of our substantive performance obligations under the agreement.

In the first quarter of 2012, we and AstraZeneca announced that, based on the totality of the results of the Phase 3 program, a regulatory submission` for TC-5214 as an adjunct therapy for MDD would not be pursued and the “switch” monotherapy trial was discontinued. These events resulted in a change in the estimated period of our substantive performance obligations under our MDD agreement with AstraZeneca. Accordingly, we revised the revenue recognition period for the upfront payment and began recognizing the portion of the upfront payment not yet recognized into revenue on a straight-line basis over the remainder of the revised period. We had recognized the full amount of the upfront payment into revenue as of June 30, 2012.

Pursuant to a September 2010 amendment to our collaboration agreement with AstraZeneca related to a clinical trial of TC-1734 in mild to moderate Alzheimer’s disease, we received a $500,000 payment in the fourth quarter of 2010 and cumulative payments of $5.5 million in the second half of 2011. We recorded all of these payments as deferred revenue and began recognizing them into revenue on a straight-line basis over the estimated period of our obligations with respect to the study. As a result of AstraZeneca’s exercise of its right to terminate TC-1734 from the collaboration in March 2013, we recognized the remaining unrecognized deferred amount of $3.5 million into revenue during the first quarter of 2013.

As of December 31, 2014, we had received $61.6 million in aggregate upfront fees and milestone payments under our ongoing collaboration agreement with AstraZeneca and recognized an additional $26.5 million in collaboration research and development revenue for research services that we provided in the preclinical research collaboration conducted under that agreement. We immediately recognized an aggregate of $32.6 million of the amounts received under the agreement for achievement of milestone events, because each event met the conditions required for immediate recognition under our revenue recognition policy. We deferred recognition of an aggregate of $29.0 million received under the agreement and have fully recognized these deferred amounts into revenue over the respective periods discussed in Note 12 to our audited financial statements included in this annual report.

From time to time we seek and are awarded grants or perform work under grants awarded to third-party collaborators from which we derive revenue. During the third quarter of 2011, we were awarded a third grant from the Michael J. Fox Foundation for Parkinson’s Research, or MJFF. Based on the terms of the grant, we received $250,000 upon inception of the grant term and an additional $250,000 in March 2012. In addition, we are a subcontractor under a grant awarded to The California Institute of Technology by the National Institute on Drug Abuse, or NIDA, part of the National Institutes of Health, to fund research on innovative NNR-based approaches to the development of therapies for smoking cessation. Based on the terms of this arrangement, we received $191,000 in May 2012, $93,000 in October 2013 and $148,000 in March 2014. Funding for awards under federal grant programs is subject to the availability of funds as determined annually in the federal appropriations process.

In September 2014, we entered into a services agreement with a biopharmaceutical company, under which we provided certain clinical development and regulatory consulting services. Under the agreement, we expect to receive approximately $187,000 for our services over the term of the agreement, which expired on February 28, 2015. We do not expect ongoing revenue from this agreement or other similar agreements.

Research and Development Expenses

Since our inception, we have focused our activities on drug discovery and development programs. We record research and development expenses as they are incurred. Research and development expenses represented approximately 65%, 76% and 74% of our total operating expenses for the years ended December 31, 2014, 2013, and 2012, respectively.

Research and development expenses historically include costs associated with:

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

We have historically utilized our research and development personnel and infrastructure resources across several programs, and many of our costs have not been specifically attributable to a single program. Accordingly, we cannot state precisely our total costs incurred on a program-by-program basis.

We have not received FDA or foreign regulatory marketing approval for any of our product candidates. Our current and future expenditures on development programs are subject to numerous uncertainties in timing and cost to completion. Our compounds are tested in numerous preclinical studies for safety, toxicology and efficacy. We then conduct clinical trials for those product candidates that are determined to be the most promising. If we do not establish an alliance or collaboration in which our collaborator assumes responsibility for funding the development of a particular product candidate, we fund these trials ourselves. As we obtain results from clinical trials, we or the collaborator may elect to discontinue or delay trials for some product candidates in order to focus resources on more promising product candidates. Completion of clinical trials may take several years or more, and 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 for a particular product candidate may vary significantly as a result of a variety of factors, including:

- the number of subjects who participate in the trials;
- the number and locations of sites included in the trials;
- the length of time required to enroll trial subjects;
- the therapeutic areas being investigated;
- the duration of the trials and subject follow-up;
- the costs of producing supplies of the product candidate needed for 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.

In addition, our strategy includes entering into alliances and collaborations with third parties to participate in the development and commercialization of some of our product candidates. Where a third party has responsibility for or authority over any or all of the non-clinical or clinical development of a particular product candidate, the estimated completion date may be largely under control of that third party and not under our control. We cannot forecast with any degree of certainty whether any of our product candidates will be subject to future alliances or collaborations or how any such arrangement would affect our development plans or capital requirements. Because of this uncertainty, and because of the numerous uncertainties related to clinical trials and drug development generally, we are unable to determine the duration and completion costs of our development programs or whether or when we will generate revenue from the commercialization and sale of any of our product candidates.

General and Administrative Expenses

General and administrative expenses consist principally of salaries and other related costs for personnel in executive, finance, business development, legal, information technology and human resource functions. Other general and administrative expenses include expenses associated with stock options granted to personnel in those functions, depreciation and other facility costs not otherwise included in research and development expenses, patent-related costs, insurance costs and professional fees for consulting, legal, accounting and public and investor relations services.

Income Taxes

We have incurred cumulative net operating losses through December 31, 2014 and have not paid federal, state or foreign income taxes for any period since our inception. An IRS examination of our 2010 federal income tax return was completed in 2014 and resulted in an adjustment that increased taxable income for 2010 by $15.1 million, decreased taxable income for 2011 by $1.1 million and decreased taxable income for 2012 by $14.0 million. The cumulative adjustment had no effect on our federal net operating loss carryforwards. The application of U.S. generally accepted accounting principles, or GAAP, may for some periods result in non-cash income tax expense or benefit being reflected in our Statement of Comprehensive Income (Loss), as an example, exercises of stock options in periods of net income may result in tax deductions for stock-based compensation in excess of expense recorded for the stock options under GAAP, which are referred to as excess tax deductions. For years for which we report net income before taxes, we recognize the income tax benefit related to the excess tax deductions as an increase to capital in excess of par value and, based on Accounting Standards Codification ASC Topic 740, *Income Taxes*, record an offsetting charge in the same amount to income tax expense.

The IRS examination adjustment to our 2010 federal income tax return resulted in the realization of an additional $3.4 million of excess tax deductions and an offsetting charge to income tax expense for the year ended December 31, 2014. For the year ended December 31, 2012, we recognized $101,000 of income tax benefit as a result of the application of accounting guidance for intra-period tax allocation, under which we are required to consider all items (including items recorded in other comprehensive income) in determining the amount of tax benefit that should be allocated to net loss. The non-cash income tax benefit for 2012 was offset in full by income tax expense recorded in other comprehensive income.

As of December 31, 2014, we had $3.9 million remaining of cumulative tax deductions for periods of net loss from exercises of stock options in excess of expense recorded for the stock options under GAAP. The benefit of these excess tax deductions had not begun to be realized as of December 31, 2014 because we have incurred cumulative net operating losses since inception. This benefit will not be recognized as an increase to capital in excess of par value until the excess deductions reduce income taxes payable.

As of December 31, 2014, we had net operating loss carryforwards of $259.2 million for federal income tax purposes and $245.0 million for state income tax purposes, and we had research and development income tax credit carryforwards of $13.5 million for federal income tax purposes and $587,000 for state income tax purposes. The federal net operating loss carryforwards begin to expire in 2024. The state net operating loss carryforwards begin to expire in 2019. The federal and state research and development tax credits begin to expire in 2021. As a result of various factors, including the subjectivity of measurements used in the calculation of particular tax positions taken or that may in the future be taken in our tax returns, it is uncertain whether or to what extent we will be eligible to use the tax credits.

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. 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. A series of stock issuances by us gave rise to such an ownership change in December 2004. As a result, an annual limitation is imposed on our use of net operating loss and credit carryforwards that are attributable to periods before the change. In addition, a portion of the net operating loss carryforwards described above may potentially not be usable by us if we experience further ownership changes in the future.

For financial reporting purposes, we have recorded a valuation allowance in all jurisdictions to fully offset the deferred tax assets related to the carryforwards and tax credits discussed above until it is more likely than not that we will realize any benefit from them.

Fair Value

The carrying amounts of our cash and cash equivalents, investments in marketable securities, accounts receivable, accounts payable and accrued expenses are considered to be representative of their respective fair values due to their short-term natures and, in the case of short-term investments, their market interest rates. Likewise, the carrying amounts of our long-term debts are considered to be representative of their fair value due to their market interest rates. Cash that we do not expect to use to fund our short-term liquidity requirements is invested in corporate debt securities and municipal bonds rated at least A quality or equivalent, U.S. Treasury notes and bonds, U.S. and state government agency-backed certificates and certificates of deposit. Our investments in marketable securities, which include marketable securities classified on our balance sheet as cash equivalents, are recorded at quoted market prices or observable market inputs and totaled $54.4 million at December 31, 2014.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of financial condition and results of operations is based on our audited financial statements, which have been prepared in accordance with GAAP. 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. We base our estimates on historical experience and on various 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 and the recording of revenues and expenses that are not readily apparent from other sources. Actual results and experiences may differ materially from these estimates. In addition, our reported financial condition and results of operations could vary if new accounting standards are enacted that are applicable to our business.

Our significant accounting policies are described in Note 2 to our audited financial statements for the year ended December 31, 2014 included in this annual report. We believe that our accounting policies relating to revenue recognition, accrued expenses and stock-based compensation are the most critical to understanding and evaluating our reported financial results. We have identified these policies as critical because they both are

important to the presentation of our financial condition and results of operations and require us to make judgments and estimates on matters that are inherently uncertain and may change in future periods. For more information regarding these policies, you should refer to Note 2 to our audited financial statements included in this annual report.

Revenue Recognition

We have historically derived a substantial portion of our revenues from our strategic alliances and collaborations and may continue, over at least the next several years, to derive a substantial portion of our revenues from additional strategic alliances or collaborations if we are able to enter into additional strategic alliances or collaborations.

Collaboration and alliance agreements may contain multiple elements, including: an upfront fee, which may include an initial payment upon commencement of the contractual relationship, payment representing a common stock purchase premium or payment to secure a right for a future license; research fees for ongoing research and development; payments associated with the achievement of discovery, development, regulatory and commercial milestone events; and royalties based on specified percentages of any net product sales, among other elements. In determining the accounting for collaboration and alliance agreements, we first determine whether the agreement involves a single unit of accounting or separate units of accounting for revenue recognition purposes by evaluating each deliverable under the terms of the agreement. If a deliverable has value on a standalone basis, we treat the deliverable as a separate unit of accounting. We determine how to allocate amounts received under the agreement among the separate units, based on the respective selling price of each unit, and we determine the revenue recognition applicable to each unit. If an agreement does not have multiple deliverables that have standalone value, we consider the agreement to have one unit of accounting and we determine the revenue recognition applicable to the entire agreement.

We defer recognition of non-refundable upfront fees and recognize them into revenue on a straight-line basis over the estimated period of our substantive performance obligations. If we do not have substantive performance obligations, we recognize non-refundable upfront fees into revenue through the date the deliverable is satisfied. The period over which we recognize the revenue may be adjusted from time to time to take into account any delays or acceleration in the development of the applicable product candidate or any extension or shortening of the applicable performance period. Any such delay or acceleration in the development of a product candidate, or extension or shortening of a performance period, would result in decreases or increases to the recognition of deferred revenue from period to period. As of December 31, 2014, all amounts that we have recorded as deferred revenue are non-refundable.

We recognize collaboration research and development revenue from research services performed under collaboration agreements as research is performed and related expenses are incurred.

We recognize revenue for non-refundable payments that are based on the achievement of discovery, development, regulatory and commercial milestone events upon achievement of the milestone event if all of the following conditions are met:

- there is substantive uncertainty regarding achievement of the milestone event at inception of the arrangement;
- the payment is commensurate with either our performance to achieve the milestone or with the enhancement of the value of the delivered item;
- the payment relates solely to past performance; and
- the payment is reasonable relative to all of the deliverables and payment terms within the arrangement.

If any of these conditions are not met, we defer recognition of the payment and recognize the payment on a straight-line basis as discussed above.

To the extent we are reimbursed under a collaboration or alliance agreement for specific research and development costs, such as third-party manufacturing costs for drug material, we reflect these reimbursable amounts as a component of collaboration research and development revenue and the costs associated with these reimbursable amounts as a component of research and development expenses.

Accrued Expenses

In the normal course of our business, we contract with research institutions and contract research organizations that conduct or manage clinical trials or other research and development activities on our behalf and with contract manufacturers that produce drug substance or clinical trial materials for us. The financial terms of these agreements are subject to negotiation, vary among agreements and may result in uneven payment flows. Payments under these agreements depend on the performance of services or the achievement of specified events, such as the production of drug substance or clinical trial materials, the recruitment of clinical trial subjects, the completion of portions of a non-clinical study or clinical trial or similar conditions.

As part of the process of preparing financial statements, we are required to estimate accrued expenses with the objective of matching the recording of expenses in our financial statements to the actual services received and efforts expended. This process involves reviewing open contracts and purchase orders, communicating with our applicable personnel to identify services that have been performed on our behalf, estimating level of services performed and the associated cost incurred for the services when we have not yet been invoiced or otherwise notified of actual cost and reviewing invoices received that have not yet become due and payable. 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. 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. Examples of estimated accrued expenses include:

- fees for services performed by contract research organizations in connection with clinical trials and non-clinical studies;
- fees for services performed by clinical trial sites in connection with clinical trials;
- fees for services performed by contract manufacturers in connection with the production of clinical trial materials; and
- professional service fees.

Stock-Based Compensation

We record the grant date fair value of stock options and unvested stock awards issued to employees and non-employee directors as stock-based compensation expense over the requisite service periods, which are typically the vesting periods. We currently use the Black-Scholes-Merton formula to estimate grant date fair value of stock options and expect to continue to use this valuation model in the future. The Black-Scholes-Merton formula requires us to make various assumptions, including among others the expected term of the award and expected volatility of our common stock. In the event a modification is made to a stock option after the grant date, we record additional stock-based compensation expense equal to the incremental fair value of the stock option immediately subsequent to the modification as compared to the fair value of the stock option immediately preceding the modification. During 2012, we modified some outstanding stock options held by executive and non-executive employees who departed Targacept to partially accelerate vesting and/or extend the permitted period for exercise. These modifications resulted in incremental compensation cost for the year ended December 31, 2012 of $1.4 million. The fair value of unvested stock awards is determined by the closing price of our common stock on the grant date. We recorded stock-based compensation expense related to stock-based awards to employees and directors of $3.5 million for the year ended December 31, 2014, $5.2 million for the year ended December 31, 2013, and $7.8 million for the year ended December 31, 2012 (inclusive of expense

resulting from stock option modifications). As of December 31, 2014, we had $4.8 million in total unrecognized compensation cost related to non-vested stock-based compensation arrangements, which we expect to record over a weighted average period of 2.42 years.

Results of Operations

Years ended December 31, 2014 and December 31, 2013

Net Operating Revenues

	Year ended December 31,		
	2014	2013	Change
	(in thousands)		
Operating revenues:			
License fees and milestones from collaborations	$—	$3,536	$(3,536)
Grant and other revenue	275	93	182
Net operating revenues	$275	$3,629	$(3,354)

Net operating revenues for the year ended December 31, 2014 decreased by $3.4 million as compared to the year ended December 31, 2013 primarily as a result of a decrease in license fees and milestones from collaborations. License fees and milestones from collaborations for the 2013 period reflected recognition of the remaining $3.5 million balance of deferred revenue from payments previously received under our collaboration agreement with AstraZeneca, triggered by AstraZeneca's decision to terminate TC-1734 from the collaboration.

We have recognized into revenue all amounts that had been previously deferred and, therefore, in future periods, will not recognize any additional revenue related to payments received under our previous collaboration agreements.

Research and Development Expenses

	Year ended December 31,		
	2014	2013	Change
	(in thousands)		
Research and development expenses	$19,499	$38,840	$(19,341)

Research and development expenses for the year ended December 31, 2014 decreased by $19.3 million as compared to the year ended December 31, 2013. The lower research and development expenses for 2014 were principally attributable to decreases of $16.6 million in costs incurred for third-party services associated with our clinical-stage programs to $11.5 million from $28.1 million for the 2013 period. This decrease was principally due to lower costs related to our Phase 2b study of TC-5619 in schizophrenia, which we completed in the fourth quarter of 2013, and lower costs related to the Phase 2b studies of TC-5214 in overactive bladder and TC-1734 in Alzheimer's disease, both of which we completed in the third quarter of 2014, and which were partially offset by costs related to our ongoing exploratory study of TC-6499 in diabetic gastroparesis, which we initiated in the second quarter of 2014. The lower research and development expenses were also attributable to a decrease of $3.0 million in research and development-related operating costs, including infrastructure and compensation-related expenses for research and development personnel, to $7.7 million for the 2014 period, from $10.7 million for the 2013 period.

The costs that we incurred for the years ended December 31, 2014 and December 31, 2013, for third-party services in connection with research and development of clinical-stage product candidates are shown in the table below:

	Year ended December 31,		
	2014	2013	Change
	(in thousands)		
TC-5214 overactive bladder	$7,786	$14,235	(6,449)
TC-6499	2,109	470	1,639
TC-1734	1,886	3,099	(1,213)
TC-5619	—	10,250	(10,250)
TC-6987	—	21	(21)
TC-6683	—	—	—

Based on our current clinical program related commitments and considering the consummation of the Proposed Merger, we expect our research and development expenses for the year ending December 31, 2015 to decrease as compared to 2014, principally as a result of our completion in 2014 of a Phase 2b clinical trial of TC-5214 as a treatment for overactive bladder and of a Phase 2b clinical trial of TC-1734 as a treatment for Alzheimer's disease.

General and Administrative Expenses

	Year ended December 31,		
	2014	2013	Change
	(in thousands)		
General and administrative expenses	$10,172	$12,005	$(1,833)

General and administrative expenses for the year ended December 31, 2014 decreased by $1.8 million as compared to the year ended December 31, 2013. The lower general and administrative expenses were partly attributable to a decrease of $943,000 in compensation related expenses for general and administrative personnel due principally to fewer general and administrative employees and a lower value assigned to our stock-based compensation awards that vested during the period. The lower general and administrative expenses were also attributable to the non-recurrence of $467,000 in non-cash stock-based compensation charges resulting from the partial accelerated vesting of, and extended exercise periods for, certain outstanding stock options held by a former executive officer who departed Targacept in March 2013, and $309,000 in severance and other charges resulting from the departure of the former executive officer.

Reductions in Force

	Year ended December 31,		
	2014	2013	Change
	(in thousands)		
Reductions in force	$318	$—	$ 318

As a result of the reduction in force we completed during 2014, as discussed above, we recorded as expense and paid $318,000 in severance and other charges in 2014.

Years ended December 31, 2013 and December 31, 2012

Net Operating Revenues

	Year ended December 31,		
	2013	2012	Change
	(in thousands)		
Operating revenues:			
License fees and milestones from collaborations	$3,536	$57,420	$(53,884)
Grant and other revenue	93	440	(347)
Net operating revenues	$3,629	$57,860	$(54,231)

Net operating revenues for the year ended December 31, 2013 decreased by $54.2 million as compared to the year ended December 31, 2012. The lower net operating revenues for 2013 were primarily attributable to a decrease of $53.9 million in license fees and milestones from collaborations. The lower license fees and milestones from collaborations principally resulted from the recognition of deferred revenue during 2012 of the remaining unrecognized portion of the upfront payment received under our MDD agreement with AstraZeneca, totaling $54.5 million, partially offset by $589,000 in increased recognition into revenue for 2013 of payments related to TC-1734 received under our ongoing collaboration agreement with AstraZeneca. We recognized into revenue during 2013 the remaining unrecognized portion of the payment related to TC-1734 received under our ongoing collaboration agreement with AstraZeneca, totaling $3.5 million.

Research and Development Expenses

	Year ended December 31,		
	2013	2012	Change
	(in thousands)		
Research and development expenses	$38,840	$49,087	$(10,247)

Research and development expenses for the year ended December 31, 2013 decreased by $10.2 million as compared to the year ended December 31, 2012. The lower research and development expenses for 2013 were principally attributable to decreases of:

- $14.9 million in other research and development-related operating costs, including infrastructure costs and stock-based compensation and other compensation-related expenses for research and development personnel, to $10.7 million for 2013, from $25.6 million for 2012; this decrease resulted primarily from the workforce reductions completed in the second and fourth quarters of 2012 discussed above;
- $2.2 million in costs incurred for the Phase 3 development program for TC-5214 as a treatment for MDD which completed in 2012; and
- $1.7 million in costs incurred for third-party research and development services in connection with nonclinical programs.

These decreases were partially offset by an increase of $8.6 million in costs incurred for third-party services associated with our clinical-stage product candidates (excluding costs for the completed program in MDD discussed above) to $28.1 million for 2013, from $19.5 million for 2012. This increase was principally due to costs related to the initiation and conduct of our Phase 2b study of TC-5214 in overactive bladder.

The costs that we incurred for the years ended December 31, 2013 and 2012 for third-party services in connection with research and development of clinical-stage product candidates are shown in the table below:

	Year ended December 31,		
	2013	2012	Change
	(in thousands)		
TC-5214 overactive bladder	$14,235	$ 1,440	12,795
TC-5619	10,250	12,662	(2,412)
AZD3480	3,099	3,762	(663)
TC-6499	470	—	470
TC-6987	21	1,655	(1,634)
TC-5214 major depressive disorder	—	2,175	(2,175)
AZD1446	—	—	—

General and Administrative Expenses

	Year ended December 31,		
	2013	2012	Change
	(in thousands)		
General and administrative expenses	$12,005	$13,193	$(1,188)

General and administrative expenses for the year ended December 31, 2013 decreased by $1.2 million as compared to the year ended December 31, 2012. The lower general and administrative expenses were primarily attributable to a decrease of $825,000 in stock-based compensation expense, salary and other compensation-related expenses for general and administrative personnel, primarily due to $1.8 million in non-recurring severance and stock-based compensation expenses recorded for 2012; and partially offset by $573,000 in non-cash stock-based compensation charges resulting from the partial accelerated vesting of, and extended exercise periods for, some outstanding stock options held by two former executive officers who departed Targacept during 2013 and $306,000 in severance and other charges, resulting from the departure of one of the former executive officers.

Reductions in Force

	Year ended December 31,		
	2013	2012	Change
	(in thousands)		
Reductions in force	$ —	$3,718	$(3,718)

As a result of the two reductions in force we completed during 2012 discussed above, we recorded as expense and paid $3.7 million in severance and other charges in 2012.

Liquidity and Capital Resources

Sources of Liquidity

We have historically financed our operations and internal growth primarily through public and private offerings of our securities, payments received under collaboration and alliance agreements, including upfront fees, payments for research and development services and payments upon achievement of milestone events, grants and equipment financing.

Our cash, cash equivalents and investments in marketable securities were $110.8 million as of December 31, 2014 and $143.8 million as of December 31, 2013. As of December 31, 2014, we had $53.1 million of cash in

bank depository accounts and institutional money market funds at Branch Banking and Trust Company, PNC Bank and Wells Fargo & Company. Substantially all of our remaining cash, cash equivalents and investments were invested as of December 31, 2014 in corporate debt securities and municipal bonds rated at least A quality or equivalent, U.S. Treasury notes and bonds, U.S. and state government agency-backed securities and a certificate of deposit.

Stock Offerings

Beginning with our initial public offering in April 2006, we have derived aggregate net proceeds of $195.1 million from public offerings of our common stock. We have also derived aggregate net proceeds of $121.8 million from private placements of convertible preferred stock, all of which occurred prior to our initial public offering.

In November 2013, we filed a Form S-3 with the Securities and Exchange Commission which became effective December 11, 2013. Pursuant to this Form S-3, we may sell shares of common stock having an aggregate offering price of up to $200.0 million. Under an At-the-Market Issuance Sales Agreement, or ATM, with MLV & Co., LLC, filed concurrently with the Form S-3, we may offer and sell shares of common stock having an aggregate offering price of up to $40.0 million.

Strategic Alliances and Collaborations

As of December 31, 2014, we had received $61.6 million in aggregate upfront fees and milestone payments under our now terminated collaboration agreement with AstraZeneca and an additional $26.5 million in collaboration research and development revenue for research services that we provided in the preclinical research collaboration conducted under the agreement.

Since inception, we have received cumulative payments of $2.6 million upon achievement of milestone events under the agreement related to the development of TC-6683 and other product candidates arising under the preclinical research collaboration conducted under the agreement.

In December 2009, we entered into our MDD agreement with AstraZeneca. We received a $200.0 million upfront payment from AstraZeneca in January 2010. Our MDD agreement with AstraZeneca was terminated effective in May 2012 and is no longer a potential source of future funds.

Loan Financing

In July 2010, we entered into a loan agreement with Branch Banking and Trust Company (the “Bank”) that provided aggregate borrowing capacity of $4.0 million available to us at any time on or prior to June 30, 2011 to fund the purchase of equipment, furnishings, software and other fixed assets. In September 2010, we borrowed $1.2 million under the loan facility at a fixed interest rate of 3.4% per annum. We were obligated only to pay interest on the September 2010 borrowing through the remainder of 2010, and it was repayable in equal monthly installments of $28,000 that began January 1, 2011 and continued through the maturity date in November, 2014. In June 2011, we borrowed $2.1 million under the loan facility at a fixed interest rate of 3.471% per annum. The June 2011 borrowing was repayable in equal monthly installments of $48,000 that began July 1, 2011. In December 2014, we repaid in full the June 2011 borrowing. Pursuant to the loan agreement, we granted a first priority security interest in favor of the Bank in the assets acquired with the proceeds of the loan facility. As of December 31, 2014, there is no outstanding principal balance under the loan facility and there is no additional borrowing capacity remaining available to us.

In March 2008, we entered into a loan agreement with the Bank that provided borrowing capacity of $5.3 million to fund the purchase of equipment, furnishings, software and other fixed assets and enabled the refinancing of a previous loan facility that we had with R.J. Reynolds Tobacco Holdings, Inc. We borrowed

$4.8 million upon entering into the loan agreement and borrowed the remaining $489,000 in September 2008. Pursuant to the loan agreement, we granted a first priority security interest in favor of the Bank in the assets acquired with the proceeds of the loan facility. The March 2008 loan bore interest at a fixed rate of 5.231% per annum and was repayable in equal monthly installments of $112,000 beginning April 1, 2008 and continuing through the maturity date of March 1, 2012 when it was repaid in full. The September 2008 loan bore interest at a fixed rate of 6.131% per annum and was repayable in equal monthly installments of $11,000 beginning October 1, 2008 and continuing through the maturity date of September 1, 2012 when it was repaid in full. There is no additional borrowing capacity remaining available to us under the loan agreement.

Cash Flows

	Year ended December 31,		
	2014	2013	Change
		(in thousands)	
Net cash used in operating activities	$(34,483)	$ (40,612)	$ 6,129
Net cash provided by investing activities	33,856	13,409	20,447
Net cash provided by (used in) financing activities	2,572	(552)	3,124
Net increase (decrease) in cash and cash equivalents	$ 1,945	$ (27,755)	

	Year ended December 31,		
	2013	2012	Change
		(in thousands)	
Net cash used in operating activities	$(40,612)	$ (64,239)	$ 23,627
Net cash provided by investing activities	13,409	39,822	(26,413)
Net cash used in financing activities	(552)	(626)	74
Net decrease in cash and cash equivalents	$(27,755)	$ (25,043)	

Net cash used in operating activities for the year ended December 31, 2014 decreased by $6.1 million as compared to the year ended December 31, 2013. For the year ended December 31, 2014, net cash used in operating activities was principally attributable to $33.0 million in payments made for research and development and general and administrative charges, and realization of $3.4 million of excess tax deductions, which is reflected as an increase to our net loss for the year ended December 31, 2014, recorded upon the completion during 2014 of an examination of our 2010 federal income tax return. These cash outflows were partially offset by $1.6 million of amortization of premiums paid for available-for-sale securities, interest income from available-for-sale securities and other investment-related operating activities.

Net cash used in operating activities for the year ended December 31, 2013 decreased by $23.6 million as compared to the year ended December 31, 2012. For 2013, net cash used in operating activities was primarily attributable to aggregate payments of $42.5 million for research and development and general and administrative charges. These cash payments were partially offset by $1.7 million of interest-related adjustments to reconcile net loss to cash used in operating activities. For 2012, net cash used in operating activities was primarily attributable to aggregate payments of $61.8 million for research and development and general and administrative charges, as well as $3.7 million in payments made as a result of two workforce reductions. These cash payments were partially offset by $2.1 million of interest income and related amounts. The decrease of $19.3 million in payments made for research and development and general and administrative charges for 2013 as compared to 2012 was principally the result of the wind-down of the development program in major depressive disorder during 2012, our plan to focus our resources on our more advanced programs, the closing of our laboratories and the completion of two workforce reductions during 2012.

Based on our current clinical program related commitments and considering the consummation of the Proposed Merger, we expect payments for operating activities for the year ending December 31, 2015 to decrease as compared to 2014, principally as a result of the completion in 2014 of the clinical trial of TC-5214 as a treatment for overactive bladder and of the clinical trial of TC-1734 as a treatment for Alzheimer's disease.

Net cash provided by investing activities for the year ended December 31, 2014 increased by $20.4 million as compared to the year ended December 31, 2013. Net cash provided by investing activities for the year ended December 31, 2013 decreased by $26.4 million as compared to the year ended December 31, 2012. Cash provided by or used in investing activities primarily reflects the portion of our cash that we allocate to, and the timing of purchases and maturities of, our investments in marketable securities. A transfer of funds from an investment in marketable securities to cash generates cash provided by investing activities, while a transfer of funds from cash or a cash equivalent to investments in marketable securities generates cash used in investing activities. Our net sales of investments in marketable securities for 2014 were $33.8 million as compared to $12.3 million for 2013 and $38.6 million for 2012. The net sales of investment in marketable securities for each period occurred as funds were transferred to cash for working capital.

Net cash provided by financing activities for the year ended December 31, 2014 was $2.6 million and net cash used in investing activities for the year ended December 31, 2013 was $552,000, a change of $3.1 million. The change reflects the realization during 2014 of an additional $3.4 million of stock-based compensation excess tax deductions as a result of the IRS examination adjustment. Net cash used in financing activities for the year ended December 31, 2013 decreased by $74,000 as compared to the year ended December 31, 2012.

Funding Requirements

As of December 31, 2014, we had an accumulated deficit of $313.3 million and our cash and investments in marketable securities totaled $110.8 million. We currently expect our existing capital resources to be sufficient to fund our operations through the entry into one or more strategic transactions; and, if we are successful in entering into a strategic transaction, our objective is to have sufficient capital to fund our operations through projected milestones that have potential for value creation. Our existing capital resources may not be sufficient to enable us to fund the completion of the development of any of our product candidates. We may require additional capital in future periods as our product candidates advance into later-stage development and as we progress our programs and invest in additional product opportunities. Our future capital requirements are difficult to forecast and will depend on many factors, including:

- whether we complete the merger with Catalyst or pursue other significant corporate transactions, and, if we do, the associated terms in each case, or whether we establish additional strategic alliances, collaborations and licensing or other comparable arrangements;
- whether and to what extent we in-license, acquire or risk-share in developing product candidates from external sources, and the terms and scope of any related agreements;
- the costs to satisfy our obligations under potential future alliances, collaborations or licensing or other comparable arrangements;
- the scope, progress, duration, results and cost of clinical trials, as well as non-clinical studies and assessments, of our product candidates and programs;
- the extent to which we retain development or commercialization rights or responsibilities for our product candidates and incur associated development costs, manufacturing costs or costs to establish sales and marketing functions;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending patents and other intellectual property rights;
- the number and characteristics of product candidates that we pursue and programs that we conduct;

- the costs of manufacturing-related services for our product candidates in development;
- the costs, timing and outcomes of regulatory reviews or other regulatory actions;
- the timing, receipt and amount of sales or royalties, if any, from our potential products;
- the extent of our general and administrative expenses; and
- the rate of technological advancements for the indications that we target.

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. To the extent our capital resources are insufficient to meet future capital requirements or to the extent the conditions for raising capital are favorable, we may seek to finance future cash needs through public or private equity or debt offerings or other financings (whether utilizing our currently effective registration statement on Form S-3, including our ATM, or otherwise). Our access in the future to additional equity or debt financing, on acceptable terms or at all, is uncertain. We may also seek to finance future cash needs through alliances, collaborations or licensing or other comparable arrangements. Strategic alliances, collaborations or licensing or other comparable arrangements may not be available on acceptable terms or at all. If adequate funds are not available, we may be required to delay, reduce the scope of or eliminate our development programs or obtain funds through arrangements with collaborators or others that may require us to relinquish rights to certain product candidates that we might otherwise seek to develop or commercialize independently. Additionally, any future equity funding may significantly dilute the ownership of our stockholders.

We cannot determine precisely the completion dates and related costs of our 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 development programs or establish strategic alliances, collaborations or licensing or other arrangements for our product candidates. Our failure, or the failure of any of our present or future licensees or collaborators, to complete research and development programs for our product candidates 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 fixed contractual obligations as of December 31, 2014:

	Payments Due by Period (in thousands)				
Contractual Obligation	**Total**	**Less Than 1 Year**	**1 - 3 Years**	**3 - 5 Years**	**More Than 5 Years**
Operating lease obligations	$ 393	$ 356	$ 37	$—	$ —
Purchase obligations	4,107	4,004	97	6	—
	$4,500	$ 4,360	$134	$ 6	$ —

The amounts of purchase obligations reflected in the above table include obligations to purchase drug substance or clinical trial materials, to compensate clinical investigators, clinical trial sites and contract research organizations contingent on the performance of services in connection with clinical trials and to compensate contract research organizations contingent on the performance of non-clinical research and development services. The amounts of purchase obligations also include contractual obligations for insurance and other general and administrative expenses. The amounts of long-term debt obligations for all periods reflected in the above table include principal and interest payments on loan facilities outstanding at December 31, 2014.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

The primary objectives of our investment activities are to preserve our capital and meet our liquidity needs to fund operations. We also seek to generate competitive rates of return from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of cash equivalents and investments in a variety of securities that are of high credit quality based on ratings from commonly relied upon rating agencies. As of December 31, 2014, we had cash, cash equivalents and investments in marketable securities of $110.8 million. Our cash, cash equivalents and investments in marketable securities may be subject to interest rate risk and could fall in value if market interest rates increase. However, because our cash is invested in accounts with market interest rates and because our cash equivalents and investments in marketable securities are traded in active markets, we believe that our exposure to interest rate risk is not significant and estimate that an immediate and uniform 10% increase in market interest rates from levels as of December 31, 2014 would not have a material impact on the total fair value of our portfolio.

We sometimes contract for the conduct of clinical trials or other research and development and manufacturing activities with contract research organizations, clinical trial sites and contract manufacturers in Europe or elsewhere outside of the United States. We may be subject to exposure to fluctuations in foreign currency exchange rates in connection with these agreements. If the average exchange rate between the currency of our payment obligations under any of these agreements and the U.S. dollar were to strengthen or weaken by 10% against the corresponding exchange rate as of December 31, 2014, we estimate that the impact on our financial position, results of operations and cash flows would not be material. We do not hedge our foreign currency exposures.

We have not used derivative financial instruments for speculation or trading purposes.

Item 8. Financial Statements and Supplementary Data.

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TARGACEPT, INC.

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of
Targacept, Inc.

We have audited the accompanying balance sheets of Targacept, Inc. as of December 31, 2014 and 2013, and the related statements of comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2014. 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 examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as 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, 2014 and 2013, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2014, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Targacept, Inc.'s internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 16, 2015 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Raleigh, North Carolina
March 16, 2015

TARGACEPT, INC.

BALANCE SHEETS
(in thousands, except share and par value amounts)

	December 31, 2014	December 31, 2013
ASSETS		
Current assets:		
Cash and cash equivalents	$ 56,430	$ 54,485
Investments in marketable securities—short term	50,955	37,844
Current receivables	141	278
Prepaid expenses	615	999
Total current assets	108,141	93,606
Investments in marketable securities—long term	3,418	51,448
Property and equipment, net	428	682
Intangible assets	—	97
Other assets	12	40
Total assets	$ 111,999	$ 145,873
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 405	$ 1,296
Accrued expenses	2,509	8,830
Current portion of long-term debt	—	853
Total current liabilities	2,914	10,979
Long-term debt, net of current portion	—	283
Total liabilities	2,914	11,262
Commitments and contingencies		
Stockholders' equity:		
Common stock, $0.001 par value, 100,000,000 shares authorized; 34,306,435 and 33,718,179 shares issued at December 31, 2014 and 2013, respectively; 33,793,735 and 33,718,179 shares outstanding at December 31, 2014 and 2013, respectively	34	34
Preferred stock, $0.001 par value, 5,000,000 shares authorized; 0 shares issued and outstanding at December 31, 2014 and 2013	—	—
Capital in excess of par value	422,303	415,123
Accumulated other comprehensive income	4	87
Accumulated deficit	(313,256)	(280,633)
Total stockholders' equity	109,085	134,611
Total liabilities and stockholders' equity	$ 111,999	$ 145,873

See accompanying notes.

TARGACEPT, INC.

STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands, except share and per share amounts)

	Year ended December 31,		
	2014	2013	2012
Operating revenues:			
License fees and milestones from collaborations	$ —	$ 3,536	$ 57,420
Grant and other revenue	275	93	440
Net operating revenues	275	3,629	57,860
Operating expenses:			
Research and development (including stock-based compensation of $1,614, $2,497 and $3,792 in 2014, 2013 and 2012, respectively)	19,499	38,840	49,087
General and administrative (including stock-based compensation of $1,858, $2,719 and $3,956 in 2014, 2013 and 2012, respectively)	10,172	12,005	13,193
Reductions in force (including stock-based compensation of $98 in 2012)	318	—	3,718
Total operating expenses	29,989	50,845	65,998
Loss from operations	(29,714)	(47,216)	(8,138)
Other income (expense):			
Interest income	585	784	1,070
Gain (loss) on sale of property and equipment	13	(213)	55
Interest expense	(23)	(53)	(86)
Total other income (expense)	575	518	1,039
Loss before income taxes	(29,139)	(46,698)	(7,099)
Income tax (expense) benefit	(3,484)	(7)	101
Net loss	$ (32,623)	$ (46,705)	$ (6,998)
Basic and diluted net loss per share	$ (0.97)	$ (1.39)	$ (0.21)
Weighted average common shares outstanding—basic and diluted	33,780,433	33,640,323	33,476,316
Net loss	$ (32,623)	$ (46,705)	$ (6,998)
Unrealized (loss) gain on available-for-sale securities, net	(83)	(114)	165
Comprehensive loss	$ (32,706)	$ (46,819)	$ (6,833)

See accompanying notes.

TARGACEPT, INC.

STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share amounts)

	Common Stock		Capital in Excess of Par Value	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balances at January 1, 2012	33,383,403	$ 33	$401,149	$ 36	$ (226,930)	$ 174,288
Issuance of common stock related to exercise of stock options	231,678	1	613	—	—	614
Stock-based compensation	—	—	7,846	—	—	7,846
Net change in unrealized holding gain on available-for-sale marketable securities	—	—	—	165	—	165
Net loss	—	—	—	—	(6,998)	(6,998)
Comprehensive loss	—	—	—	—	—	(6,833)
Balances at December 31, 2012	33,615,081	34	409,608	201	(233,928)	175,915
Issuance of common stock related to exercise of stock options	103,098	—	299	—	—	299
Stock-based compensation	—	—	5,216	—	—	5,216
Net change in unrealized holding gain on available-for-sale marketable securities, net of taxes	—	—	—	(114)	—	(114)
Net loss	—	—	—	—	(46,705)	(46,705)
Comprehensive loss	—	—	—	—	—	(46,819)
Balances at December 31, 2013	33,718,179	34	415,123	87	(280,633)	134,611
Issuance of common stock related to exercise of stock options	75,556	—	296	—	—	296
Stock-based compensation	—	—	3,472	—	—	3,472
Excess tax benefits from stock-based compensation	—	—	3,412	—	—	3,412
Net change in unrealized holding gain on available-for-sale marketable securities, net of taxes	—	—	—	(83)	—	(83)
Net loss	—	—	—	—	(32,623)	(32,623)
Comprehensive loss	—	—	—	—	—	(32,706)
Balances at December 31, 2014	33,793,735	$ 34	$422,303	$ 4	$ (313,256)	$ 109,085

See accompanying notes.

TARGACEPT, INC.

STATEMENTS OF CASH FLOWS
(in thousands)

	Year ended December 31,		
	2014	2013	2012
Operating activities			
Net loss	$(32,623)	$(46,705)	$ (6,998)
Adjustments to reconcile net loss to net cash used in operating activities:			
Recognition of deferred revenue	(148)	(3,536)	(57,860)
Amortization of premium on marketable securities, net	775	908	937
Depreciation and amortization	351	547	2,212
Stock-based compensation expense	3,472	5,216	7,846
Loss (gain) on disposal of property and equipment	(14)	213	(55)
Income tax expense (benefit) from other comprehensive income	72	7	(101)
Changes in operating assets and liabilities:			
Current receivable	131	226	(1,162)
Other assets	565	527	2,017
Accounts payable, license fees payable and accrued expenses	(7,212)	1,985	(11,515)
Deferred license fee revenue	148	—	440
Net cash used in operating activities	(34,483)	(40,612)	(64,239)
Investing activities			
Purchase of investments in marketable securities	(7,169)	(57,551)	(120,972)
Proceeds from sale of investments in marketable securities	40,991	69,882	159,538
Purchase of property and equipment	(4)	(92)	(333)
Proceeds from sale of property and equipment	38	1,170	1,589
Net cash provided by investing activities	33,856	13,409	39,822
Financing activities			
Excess tax benefits from stock-based compensation	3,412	—	—
Principal payments on long-term debt	(1,136)	(851)	(1,240)
Proceeds from issuance of common stock, net	296	299	614
Net cash provided by (used in) financing activities	2,572	(552)	(626)
Net increase (decrease) in cash and cash equivalents	1,945	(27,755)	(25,043)
Cash and cash equivalents at beginning of year	54,485	82,240	107,283
Cash and cash equivalents at end of year	$ 56,430	$ 54,485	$ 82,240

See accompanying notes.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2014

1. The Company and Nature of Operations

Targacept, Inc., or the Company, is a Delaware corporation formed on March 7, 1997. The Company is a biopharmaceutical company engaged in the development of novel NNR Therapeutics™ to treat patients suffering from serious nervous system and gastrointestinal/genitourinary diseases and disorders. The Company's NNR Therapeutics selectively target neuronal nicotinic receptors, which it refers to as NNRs. Its facilities are located in Winston-Salem, North Carolina.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles, or GAAP, requires management to make estimates and assumptions that affect the amounts of assets, liabilities, revenues and expenses reported in the financial statements and accompanying notes. Actual results could differ from these estimates.

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 Marketable Securities

Consistent with its investment policy, the Company invests its cash allocated to fund its short-term liquidity requirements with prominent financial institutions in bank depository accounts and institutional money market funds and the Company invests the remainder of its cash in corporate debt securities and municipal bonds rated at least A quality or equivalent, U.S. Treasury notes and bonds, U.S. and state government agency-backed securities and certificates of deposit.

The Company determines the appropriate classification of marketable securities at the time of purchase and reevaluates its classification as of each balance sheet date. All marketable securities owned during 2014 and 2013 were classified as available-for-sale. The cost of securities sold is based on the specific identification method. Investments in marketable securities are recorded as of each balance sheet date at fair value, with unrealized gains and, to the extent deemed temporary, unrealized losses included in stockholders' equity. Interest and dividend income on investments in marketable securities, accretion of discounts and amortization of premiums and realized gains and losses are included in interest income in the statement of comprehensive income (loss).

An investment in marketable securities is considered to be impaired when a decline in fair value below its cost basis is determined to be other than temporary. The Company evaluates whether a decline in fair value of an investment in marketable securities below its cost basis is other than temporary using available evidence. In the event that the cost basis of the investment exceeds its fair value, the Company evaluates, among other factors, the amount and duration of the period that the fair value is less than the cost basis, the financial health of and business outlook for the issuer, including industry and sector performance and operational and financing cash flow factors, overall market conditions and trends, the Company's intent to sell the investment and whether it is more likely than not the Company would be required to sell the investment before its anticipated recovery. If a decline in fair value is determined to be other than temporary, the Company records an impairment charge in the statement of comprehensive income (loss) and establishes a new cost basis in the investment.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

2. Summary of Significant Accounting Policies (continued)

Receivables

The Company's current receivables at December 31, 2014 and 2013 are primarily related to the Company's sale of equipment as a result of the Company closing its laboratory operations and the Company's service revenue. During 2014, 2013 and 2012, the Company sold equipment with a net book value of $4,000, $519,000 and $1,534,000, respectively, of which $13,000, $183,000 and $1,046,000 was receivable at December 31, 2014, 2013 and 2012, respectively.

Long-lived Assets

Property and equipment consists primarily of laboratory equipment, office furniture and fixtures and leasehold improvements and is recorded at historical cost, net of accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. Equipment is typically depreciated over 3 to 5 years, office furniture and fixtures are typically depreciated over 7 years, and leasehold improvements are typically amortized over the lesser of the asset life or the lease term.

The Company capitalizes the costs of intellectual property acquired or licensed from external sources as intangible assets if, at the time of acquisition, the intellectual property has reached technological feasibility. Intellectual property acquired or licensed from external sources that has not reached technological feasibility at the time of acquisition or that has no expected future use is charged to research and development expense as incurred. The Company records all other charges related to the filing, prosecution and maintenance of patents to expense as incurred.

The Company assesses the net realizable value of its long-lived assets and evaluates these assets for impairment whenever events or changes in business circumstances indicate that the carrying amount of an asset may not be recoverable. An impairment charge 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 charge, if recognized, would be based on the excess of the carrying value of the impaired asset over its estimated fair value.

Research and Development Expense

Research and development costs are expensed as incurred and include direct costs incurred to third parties related to research or development of the Company's product candidates, salaries of, and stock-based compensation for, personnel involved in research and development activities, contractor fees, administrative expenses and allocations of research and development-related overhead costs. Administrative expenses and research and development-related overhead costs included in research and development expense 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. For the year ended December 31, 2014 the Company recorded insurance proceeds of $790,000 related to clinical trial material manufacturing, as a reduction to research and development expense. The Company directly reduces research and development expenses for amounts reimbursed pursuant to the cost-sharing agreements described in Note 12.

Accrued Expenses

The Company records accruals based on estimates of the services received, efforts expended and amounts owed pursuant to contracts with clinical trial sites, contract research organizations and other service providers. In

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

2. Summary of Significant Accounting Policies (continued)

the normal course of business, the Company contracts with third parties to perform various clinical trial and other research and development activities in the ongoing development of potential products. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. Payments under these agreements depend on the performance of services or the achievement of specified events, such as the production of drug substance or clinical trial materials, the recruitment of clinical trial subjects, the completion of portions of a non-clinical study or 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 are recognized based on the Company's estimate of the degree of completion of the event or events specified in a particular contract as giving rise to a payment.

Credit Risk

Financial instruments that potentially subject the Company to credit risk consist principally of cash, investments in marketable securities and receivables from collaborations. The Company has established guidelines for investment of its cash that are designed to emphasize safety, liquidity and preservation of capital. The Company places its cash and cash equivalents with prominent financial institutions. At December 31, 2014 and 2013, the Company had deposits in excess of federally insured limits of $52,324,000 and $57,485,000, respectively.

Revenue Recognition

The Company uses the revenue recognition guidance established by Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 605, *Revenue Recognition*, or ASC 605. In determining the accounting for collaboration and alliance agreements, the Company follows the provisions of ASC 605, Subtopic 25, *Multiple Element Arrangements*, or ASC 605-25. ASC 605-25 provides guidance on whether an arrangement that involves multiple revenue-generating activities or deliverables should be divided into separate units of accounting for revenue recognition purposes and, if division is required, how the arrangement consideration should be allocated among the separate units of accounting. If the arrangement constitutes separate units of accounting according to the separation criteria of ASC 605-25, the consideration received is allocated among the separate units of accounting and the applicable revenue recognition criteria must be applied to each unit. If the arrangement constitutes a single unit of accounting, the revenue recognition policy must be determined for the entire arrangement and the consideration received is recognized over the period of inception through the date on which the last deliverable within the single unit of accounting is expected to be delivered. Revisions to the estimated period of recognition are reflected in revenue prospectively.

Non-refundable upfront fees, which may include, for example, an initial payment upon effectiveness of the contractual relationship, payment representing a common stock purchase premium or payment to secure a right for a future license, are recorded as deferred revenue and recognized into revenue as license fees and milestones from collaborations on a straight-line basis over the estimated period of the Company's substantive performance obligations. If the Company does not have substantive performance obligations, it recognizes non-refundable upfront fees into revenue through the date the deliverable is satisfied.

Revenue for non-refundable payments based on the achievement of milestone events under collaboration agreements is recognized in accordance with ASC 605, Subtopic 28, *Milestone Method*, or ASC 605-28. Milestone events under the Company's collaboration agreements may include research, development, regulatory,

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

2. Summary of Significant Accounting Policies (continued)

commercialization or sales events. Under ASC 605-28, a milestone payment is recognized as revenue when the applicable event is achieved if the event meets the definition of a milestone and the milestone is determined to be substantive. ASC 605-28 defines a milestone event as an event having all of the following characteristics: (1) there is substantive uncertainty regarding achievement of the milestone event at the inception of the arrangement; (2) the event can only be achieved based, in whole or in part, on either the company's performance or a specific outcome resulting from the company's performance; and (3) if achieved, the event would result in additional payment due to the company. The Company also treats events that can only be achieved based, in whole or in part, on either a third party's performance or a specific outcome resulting from a third party's performance as milestone events if the criteria of ASC 605-28 are otherwise satisfied. A milestone is considered substantive if it meets all of the following criteria: (A) the payment is commensurate with either the Company's performance to achieve the milestone or with the enhancement of the value of the delivered item; (B) the payment relates solely to past performance; and (C) the payment is reasonable relative to all of the deliverables and payment terms within the arrangement. If any of these conditions is not met, the milestone payment is deferred and recognized on a straight-line basis over a period determined as discussed above.

Research and development costs that are reimbursable under collaboration agreements are recorded in accordance with ASC 605, Subtopic 45, *Principal Agent Considerations*. Amounts reimbursed under a cost sharing arrangement are reflected as a reduction of research and development expense.

Grant payments received prior to the Company's performance of work required by the terms of the award are recorded as deferred revenue and recognized as grant revenue as the Company performs the work and incurs qualifying costs. Service revenue is earned and recognized as research or development is performed and related expenses are incurred.

Income Taxes

The Company uses the liability method in accounting for income taxes as required by ASC Topic 740, *Income Taxes*, or ASC 740. Under ASC 740, deferred tax assets and liabilities are recorded 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 of a change in tax rates on deferred tax assets and liabilities 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 the assets will be realized. ASC 740 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. ASC 740 also provides guidance on de-recognition, classification, interest and penalties, accounting in interim periods, disclosures and transition. The Company's policy is to classify any interest recognized in accordance with ASC 740 as interest expense and to classify any penalties recognized in accordance with ASC 740 as an expense other than income tax expense.

Net Income or Loss Per Share

The Company computes net income or loss per share in accordance with ASC Topic 260, *Earnings Per Share*, or ASC 260. Under the provisions of ASC 260, basic net income or loss per share, or Basic EPS, is

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

2. Summary of Significant Accounting Policies (continued)

computed by dividing net income or loss by the weighted average number of common shares outstanding. Diluted net income or loss per share, or Diluted EPS, is computed by dividing net income or loss by the weighted average number of common shares outstanding plus, in the case of diluted net income per share, dilutive common share equivalents outstanding.

The calculations of Basic EPS and Diluted EPS are set forth in the table below (in thousands, except share and per share amounts):

	Year Ended December 31,		
	2014	2013	2012
Basic and diluted:			
Net loss	$ (32,623)	$ (46,705)	$ (6,998)
Weighted average common shares—basic and diluted	33,780,433	33,640,323	33,476,316
Basic and diluted EPS	$ (0.97)	$ (1.39)	$ (0.21)

Common share equivalents consist of the incremental common shares that would be outstanding upon the exercise of stock options, calculated using the treasury stock method. For each of the years ended December 31, 2014, 2013 and 2012, the Company excluded all common share equivalents from the calculation of Diluted EPS because the Company had a net loss. As a result, Diluted EPS is identical to Basic EPS for those years. If the Company had been in a net income position for the years ended December 31, 2014, 2013 or 2012, 4,683,263, 4,364,064 and 4,250,964 shares, respectively, subject to outstanding stock options may have been included in the calculation of common share equivalents using the treasury stock method.

Stock-Based Compensation

The Company has two stock-based incentive plans, the 2000 Equity Incentive Plan of Targacept, Inc., as amended and restated through March 15, 2006, or the 2000 Plan, and the Targacept, Inc. 2006 Stock Incentive Plan, as amended and restated through March 9, 2011 and further amended on December 7, 2012, March 13, 2013 and April 10, 2013, or the 2006 Plan. The 2000 Plan and the 2006 Plan, or the Plans, are described more fully in Note 9.

The Company records stock-based compensation under the fair value recognition provisions of ASC Topic 718, *Compensation – Stock Compensation*, or ASC 718. Under ASC 718, the Company calculates the fair value of each option grant using the Black-Scholes-Merton valuation formula. The fair value of each grant is recorded as expense on a straight-line basis over the option's vesting period.

ASC 718 also requires the benefits of tax deductions in excess of recognized compensation expense to be reported as a financing cash flow. This requirement reduces net operating cash flows and increases net financing cash flows for periods after adoption. The Company cannot estimate the future effect of excess tax deductions or shortfalls on cash flows because they depend on, among other things, when employees exercise stock options and the tax deductions available to the Company at those times.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

2. Summary of Significant Accounting Policies (continued)

Prepaid Expenses

The Company defers and capitalizes non-refundable advance payments for goods or services to be received in the future. The Company then charges the advance payments to expense ratably as the goods are delivered or the services are rendered. The Company may make adjustments to the amount charged to expense each period if expectations change regarding the timing of delivery of goods or rendering of services.

Fair Value

The carrying amounts of cash and cash equivalents, investments in marketable securities, receivables, accounts payable and accrued expenses are considered to be representative of their respective fair values due to their short-term natures and, in the case of investments in marketable securities, their market interest rates. Likewise, the carrying amounts of the Company's long-term debts are considered to be representative of their fair value due to their respective market interest rates.

The Company follows ASC Topic 820, *Fair Value Measurements and Disclosures*, or ASC 820, for application to financial assets. ASC 820 defines fair value, provides a consistent framework for measuring fair value under GAAP and requires fair value financial statement disclosures. ASC 820 applies only to the measurement and disclosure of financial assets that are required or permitted to be measured and reported at fair value under other ASC topics (except for standards that relate to share-based payments such as ASC Topic 718, *Compensation – Stock Compensation*).

The valuation techniques required by ASC 820 may be based on either observable or unobservable inputs. Observable inputs reflect readily obtainable data from independent sources, and unobservable inputs reflect the Company's market assumptions. These inputs are classified into the following hierarchy:

Level 1 Inputs—quoted prices (unadjusted) in active markets for identical assets that the reporting entity has the ability to access at the measurement date;

Level 2 Inputs—inputs other than quoted prices included within Level 1 that are observable for the asset, either directly or indirectly; and

Level 3 Inputs—unobservable inputs for the assets.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

2. Summary of Significant Accounting Policies (continued)

The following tables present the Company's investments in marketable securities (including, if applicable, those classified on the Company's balance sheet as cash equivalents) that are measured at fair value on a recurring basis as of December 31, 2014 and 2013, respectively:

December 31, 2014	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
		(in thousands)	
U.S. Treasury and U.S. or state government agency-backed securities	$22,685	$ —	$ —
Corporate debt securities	—	30,372	—
Municipal bonds	—	1,075	—
Accrued interest	241	—	—
Total cash equivalents and marketable securities	$22,926	$ 31,447	$ —

December 31, 2013	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
		(in thousands)	
U.S. Treasury and U.S. or state government agency-backed securities	$37,029	$ —	$ —
Corporate debt securities	—	43,347	—
Municipal bonds	—	3,509	—
Certificates of deposit	5,000	—	—
Accrued interest	407	—	—
Total cash equivalents and marketable securities	$42,436	$ 46,856	$ —

Corporate debt securities and municipal bonds are valued based on various observable inputs such as benchmark yields, reported trades, broker/dealer quotes, benchmark securities and bids.

Accumulated Other Comprehensive Income or Loss

Accumulated other comprehensive income or loss, as presented in stockholders' equity on the Company's balance sheet, reflects the cumulative net unrealized gains or losses on available-for-sale securities for all periods. The table below reflects changes in accumulated other comprehensive income for the year ended December 31, 2014, in thousands.

Accumulated other comprehensive income, January 1, 2014	$ 87
Unrealized loss on available-for-sale securities, net	(147)
Net realized gains on available-for sale securities reclassified out of other comprehensive income	(8)
Income taxes	72
Accumulated other comprehensive income, December 31, 2014	$ 4

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

2. Summary of Significant Accounting Policies (continued)

Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update 2014-09, *Revenue from Contracts with Customers*, or ASU 2014-09. ASU 2014-09 develops a common revenue standard for GAAP and International Financial Reporting Standards and supersedes most current revenue recognition guidance. ASU 2014-09 outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and requires a company to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. ASU 2014-09 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2016. The Company is currently evaluating the impact that the implementation of ASU 2014-09 will have on the Company's financial statements.

3. Investments in Marketable Securities

The following is a reconciliation of amortized cost to fair value of available-for-sale marketable securities (including those classified on the Company's balance sheet as cash equivalents) held at December 31, 2014 and 2013:

December 31, 2014	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		(in thousands)		
Security type				
Marketable Securities—Short term				
U.S. Treasury and U.S. or state government agency-backed securities	$ 22,677	$ 9	$ (1)	$22,685
Corporate debt securities	27,240	19	(4)	27,255
Municipal Bonds	780	1	—	781
Accrued interest	234	—	—	234
Marketable Securities—Long term				
Corporate debt securities—long term	3,114	4	(1)	3,117
Municipal Bonds	295	—	(1)	294
Accrued interest	7	—	—	7
Total available-for-sale marketable securities	$ 54,347	$ 33	$ (7)	$54,373

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

3. Investments in Marketable Securities (continued)

December 31, 2013	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		(in thousands)		
Security type				
Marketable Securities—Short term				
U.S. Treasury and U.S. or state government agency-backed securities	$ 16,352	$ 39	$ —	$16,391
Corporate debt securities	14,307	35	—	14,342
Municipal bonds	1,910	3	—	1,913
Certificates of deposit	5,000	—	—	5,000
Accrued interest	198	—	—	198
Marketable Securities—Long term				
U.S. Treasury and U.S. or state government agency-backed securities	20,628	14	(4)	20,638
Corporate debt securities—long term	28,909	101	(5)	29,005
Municipal bonds	1,598	4	(6)	1,596
Accrued interest	209	—	—	209
Total available-for-sale marketable securities	$ 89,111	$ 196	$ (15)	$89,292

As of December 31, 2014, the Company held investments in marketable securities with unrealized gains of $33,000 and unrealized losses of $7,000. As of December 31, 2014, the Company's investments in marketable securities reach maturity between January 9, 2015 and December 12, 2016, with a weighted average maturity date of approximately June 24, 2015.

4. Property and Equipment

As of the respective dates shown, property and equipment consisted of the following:

	December 31,	
	2014	2013
	(in thousands)	
Equipment	$ 62	$ 165
Office furniture and fixtures	2,015	2,373
Leasehold improvements	22	22
	2,099	2,560
Less: accumulated depreciation	(1,671)	(1,878)
Property and equipment, net	$ 428	$ 682

The Company recorded $254,000, $505,000 and $2,195,000 of depreciation expense for the years ended December 31, 2014, 2013 and 2012, respectively. During the year ended December 31, 2012, the Company closed its laboratory operations and completed two reductions in force (see Note 13). In connection with the reductions in force, the Company sold laboratory equipment and office furniture and fixtures with a book value of $4,000, $519,000 and $1,534,000 for the year ended December 31, 2014, 2013 and 2012, respectively, which resulted in a cumulative gain of $14,000, a cumulative loss of $213,000 and a cumulative gain of $55,000 for the year ended December 31, 2014, 2013 and 2012, respectively.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

5. Intangible Assets

As of the respective dates shown, intangible assets consisted of the following:

	December 31, 2014	December 31, 2013
	(in thousands)	
Patents	$ 296	$ 296
Less: accumulated amortization	(296)	(199)
Total	$ —	$ 97

Intangible assets consisted of licensed patent rights assigned to the Company by Layton Bioscience, Inc. in 2002, which had an original value to the Company of $296,000. During 2014, as a result of recent clinical trial failures of a compound, the licensed patent rights of which were assigned to Targacept, the Company determined the intangible assets were impaired and recorded an expense for the full remaining carrying value in general and administrative expenses.

6. Accrued Expenses

As of the respective dates shown, accrued expenses consisted of the following:

	December 31, 2014	December 31, 2013
	(in thousands)	
Clinical trial and nonclinical study costs	$1,891	$7,578
Employee compensation	590	1,200
Other	28	52
Total	$2,509	$8,830

7. Long-term Debt

In July 2010, the Company entered into a loan agreement with a bank that provides aggregate borrowing capacity of $4,000,000 to be provided in up to three individual term loans on or prior to June 30, 2011 to fund the purchase of equipment, furnishings, software and other fixed assets. The Company borrowed $1,228,000 under the loan agreement in September 2010 and borrowed an additional $2,132,000 in June 2011. The Company's September 2010 borrowing bears interest at a fixed rate of 3.40% per annum and is repayable in equal monthly installments of $28,000 beginning January 1, 2011 through the maturity date of December 1, 2014. The Company's June 2011 borrowing bears interest at a fixed rate of 3.471% per annum and is repayable in equal monthly installments of $48,000 beginning July 1, 2011 through the maturity date of June 1, 2015. Pursuant to the loan agreement, the Company granted a first priority security interest in favor of the bank in assets acquired with the proceeds of the loan. The September 2010 borrowing was paid and satisfied in full in November 2014, and the June 2011 borrowing was paid and satisfied in full in December 2014.

In March 2008, the Company entered into a loan agreement with a bank that provided borrowing capacity of $5,300,000 to fund the purchase of equipment, furnishings, software and other fixed assets and enable the refinancing of an existing loan facility with another lender. The Company borrowed $4,811,000 upon entering into the loan agreement and borrowed the remaining $489,000 in September 2008. The Company's March 2008 borrowing bore interest at a fixed rate of 5.231% per annum and was repayable in equal monthly installments of $112,000 beginning April 1, 2008 through the maturity date of March 1, 2012. The March 2008 borrowing was

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

7. Long-term Debt (continued)

paid and satisfied in full on March 1, 2012. The Company used $1,679,000 of the proceeds from the March 2008 borrowing to pay and satisfy in full the principal and interest outstanding on two tranches of the existing loan facility with another lender. The Company's September 2008 borrowing bore interest at a fixed rate of 6.131% per annum and was repayable in equal monthly installments of $11,000 beginning October 1, 2008 through the maturity date of September 1, 2012. The September 2008 borrowing was paid and satisfied in full in August 2012.

As of December 31, 2014, the Company had no remaining unpaid balance related to its loan agreements. The Company paid $26,000, $56,000 and $91,000 in interest under notes payable during the years ended December 31, 2014, 2013 and 2012, respectively.

8. Income Taxes

For the year ended December 31, 2012, the Company recognized $101,000 of income tax benefit as a result of the application of intraperiod tax allocation provisions of ASC 740, under which the Company is required to consider all items (including items recorded in other comprehensive income) in determining the amount of tax benefit that should be allocated to net loss. The non-cash income tax benefit was offset in full by income tax expense recorded in other comprehensive income. The Company recorded $72,000 and $7,000 income tax expense for the years ended December 31, 2014 and 2013, respectively, and a corresponding income tax benefit in other comprehensive income for each period, as the available-for-sale securities began to be sold.

Because the Company has incurred cumulative net operating losses since inception, all tax years remain open to examination by U.S. federal, North Carolina and Massachusetts tax authorities. An examination of the Company's 2010 federal income tax return was completed in 2014 and resulted in an adjustment that increased taxable income for 2010 by $15,064,000, decreased taxable income for 2011 by $1,076,000, and decreased taxable income for 2012 by $13,988,000. The examination adjustment had no cumulative effect on federal net operating loss carryforwards. The examination adjustment to the Company's 2010 federal income tax return resulted in the realization of an additional $3,412,000 of excess tax deductions and an offsetting charge to income tax expense for the year ended December 31, 2014. The excess tax deductions were the result of exercises of stock options in periods of net income that gave rise to tax deductions for stock-based compensation in excess of expense recorded for the stock options under GAAP. For the years shown, components of the Company's income tax expense (benefit) were as follows:

	Year Ended December 31,		
	2014	2013	2012
		(in thousands)	
Current:			
Federal	$ 3,412	$ —	$ —
State	—	—	—
Net current income tax (benefit) expense	3,412	—	—
Deferred:			
Federal	(13,477)	(18,076)	(1,128)
State	(1,488)	1,010	(718)
Valuation allowance	15,037	17,073	1,745
Net deferred income tax expense (benefit)	72	7	(101)
Net income tax expense (benefit)	$ 3,484	$ 7	$ (101)

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

8. Income Taxes (continued)

The following is a reconciliation from the federal income tax rate to the Company's effective tax rate.

	Year Ended December 31,		
	2014	2013	2012
Expected federal income tax benefit/expense at statutory rate	35%	35%	35%
Increase (decrease) resulting from:			
Research and development credits	2	4	—
Stock-based compensation	(1)	(1)	(15)
State income tax expense, net of federal benefit	3	4	2
Change in state rates	—	(6)	—
Change in unrecognized tax benefit reserves	1	—	—
Change in valuation allowance	(52)	(37)	(25)
Other	—	—	4
	(12)%	(1)%	1%

At December 31, 2014, 2013 and 2012, the Company had net operating loss carryforwards for federal income tax purposes of $259,168,000, $233,170,000, and $187,752,000, respectively, and for state income tax purposes of $244,994,000, $219,792,000 and $176,296,000, respectively. At December 31, 2014, 2013 and 2012, the Company had research and development income tax credit carryforwards for federal income tax purposes of $13,468,000, $12,773,000 and $10,762,000, respectively. The Company had research and development income tax credit carryforwards for state income tax purposes of $587,000 at December 31, 2014, 2013 and 2012. The federal net operating loss carryforwards begin to expire in 2024. The state net operating loss carryforwards begin to expire in 2019. The federal and state research and development tax credits 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. A series of stock issuances gave rise to such an ownership change in December 2004. As a result, an annual limitation is imposed on the Company's use of net operating loss and credit carryforwards attributable to periods before the change.

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 principally to its research and development tax credits and net operating loss carryforwards. A valuation allowance has been recognized to offset the deferred tax assets. If and when recognized, the tax benefit for those items will be reflected in the period in which the benefit is recorded as a reduction of income tax expense. However, in the event the Company has excess tax deductions related to the exercise of stock options, the tax benefit will be reflected as an increase to capital in excess of par value. 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. The valuation allowance increased by $15,026,000 and $17,110,000 for the years ended December 31, 2014 and 2013, respectively.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

8. Income Taxes (continued)

As of the respective dates shown, significant components of the Company's deferred tax assets (liabilities) were as follows:

	December 31,	
	2014	2013
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforward	$ 94,756	$ 81,183
Research and development tax credit	12,739	12,044
Stock-based compensation	7,317	6,498
Patents	1,500	1,641
Collaboration revenue	—	—
Other	26	36
Total gross deferred tax assets	116,338	101,402
Valuation allowance	(116,237)	(101,211)
Net deferred tax asset	101	191
Deferred tax liabilities		
Equipment and other	(101)	(191)
Net deferred tax asset	$ —	$ —

As of December 31, 2014, the Company had cumulative tax deductions from exercises of stock options in excess of expense recorded for the stock options under GAAP. The $3,915,000 benefit of these excess tax deductions had not begun to be realized as of December 31, 2014 because the Company incurred operating losses in the years the respective stock options were exercised and has incurred cumulative net operating losses since inception. Accordingly, the tax benefit will not be recognized as an increase to capital in excess of par value unless and until the excess deductions reduce income taxes payable.

The Company follows the provisions of ASC 740, which prescribes a threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return and also provides guidance on de-recognition, classification, interest and penalties, accounting in interim periods and disclosures. A reconciliation of beginning and ending unrecognized tax benefits is as follows (in thousands).

Balance at January 1, 2012	$1,474
Additions (decreases) based on tax positions related to current and prior years	—
Balance at December 31, 2012	1,474
Additions (decreases) based on tax positions related to current and prior years	2
Balance at December 31, 2013	1,476
Additions (decreases) based on tax positions related to current and prior years	(159)
Balance at December 31, 2014	$1,317

None of the unrecognized tax benefits would, if recognized, affect the effective tax rate because the Company has recorded a valuation allowance to fully offset federal and state deferred tax assets. The Company has no tax positions for which it is reasonably possible that the total amount of unrecognized tax benefits will significantly increase or decrease during 2015. No interest or penalties with respect to unrecognized tax positions

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

8. Income Taxes (continued)

are recognized in the statement of comprehensive income (loss) for any of the years ended December 31, 2014, 2013 or 2012.

9. Stock-Based Incentive Plans

The 2000 Plan became effective in August 2000. The 2006 Plan became effective in April 2006 and is the successor equity incentive program to the 2000 Plan. All shares previously reserved under the 2000 Plan and not subject to outstanding awards under the 2000 Plan are now reserved for grant under the 2006 Plan. As of December 31, 2014, the number of shares authorized for issuance under the Plans was 7,033,298, of which 3,149,324 shares remained available for grant.

Awards may be made with respect to the 2006 Plan, or may have been made with respect to both Plans, to participants under the Plans in the form of incentive and nonqualified stock options, restricted stock (or unvested stock awards), stock appreciation rights, stock awards, and performance awards. As of December 31, 2014, the company has granted stock options and unvested stock awards under the Plans. Eligible participants under the Plans include employees, directors and certain independent contractors, consultants or advisors of the Company or a related corporation. Awards made under the Plans have vesting periods that are determined at the discretion of the administrator and range from 0 to 5 years and most commonly 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 stock options granted under the Plans may not be less than 100% of the fair market value of the common stock on the date of grant, as determined by the administrator.

In addition to awards made under the Plans, on December 3, 2012, the Company granted a nonqualified option to purchase 400,000 shares of its common stock pursuant to an employment agreement entered into by the Company in connection with the hire of its president and chief executive officer. The option, which was not granted pursuant to a Plan, has similar terms to nonqualified stock options granted under the 2006 Plan.

Under ASC 718, the Company recognizes the grant date fair value of stock awards issued to employees and non-employee directors over the requisite service periods, which are typically the vesting periods. The Company uses the Black-Scholes-Merton formula to estimate the fair value of its stock options. The volatility assumption used in the Black-Scholes-Merton formula is primarily based on the Company's implied volatility, the calculated historical volatility of twelve to sixteen benchmark companies in the Company's industry that have been identified as comparable public entities, the Company's historical volatility and the implied volatility of the same benchmark companies. The expected term for stock options granted during 2014, 2013 and 2012 is based on historical analysis. 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-Merton model used in determining the fair value of stock options granted as of the respective dates shown:

	Year ended December 31,		
	2014	2013	2012
Dividend yield	—	—	—
Risk-free interest rate	1.8%	1.1%	1.0%
Volatility	111%	82%	69%
Expected term	5.63 years	5.73 years	6.16 years

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

9. Stock-Based Incentive Plans (continued)

During 2013 and 2012, the Company partially accelerated the vesting of, and/or extended the permitted period for exercise for, some outstanding stock options held by several employees who departed the Company. These modifications resulted in incremental compensation cost recorded by the Company for the year ended December 31, 2013 and 2012 of $573,000 and $1,397,000, respectively.

A summary of option activity and changes during the year ended December 31, 2014 appears below.

	Shares Subject to Options	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value (in thousands)
Outstanding at January 1, 2014	4,539,628	$ 9.93		
Granted	935,368	4.68		
Forfeited	(1,515,466)	9.53		
Exercised	(75,556)	3.93		
Outstanding at December 31, 2014	3,883,974	$ 8.93	5.21	$ 2
Vested and exercisable at December 31, 2014	2,838,812	$ 10.49	3.98	$ 1

The weighted average grant date fair value of options granted during the years ended December 31, 2014, 2013, and 2012 was $3.85, $3.38 and $2.98, respectively. The total intrinsic value of options exercised during the years ended December 31, 2014, 2013, and 2012 was $60,000, $200,000, and $472,000, respectively. During 2014 and 2013, respectively, 12,171 and 176,102 shares subject to options expired upon reaching the 10-year contractual term, and are included in the “Forfeited” amount in the table above.

A summary of the status of non-vested stock options outstanding as of December 31, 2014 and changes during the year ended December 31, 2014 appears below.

	Shares Subject to Options	Weighted Average Grant-Date Fair Value Per Share
Non-vested at January 1, 2014	1,357,654	$ 4.04
Granted	935,368	3.85
Vested	(721,385)	4.75
Forfeited	(526,475)	3.82
Non-vested at December 31, 2014	1,045,162	$ 3.50

As of December 31, 2014, there was $3,654,000 of total unrecognized compensation expense related to unvested stock options, before considering forfeitures. That cost is expected to be recorded over a weighted average period of 2.56 years. The total fair value of shares subject to stock options that vested during the years ended December 31, 2014, 2013, and 2012 was $3,427,000, $5,140,000 and $7,836,000, respectively.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

9. Stock-Based Incentive Plans (continued)

The Company uses the closing price on the date of grant as the fair value of its unvested stock awards. A summary of the status of unvested stock awards as of December 31 and changes during the year ended December 31, 2014 appears below.

	Shares Subject to Options	Weighted Average Grant-Date Fair Value Per Share
Non-vested at January 1, 2014	—	$ —
Granted	567,700	2.36
Vested	—	—
Forfeited	(55,000)	2.36
Non-vested at December 31, 2014	512,700	$ 2.36

As of December 31, 2014, there was $1,111,000 of total unrecognized compensation expense related to unvested stock awards. That cost is expected to be recorded over a weighted average period of 2.00 years. The unvested stock awards are reflected on the Company's balance sheet as "issued" but not "outstanding" at December 31, 2014; and will become "outstanding" as they vest.

The Company had 3,883,974 and 4,539,337 shares of common stock reserved for future issuance upon the exercise of outstanding stock options at December 31, 2014 and 2013, respectively.

On January 21, 2015, the Company granted 111,025 stock options to employees. The stock options will vest over 16 quarters, beginning March 31, 2015.

10. Commitments and Contingencies

Leases

On December 4, 2012, the Company entered into an agreement with B/E Aerospace, Inc. to sublease approximately 18,282 square feet of office space in Winston-Salem, North Carolina. The term of the sublease began on January 1, 2013 and ends on December 30, 2015. The monthly rent payable by the Company under the sublease is approximately $23,000. The sublease is subject to the terms and conditions of the prime lease covering the subleased space between B/E Aerospace and its landlord, SL Winston-Salem, LLC.

The Company has entered into various other lease agreements, primarily for storage space and equipment. The Company's previous office lease expired on December 31, 2012. Rent expense incurred by the Company under the office leases and other operating leases was $541,000, $582,000 and $2,819,000 for the years ended December 31, 2014, 2013 and 2012, respectively.

The following table illustrates expected future lease payments under all operating leases (in thousands):

2015	$356
2016	25
2017	12
2018 and thereafter	—
	$393

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

10. Commitments and Contingencies (continued)

Employment Arrangements

The Company has entered into employment agreements with some of its employees. Under the agreements, if the Company terminates the employment other than for just cause or if the employee terminates employment for good reason, in each case as that term is defined in the agreement, the employee is entitled, among other things, to receive severance equal to current base salary for from up to 12 to 18 months following termination, depending on the employee and the circumstances of termination. The employee would also be entitled to continuation of the health and life insurance benefits coverage provided as of the date of termination for the period during which he receives severance.

Under an employment agreement with a former executive officer and a related separation agreement and release, the Company paid severance equal to the departing executive's regular base salary as of March 31, 2013 for nine months, a pro rata percentage of the departing executive's target bonus for 2013, and the departing executive's health and life insurance benefits coverage provided to him as of March 31, 2013 for nine months. These payments and benefits, which represent an aggregate amount of $306,000, were recorded as general and administrative expense for the year ended December 31, 2013.

11. Retirement Savings Plan

The Company has a 401(k) retirement plan in which all of its employees are eligible to participate. The Company contributed $194,000, $275,000 and $454,000 to the plan for the years ended December 31, 2014, 2013 and 2012, respectively. The Company matched employee contributions to the plan, on a per employee basis, up to 4% of each employee's wages, subject to statutory limits, for each of the years ended December 31, 2014, 2013 and 2012.

12. Strategic Alliance and Collaboration Agreements

AstraZeneca AB

In December 2005, the Company entered into a collaborative research and license agreement with AstraZeneca AB, or AstraZeneca, that was initially focused in cognitive disorders. In October 2014, AstraZeneca terminated the agreement in its entirety, effective January 2015. When termination of the agreement became effective, all remaining rights and licenses to compounds granted by the Company under the agreement to AstraZeneca were terminated and reverted to the Company, including the rights and license relating to the Company's product candidate TC-6683 (also known as AZD1446).

AstraZeneca paid the Company an initial fee of $10,000,000 under the agreement in February 2006. The initial fee included $5,000,000 for grants of licenses to develop and commercialize the Company's product candidate TC-1734 (formerly known also as AZD3480), which the Company recognized on a straight-line basis over the estimated development period for TC-1734. In September 2010, the Company and AstraZeneca amended the agreement to enable the Company to conduct a clinical trial of TC-1734 in mild to moderate Alzheimer's disease and to provide for respective roles and responsibilities and associated financial terms for such a study. Under the 2010 amendment, the Company received from AstraZeneca cumulative payments of $6,000,000 during 2010 and 2011. At that time, the Company began recognizing the portion of the $5,000,000 received for grants of licenses not yet recognized and the payments received under the 2010 amendment into revenue on a straight-line basis over the period of the Company's substantive performance obligations under the agreement as amended.

12. Strategic Alliance and Collaboration Agreements (continued)

In March 2013, the Company and AstraZeneca amended the agreement to permit AstraZeneca to pursue development and commercialization of compounds it had licensed from the Company in any therapeutic area. Also in March 2013, AstraZeneca exercised its right to terminate TC-1734 from the collaboration. As a result, the Company recognized into revenue during the first quarter of 2013 all of the initial fee and payments received under the 2010 amendment that had not yet been recognized as of the date of AstraZeneca's action, totaling $3,142,000. The Company recognized an aggregate of $3,536,000 and $2,946,000 of the initial fee and the payments received under the 2010 amendment into revenue during the years ended December 31, 2013 and 2012, respectively.

Under the agreement, AstraZeneca paid the Company an aggregate of $88,120,000, including the initial fee and payments upon the achievement of milestone events, to maintain option rights and for research services rendered in the completed preclinical research collaboration. This entire amount had been fully recognized into revenue in previous periods.

Prior Collaboration Agreement

In December 2009, the Company entered into a collaboration and license agreement with AstraZeneca AB for the global development and commercialization of TC-5214 as a treatment for major depressive disorder. Under the agreement, AstraZeneca made an upfront payment to the Company of $200,000,000. The Company recorded the upfront payment made by AstraZeneca as deferred revenue and began recognizing the payment as revenue on a straight-line basis over the estimated period of the Company's substantive performance obligations under the agreement, or approximately 33 months after the agreement date. The Company recognized $54,473,000 of the upfront payment as revenue for the year ended December 31, 2012.

Under the agreement, AstraZeneca was responsible for 80% and the Company was responsible for 20% of the costs of the global development program for TC-5214 in major depressive disorder, except that AstraZeneca was responsible for 100% of development costs that were required only for countries outside the United States and the European Union. In addition, for each of the Company and AstraZeneca, costs that were not contemplated at execution to be part of the program were in some cases excluded from the cost-sharing arrangement.

The Company's portion of the costs of the TC-5214 development program was $2,175,000 for the year ended December 31, 2012. AstraZeneca's allocable portion of the program costs paid by the Company was $127,000 for the year ended December 31, 2012. AstraZeneca's allocable portion of the program costs paid by the Company is reflected in the Company's financial statements as a reduction to research and development expense.

In the first quarter of 2012, the Company and AstraZeneca announced that, based on the totality of the results of the Phase 3 development program for TC-5214, a regulatory submission for TC-5214 as an adjunct therapy for major depressive disorder would not be pursued. Also in the first quarter of 2012, the Company reported that the Company and AstraZeneca determined to discontinue a Phase 2b clinical trial of TC-5214 as a "switch" monotherapy. These determinations resulted in a change in the estimated period of the Company's substantive performance obligations under the agreement, and the Company revised the revenue recognition period for the upfront payment accordingly. As a result, the entire upfront payment was recognized into revenue by June 30, 2012. In April 2012, the Company received notice of termination of the agreement from AstraZeneca. By the terms of the agreement, the termination became effective in May 2012.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

13. Reductions In Force

On April 25, 2012, the Company announced a reduction in force as part of a plan to focus its resources on its more advanced programs. The restructuring was completed in the second quarter of 2012. The Company recorded $2,312,000 in severance and other charges related to the reduction in force in the year ended December 31, 2012. Upon the completion of the restructuring, the Company's workforce was reduced by 65 employees, or approximately 46%.

On October 8, 2012, the Company announced a further reduction in force and the closing of its laboratory operations. Both of these actions were completed in the fourth quarter of 2012. The Company recorded $1,406,000 in severance and other charges related to the reduction in force in the year ended December 31, 2012. Upon the completion of the restructuring, the Company's workforce was further reduced by 27 employees, or approximately 38%.

In the fourth quarter of 2014, the Company completed a reduction in force, which reduced the Company's workforce by 7 employees, or approximately 26%. The Company recorded $318,000 in severance and other charges related to the reduction in force in the year ended December 31, 2014.

14. Selected Quarterly Financial Data (unaudited)

	2014 Quarter			
	First	Second	Third	Fourth
	(in thousands, except share and per share amounts)			
Net operating revenues	$ 87	$ 36	$ 25	$ 127
Loss from operations	(11,756)	(8,239)	(4,988)	(4,731)
Net loss	(14,999)	(8,136)	(4,860)	(4,628)
Basic net loss per share(1)	$ (0.44)	$ (0.24)	$ (0.14)	$ (0.14)
Weighted average common shares outstanding—basic and diluted(2)	33,746,917	33,786,686	33,793,735	33,793,735

	2013 Quarter			
	First	Second	Third	Fourth
	(in thousands, except share and per share amounts)			
Net operating revenues	$ 3,536	$ —	$ —	$ 93
Loss from operations	(8,274)	(12,488)	(13,146)	(13,308)
Net loss	(8,066)	(12,371)	(12,902)	(13,366)
Basic net loss per share(1)	$ (0.24)	$ (0.37)	$ (0.38)	$ (0.40)
Weighted average common shares outstanding—basic and diluted(2)	33,616,342	33,626,980	33,644,256	33,673,047

(1) Per common share amounts for the quarters and full years have been calculated separately. Accordingly, the sum of quarterly amounts may not equal the annual amount because of differences in the weighted average common shares outstanding during each period, principally due to the effect of share issuances by the Company during the year.

(2) Diluted weighted average common shares outstanding are identical to basic weighted average common shares outstanding and Diluted EPS is identical to Basic EPS for the each quarter of 2014 and 2013 because common share equivalents are excluded from the calculations of diluted weighted average common shares outstanding for those quarters, as their effect is antidilutive.

TARGACEPT, INC.

NOTES TO FINANCIAL STATEMENTS (continued)
DECEMBER 31, 2014

15. Subsequent Event

On March 5, 2015 the Company announced entry into a definitive Agreement and Plan of Merger (the "Merger Agreement") with Catalyst Biosciences, Inc. ("Catalyst"), pursuant to which, among other things, subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, a wholly-owned subsidiary of the Company's will be merged with and into Catalyst, with Catalyst continuing as the surviving corporation and a wholly-owned subsidiary of the Company's (the "Proposed Merger"). Immediately following the effective time of the Proposed Merger, existing Catalyst equity holders are expected to own approximately 65% of the capital stock of the combined company, and existing Targacept equity holders are expected to own approximately 35% of the capital stock of the combined company. Prior to the closing of the Proposed Merger, the Company also expects to distribute to its stockholders a dividend of approximately $37,000,000 in aggregate principal amount of redeemable convertible notes, and approximately $20,000,000 in cash (the "Pre-Closing Dividend"). The notes will be convertible into shares of common stock of the combined company at a conversion price of $1.31 per share, which represents 130% of the negotiated per share value of the Company's assets following the anticipated Pre-Closing Dividend. If, in the future, the redeemable convertible notes are fully converted into Targacept common stock, the Company's stockholders would own approximately 49% of the outstanding capital stock of the combined company on a pro forma basis as of the anticipated closing date. Targacept stockholders who are entitled to the Pre-Closing Dividend will also be entitled to any net proceeds received as a result of any disposition of Targacept's NNR compounds and related assets that occurs within up to two years after the closing of the Proposed Merger, unless those assets are sold or otherwise disposed of prior to the closing of the Proposed Merger.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

(a) *Evaluation of Disclosure Controls and Procedures*. Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures in accordance with Rule 13a-15(b) under the Exchange Act as of the end of the period covered by this annual report. In designing and evaluating our disclosure controls and procedures, our management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and our management necessarily applied its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of the end of the period covered by this annual report, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is (a) accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure and (b) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms.

(b) *Management's Report on Internal Control Over Financial Reporting*. Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or Rule 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the principal executive and principal financial officers and effected by the board of directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may lessen. Our management, including our chief executive officer and chief financial officer, assessed the effectiveness of our internal control over financial reporting as of December 31, 2014 using the criteria established in a report entitled "Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission" (2013 framework) and in accordance with the interpretive guidance issued by the SEC in Release No. 34-55929. Based on its assessment, our management concluded that, as of December 31, 2014, our internal control over financial reporting was effective.

Our independent registered public accounting firm has issued an audit report on the effectiveness of our internal control over financial reporting as of December 31, 2014. The report appears below.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of
Targacept, Inc.

We have audited Targacept, Inc.'s internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Targacept, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit 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 effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Targacept, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2014, based on the COSO criteria.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the balance sheets of Targacept, Inc. as of December 31, 2014 and 2013, and the related statements of comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2014 and our report dated March 16, 2015 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Raleigh, North Carolina
March 16, 2015

(c) *Changes in Internal Controls*. No change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) occurred during the quarter ended December 31, 2014 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The following table sets forth certain information concerning our executive officers and directors as of March 16, 2015:

Name	Age	Position
Executive Officers		
Stephen A. Hill, M.D.	57	President & Chief Executive Officer; Class II Director
Mauri K. Hodges, C.P.A., C.C.P	57	Vice President, Finance and Administration, Chief Financial Officer and Treasurer
Patrick C. Rock, J.D.	55	Senior Vice President, General Counsel and Secretary
Steven M. Toler, Pharm.D., Ph.D.	54	Vice President, Clinical Pharmaceutical Sciences
Scott N. Cullison	38	Vice President, Business Development
Non-Employee Directors		
Charles A. Blixt	63	Class I Director
Julia R. Brown	67	Class II Director
Errol B. De Souza	61	Class III Director
Alan W. Dunton, M.D.	60	Class I Director
John R. Richard	57	Chairman of the Board; Class II Director

Executive Officers

Dr. Stephen A. Hill has been our President and Chief Executive Officer and a member of our Board since December 2012. From May 2012 to November 2012, Dr. Hill served as president and chief executive officer of QUE Oncology, a start-up biotechnology company, and, from March 2011 to December 2011, he served as president and chief executive officer of 21st Century Biodefense, Inc., a biodefense company. From April 2008 until its acquisition in December 2010, he served as president and chief executive officer of Solvay Pharmaceuticals, Inc., a pharmaceutical company. Prior to Solvay, he served as president, chief executive officer and director of ArQule, Inc., a pharmaceutical company, from April 1999 to March 2008. Dr. Hill is a member of the board of directors of the publicly-traded companies Cellectar Biosciences, Inc. (formerly Novelos Therapeutics, Inc.) and Lipocine, Inc.

Dr. Hill's service as a director enables the Board to perform its responsibilities with the direct benefit of management's perspectives. In addition, he brings to the Board extensive experience across a range of senior management positions with both pharmaceutical and biotechnology companies. Prior to Solvay and ArQule, Dr. Hill held several leadership positions with F. Hoffmann-La Roche Ltd., including Global Head of Clinical Development, and served for seven years with the National Health Service in the United Kingdom in General and Orthopedic Surgery. Dr. Hill's role as our chief executive, together with his breadth of experience, make him uniquely suited to serve on our Board.

Mauri K. Hodges, C.P.A., C.C.P. has been our Vice President, Finance and Administration, Chief Financial Officer and Treasurer since December 2014. From July 2014 to November 2014, she was our Vice President of Human Resources and served as Vice President, Finance and Corporate Systems and Controller from 2007 to June 2014.

Patrick C. Rock, J.D. joined the Company in August 2013 and became our Senior Vice President, General Counsel and Secretary effective October 1, 2013. From April 2009 to December 2011, he served as Vice President and General Counsel to 21st Century Biodefense, Inc., a biodefense company. From January 2012 to August 2013, Mr. Rock maintained his own legal practice counseling multinational pharmaceutical and energy industry clients.

Steven M. Toler, Pharm.D., Ph.D. has been our Vice President, Clinical Pharmaceutical Sciences since September 2012. He was our Vice President, Translational Sciences and Emerging Opportunities from March 2010 to September 2012 and our Senior Director, Translational Medicine from September 2007 to March 2010.

Scott N. Cullison, M.B.A, has been our Vice President, Business Development since June 2013. He was our Senior Director, Business and Commercial Development from January 2010 to May 2013 and Director, Business and Commercial Development from January 2006 to December 2009.

Non-Employee Directors

Charles A. Blixt has been a member of the Board since August 2000. From October 2007 to December 2010, Mr. Blixt was a senior adviser to Jones Day, a law firm. Previously, he worked for more than 20 years in legal positions of increasing responsibility, including Executive Vice President and General Counsel, of R.J. Reynolds Tobacco Company or its affiliated companies. Mr. Blixt is a member of the board of directors of the publicly-traded company Krispy Kreme Doughnuts, Inc. Within the past five years, he served as a member of the board of directors of the publicly-traded company Swedish Match AB.

Mr. Blixt brings to the Board extensive legal, policy, corporate development and business experience. In particular, his experience gained over many years as general counsel of a Fortune 100 consumer products company serves to supplement and diversify the emerging growth and life science backgrounds of the other members of the Board and provides the Board with a unique and valuable perspective. In addition, Mr. Blixt's legal background helps the Board promote strong corporate governance practices.

Julia R. Brown has been a member of the Board since November, 2007. She has held a variety of executive positions over her career in the pharmaceutical industry. Ms. Brown served as Executive Vice President of Amylin Pharmaceuticals, Inc. from 2000-2003 and as Advisor to the CEO until 2008. Prior to joining Amylin, she was Executive Vice President of Dura Pharmaceuticals, Inc. Ms. Brown spent over 25 years with Eli Lilly and Company in progressively more senior roles including Vice President of IVAC Corporation and General Manager of its Vital Signs Division and Vice President of Worldwide Marketing for Hybritech. She currently serves on the board of directors of Biodel, Inc. and Cleveland Biolabs, Inc., both publicly-traded, development stage pharmaceutical companies. She is compensation committee chair and a member of the nominating and governance committee of both companies. Ms. Brown previously served on the boards of five other development stage pharmaceutical companies, including the publicly-traded company Labopharm, Inc. (acquired by Paladin Labs Inc.) from 2007 to 2011. She is Chairman of the Corporate Directors Forum and is a member of the National Association of Corporate Directors and Women Corporate Directors. Ms. Brown is a trustee and chair emerita of the University of California San Diego Foundation and is a member of the board of two industry associations.

Ms. Brown's qualifications to serve on the Board include her extensive experience in the pharmaceutical industry, particularly with development stage companies, and her substantial involvement in organizations dedicated to fostering high standards of professionalism in corporate governance.

Errol B. De Souza, Ph.D. has been a member of the Board since January 2004. Since March 2010, Dr. De Souza has been president and chief executive officer of Biodel Inc., a specialty pharmaceutical company. From April 2009 to March 2010, Dr. De Souza was a pharmaceutical and biotechnology consultant. From April 2003 to March 2009, he served as president and chief executive officer of Archemix Corporation, a privately held biopharmaceutical company. Dr. De Souza currently serves as a member of the board of directors of each of the publicly-traded companies Biodel Inc. and Bionomics Ltd. Within the past five years, he served on the board of directors of each of the publicly-traded companies IDEXX Laboratories, Inc. and Palatin Technologies, Inc.

Dr. De Souza brings to the Board substantial experience as an executive in the pharmaceutical industry, having served as president and chief executive officer of Synaptic Pharmaceutical Corp. until its sale to H. Lundbeck A/S, in addition to Biodel and Archemix. Over Dr. De Souza's career, he has also served in a number

of high-ranking research and development roles, including senior vice president and head of global lead generation for Hoechst Marion Roussel and senior vice president and U.S. head of drug innovation and approval following that company's merger with Rhône-Poulenc to form Aventis (now Sanofi-Aventis) and co-founder and executive vice president of research and development at Neurocrine Biosciences, Inc. These experiences, together with his service as a director for other biopharmaceutical companies, enable Dr. De Souza to contribute valuable insight to the Board regarding pharmaceutical portfolio development and management from both large company and emerging company perspectives.

Alan W. Dunton, M.D. has been a member of the Board since October 2006. Since April 2006, he has been the principal of Danerius, LLC, a consulting company. From January 2007 to March 2009, Dr. Dunton served as president and chief executive officer of Panacos Pharmaceuticals Inc., and he served as a managing director of Panacos from March 2009 to January 2011. Dr. Dunton is a member of the board of directors of each of the publicly-traded companies Oragenics, Inc. and Palatin Technologies, Inc. Within the past five years, he served on the board of directors of each of the publicly-traded companies Adams Respiratory Therapeutics, Inc. (acquired by Reckitt Benckiser Group plc) and MediciNova, Inc. and the formerly publicly-traded company Panacos Pharmaceuticals, Inc. In addition, he was Chairman of EpiCept Corporation which merged with Immune Pharmaceuticals in 2013. He is also currently a director of Sancilio & Company, a privately held pharmaceutical company.

Dr. Dunton brings to the Board substantial drug development and clinical research experience. Over his almost three decade career in the pharmaceutical industry, Dr. Dunton has played a key role in the development of more than 20 products to regulatory approval, including several successful neuroscience products. In addition, his experience and training as a physician and fellowship in clinical pharmacology enable him to bring valuable insight to the Board.

John P. Richard has been a member of the Board since November 2002, and has served as Chairman since January 2014. Mr. Richard is an operating partner at the life science investment firm Phase4 Partners (formerly Nomura Phase4 Ventures), and has served as a non-executive director for Phase4 since March 2011 and as a venture partner since 2008. Since 2005 he has also been a managing director of Georgia Venture Partners, a seed venture capital firm that focuses on the biotechnology industry. In addition, Mr. Richard currently serves and from time to time during at least the past five years has served as a consultant to Phase4 Partners (or its predecessor) and certain of its portfolio companies, and to portfolio companies of Georgia Venture Partners. Mr. Richard is currently a director of the publicly-traded company Biota Pharmaceuticals, Inc.

Mr. Richard brings to the Board extensive business development experience, having led that function at three separate life science companies and played a primary role in establishing numerous pharmaceutical alliances. In addition, the breadth of Mr. Richard's current roles enables him to view issues that we face from a variety of perspectives, including as an executive, investor, director and business development professional.

Corporate Governance

Board Leadership Structure

The Board and each of its committees are chaired by directors whom the Board has determined meet the listing standards of The NASDAQ Stock Market LLC, or NASDAQ.

The roles of chief executive officer and chairman of the board of directors have been held by separate individuals since we became an independent company in 2000. This separation of roles enables our Chief Executive Officer to focus on his core responsibility of leading and managing our operations and day-to-day performance, consistent with strategic direction provided by the Board, and our Chairman of the Board to focus on leading the Board in its fundamental role of providing guidance to, and independent oversight of, our management. In addition, this separation provides an opportunity for consistent leadership, as the individual that fills either role could assume the duties of the other role on a temporary basis if the need were to arise.

Director Independence

NASDAQ's listing standards and our Corporate Governance Guidelines require that the Board consist of a majority of independent directors, as determined under the applicable NASDAQ listing standard. The Board, consistent with the determination of its Governance and Nominating Committee, has determined that each of Mr. Richard, Mr. Blixt, Ms. Brown, Dr. De Souza and Dr. Dunton qualifies as an independent director.

For purposes of qualifying as independent to serve on the Audit Committee of the Board, applicable NASDAQ listing standards and rules of the SEC require that a director not accept any consulting, advisory, or other compensatory fee from us, other than for Board service, or be an affiliated person of us. For purposes of qualifying as independent to serve on the Compensation Committee of the Board, applicable NASDAQ listing standards require that a director not accept any consulting, advisory, or other compensatory fee from us, other than for Board service, and that the Board consider whether a director is affiliated with us and, if so, whether the affiliation would impair the director's judgment as a member of the Compensation Committee. The Board has considered these requirements and believes they are satisfied by all of the members of our Audit Committee and all of the members of our Compensation Committee.

The Board and its Committees

Our bylaws provide that the Board shall consist of not less than 3 or more than 13 directors, as fixed from time to time in accordance with our certificate of incorporation. Our certificate of incorporation provides that the number of directors shall be fixed from time to time exclusively by the Board. The Board has fixed the number of directors at 7. The Board is divided into three classes, with one class to be elected at each annual meeting of stockholders to serve for a three-year term. The term of our Class I directors expires at the 2016 annual meeting of stockholders; the term of our Class II directors expires at the 2017 annual meeting of stockholders; and the term of our Class III directors expires at the 2015 annual meeting of stockholders; in each case with each director to hold office until his or her successor is duly elected and qualified or until his or her earlier death, retirement, resignation or removal. Our directors are divided among the three classes as follows:

Class	Director(s)	Term Expiration
I	Charles A. Blixt and Alan W. Dunton, M.D.	2016
II	Julia R. Brown, Stephen A. Hill, M.D. and John P. Richard	2017
III*	Errol B. De Souza, Ph.D	2015

* One Class III seat has been vacant since the resignation of our former chairman, Mark Skaletsky, in November 2013.

In 2014, the Board met eight times. Each of our directors attended at least 75% of the aggregate number of meetings of the Board and the committees on which he or she served. Our Corporate Governance Guidelines provide that our directors are also expected to attend annual meetings of stockholders. All of our directors attended the 2014 annual meeting of stockholders.

The Board has the following standing committees: Governance and Nominating, Audit, Compensation, and Technology and Innovation. A brief description of these committees and their current memberships follows.

Governance and Nominating Committee

The current members of the Governance and Nominating Committee are Mr. Blixt, Ms. Brown and Dr. De Souza, with Dr. De Souza serving as chairman. In 2014, the Governance and Nominating Committee met three times. You can find the Governance and Nominating Committee charter on the "Investor Relations" page of our

website, www.targacept.com, under the “Corporate Governance” tab. Specific responsibilities of the Governance and Nominating Committee include:

- identifying individuals qualified to serve as directors and committee members, recommending to the Board nominees for election at our annual meetings of stockholders and recommending to the Board individuals to fill vacancies on the Board;
- making recommendations to the Board concerning the criteria for membership on the Board and the size, composition, chairmanship and compensation of the Board and its committees;
- considering whether and how it takes into account diversity in identifying nominees;
- monitoring and making recommendations to the Board regarding corporate governance matters;
- advising the Board on corporate governance matters generally;
- conducting an annual review of the performance of the Board and its committees; and
- periodically evaluating and making recommendations to the Board concerning the compensation of non-employee directors.

Our non-employee director compensation program, including the roles of members of our executive management team and outside compensation consultants in assisting with establishing non-employee director compensation, is discussed below under “Executive Compensation — Compensation of Directors.”

The objective of the Governance and Nominating Committee is that the backgrounds and qualifications of the directors as a group provide a significant breadth and diversity of experience, knowledge and abilities. In considering whether to recommend any particular candidate for inclusion in the Board’s slate of recommended nominees, the Governance and Nominating Committee applies certain criteria found in our Corporate Governance Guidelines. In particular, each nominee should possess:

- a reputation for integrity, honesty and adherence to high ethical standards;
- sound judgment and a willingness and ability to contribute positively to decision-making processes;
- a commitment to understand us and our industry and to regularly attend and participate in meetings of the Board and, as applicable, its committees;
- the interest and ability to understand sometimes conflicting interests of various constituencies, such as stockholders, employees, governmental or regulatory bodies, creditors and the general public, and to act in the interests of all stockholders; and
- no actual or apparent conflict of interest that would impair the ability to represent the interests of all stockholders and to fulfill the responsibilities of a director.

The Governance and Nominating Committee does not assign specific weights to particular criteria, and no particular criterion is a prerequisite for a nominee.

The Governance and Nominating Committee recommends to the Board individuals to be nominated for election as directors. In considering an incumbent director as a nominee, the Governance and Nominating Committee considers his or her prior contributions to the functioning of the Board and, as applicable, its committees. The Governance and Nominating Committee may also receive recommendations for nominees from members of the Board or management and may from time to time engage a third-party search firm to help identify potential nominees. If a candidate is identified, the Governance and Nominating Committee evaluates his or her qualifications and other biographical information, taking into account the backgrounds and qualifications of the continuing members of the Board and the criteria included in our Corporate Governance Guidelines. Members of the Governance and Nominating Committee and our Chief Executive Officer then interview the candidate or, if multiple candidates are identified, select candidates. Following discussion of the candidates identified and evaluated, the Governance and Nominating Committee recommends to the Board a list of nominees for election.

Audit Committee

The current members of the Audit Committee are Mr. Blixt, Dr. De Souza and Mr. Richard, with Mr. Blixt serving as chairman. The Board has determined that Mr. Richard is an "audit committee financial expert" as defined in Item 407(d)(5) of Regulation S-K.

In 2014, the Audit Committee met seven times. You can find the Audit Committee charter on the "Investor Relations" page of our website, www.targacept.com, under the "Corporate Governance" tab. The Audit Committee assists the Board in its oversight of our accounting, financial reporting and internal control functions. Some of the specific responsibilities of the Audit Committee include:

- the appointment, compensation, retention and oversight of any independent registered public accounting firm that we engage to issue an audit report, or to perform other audit, review or attest services, for our financial statements, and evaluating auditor independence;
- receiving and reviewing reports of management and the independent registered public accounting firm regarding the annual audit process, as well as the review process for our interim financial statements;
- reviewing with management significant accounting issues, policies relating to our financial statements and our cash management program;
- discussing with management and the independent registered public accounting firm our exposure to material risks and the adequacy of our risk management activities;
- reviewing management's assessment of the effectiveness of, and our independent registered public accounting firm's report on, our internal control over financial reporting;
- approving, to the extent required by applicable law or NASDAQ listing standards or by our related person transactions policy, related person transactions;
- establishing procedures for the receipt, retention and treatment of complaints regarding accounting, internal accounting controls or auditing matters;
- responding to any report of evidence of a material violation of the securities laws or breach of fiduciary duty that it receives; and
- preparing the report of the audit committee required by applicable SEC rules to be included in our annual proxy statement.

Compensation Committee

The current members of the Compensation Committee are Ms. Brown, Dr. Dunton and Mr. Richard, with Ms. Brown serving as chairperson. In 2014, the Compensation Committee met six times. You can find the Compensation Committee charter on the "Investor Relations" page of our website, www.targacept.com, under the "Corporate Governance" tab. Some of the specific responsibilities of the Compensation Committee include:

- reviewing periodically our compensation philosophy and the adequacy of compensation plans and programs for our executive officers and other employees;
- the appointment, compensation and oversight of any compensation expert, legal counsel or other adviser that the Compensation Committee determines to engage and the consideration of factors relevant to such expert's, counsel's or adviser's independence;
- reviewing the performance of our Chief Executive Officer and establishing the compensation of all of our executive officers;
- approving employment, severance and change in control agreements, and any amendments, for our executive officers;

- administering our 2006 Stock Incentive Plan and any other stock-based plans, as well as other employee benefit and incentive plans;
- assessing annually any risks associated with our compensation policies and practices;
- reviewing and discussing with management our Compensation Discussion and Analysis disclosure and formally recommending to the Board that it be included in our annual report on Form 10-K (either directly or by incorporation by reference to our annual proxy statement);
- making a recommendation to the Board with respect to the Board's recommendation to our stockholders on any proposal that our stockholders approve the compensation of our named executive officers on an advisory basis;
- making a recommendation to the Board, at least once every six years, whether to submit the compensation of our named executive officers to an advisory vote of our stockholders every one, two or three years; and
- preparing the report of the Compensation Committee required by applicable SEC rules to be included in our annual report on Form 10-K (either directly or by incorporation by reference to our annual proxy statement).

The Compensation Committee consults regularly with our Chief Executive Officer regarding our executive compensation program. Our executive compensation program, including the role of members of our executive management team and outside compensation consultants in assisting with establishing compensation, is discussed below under "Executive Compensation—Compensation Discussion and Analysis."

The Compensation Committee has the discretion to delegate any of its authority to a subcommittee. In addition, the Board has delegated to Dr. Hill, as Chief Executive Officer, the authority to grant stock options under our 2006 Stock Incentive Plan, subject to limits and other conditions specified by the Board or the Compensation Committee, the terms of that plan and applicable law. In particular, Dr. Hill does not have the authority to grant stock options to the members of our executive management committee.

Compensation Committee Interlocks and Insider Participation

None of the directors who served on our Compensation Committee during 2014, Ms. Brown, Dr. Dunton, or Mr. Richard, was an officer within the meaning of Rule 3b-2 under the Securities Exchange Act of 1934, or the "*1934 Act*," or employee of ours during or prior to fiscal 2014 or had any relationship during fiscal 2014 that would be required to be disclosed pursuant to Item 404 of Regulation S-K. None of our executive officers served during fiscal 2014 as a member of the board of directors or compensation committee, or other committee serving an equivalent function, of any entity that has an executive officer who serves on our Board or Compensation Committee.

Technology and Innovation Committee

The current members of the Technology and Innovation Committee are Dr. De Souza and Dr. Dunton. In 2014, the Technology and Innovation Committee met three times. You can find the Technology and Innovation Committee charter on the "Investor Relations" page of our website, www.targacept.com, under the "Corporate Governance" tab. Specific responsibilities of the Technology and Innovation Committee include:

- assessing information provided by management regarding our research and development activities, initiatives and programs and periodically reporting to the Board on such matters;
- reviewing periodically and reporting to the Board on our research and development strategies; and
- discussing and reporting to the Board on significant emerging technology issues and trends relevant to our areas of scientific or therapeutic focus.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the 1934 Act requires our directors and executive officers and the holders of more than 10% of our common stock to file with the SEC initial reports of ownership of our common stock and other equity securities on a Form 3 and reports of changes in such ownership on a Form 4 or Form 5. Officers, directors and more than 10% stockholders are required by SEC rules to provide us with copies of all Section 16(a) forms they file. Based solely upon a review of the copies of such forms furnished to us for the year ended December 31, 2014, and information provided to us by our directors and executive officers required to file the reports, we believe that all forms required by Section 16(a) to be filed in 2014 were filed on a timely basis.

The Board's Role in Risk Oversight

The Board is involved in our risk oversight in multiple ways. For example, in determining whether and under what circumstances we would engage in financing transactions or enter into strategic alliances and collaborations, the Board is involved in our management of risks related to our financial condition or of the risks inherent in drug development and commercialization. In addition, the Board routinely receives at its meetings business updates from various members of management. These updates may identify matters that have emerged within that member of management's scope of responsibility that involve operational, financial, legal or regulatory risks and, in these cases, the Board's risk oversight role is to provide guidance to management.

The Board also exercises a risk oversight role through its committees, each of which is structured to include only independent directors and is separately chaired. Each committee provides regular reports of its actions to the full Board. In particular, as noted above, the Audit Committee is responsible for discussing our exposure to material risks and the adequacy of our risk management activities with management and our independent registered public accounting firm. The Audit Committee's primary emphasis is financial risk, including our internal control over financial reporting, and it reviews information received from our independent registered public accounting firm as to the effectiveness of our internal control over financial reporting and from other third parties in support of management's assessment of the effectiveness of our internal control over financial reporting. The Audit Committee also oversees our management of exposure to certain financial risks through its periodic review of our investment policy and the allocation of our investment portfolio. Additionally, the Audit Committee seeks assurance from our insurance broker periodically that it considers our various insurance coverages, including clinical trial-related insurance, to be appropriate and generally consistent with its other clients in our industry with similar profiles. Beyond the Audit Committee, the Compensation Committee is responsible for considering whether our compensation programs and practices are reasonably likely to have a material adverse effect on us.

Corporate Governance Guidelines

The Board has adopted Corporate Governance Guidelines that address a number of matters applicable to directors, including, as examples, independence, qualification standards, compensation, conduct and frequency of meetings, executive sessions and management evaluation and succession. You can find our Corporate Governance Guidelines on the "Investor Relations" page of our website, www.targacept.com, under the "Corporate Governance" tab.

Code of Business Conduct and Ethics

The Board has also adopted a Code of Business Conduct and Ethics applicable to all Targacept personnel, including our directors and executive officers. The Code of Business Conduct and Ethics is designed, among other things, to reflect our commitment to fair and ethical conduct and compliance with law. You can find the Code of Business Conduct and Ethics on the "Investor Relations" page of our website, www.targacept.com, under the "Corporate Governance" tab. To the extent permissible under applicable law, the rules of the SEC or NASDAQ listing standards, we also intend to post on our website any amendment to the Code of Business Conduct and Ethics, or any grant of a waiver from a provision of the Code of Business Conduct and Ethics, that requires disclosure under applicable law, SEC rules or NASDAQ listing standards.

Item 11. Executive Compensation

Compensation of Directors

Under our non-employee director compensation program as in effect for fiscal 2014:

- each non-employee director who is first elected or appointed to the Board receives a nonqualified option to purchase 25,000 shares of common stock on the fifth business day after his or her election or appointment (an "*Initial Option*");
- each non-employee director who is first elected or appointed as chairman of the Board receives an additional Initial Option to purchase 10,000 shares of common stock on the fifth business day after his or her election or appointment;
- each non-employee director receives on an annual basis a nonqualified option to purchase 12,500 shares of common stock or, in the case of the chairman of the Board, an option to purchase 17,500 shares of common stock (an "*Annual Option*");
- each non-employee director receives an annual cash retainer of $35,000 payable in quarterly installments ($55,000 in the case of the chairman of the Board); and
- each member of the Audit Committee receives an additional annual cash retainer of $10,000 ($20,000 in the case of the chairman of the committee); each member of the Compensation Committee receives an additional annual cash retainer of $7,500 ($15,000 in the case of the chairman of the committee); and each member of the Governance and Nominating Committee and each member of the Technology and Innovation Committee receives an additional annual cash retainer of $5,000 ($10,000 in the case of the chairman of each committee).

Each Initial Option vests and becomes exercisable (i) with respect to one-third of the shares subject to the Initial Option, on the earlier of the first anniversary of the grant date or the last business day before the annual meeting of stockholders that occurs in the next calendar year, provided that the recipient director remains in service on the vesting date, and (ii) with respect to the remaining two-thirds of the shares subject to the Initial Option, on a pro rata quarterly basis over the next two years, if the recipient director remains in service as a director during such periods.

Each Annual Option is granted on the fifth business day after the date of the stockholders meeting at which directors are elected, if the recipient director remains in service as a director as of the grant date, and vests and becomes exercisable in full on the earlier of the first anniversary of the grant date or the last business day before the annual meeting of stockholders that occurs in the next calendar year, if the recipient director remains in service as a director on the vesting date.

The exercise price per share for both Initial Options and Annual Options is equal to the fair market value of our common stock on the date the option is granted, as determined in accordance with the 2006 Stock Incentive Plan (or any successor plan). The "option period" for both Initial Options and Annual Options is 10 years. The post-termination exercise periods for both outstanding and future non-employee director options, to the extent vested as of the director's termination date, is the earlier of the third anniversary of the director's termination date or the end of the option period (unless the director was terminated for cause, in which case the option would terminate as of the director's termination date). Unvested options continue to be forfeited as of the director's termination date.

Process for Determining Director Compensation

The Governance and Nominating Committee periodically engages a third party consultant to assemble director compensation data for our then-current peer group to evaluate the competitiveness of our non-employee director compensation program. Based on the findings, the Governance and Nominating Committee considers whether to recommend that the Board modify our non-employee director compensation program.

2014 Director Compensation Table

The following table contains information regarding total compensation paid to members of the Board (other than Dr. Hill) for service in the fiscal year ended December 31, 2014. For information regarding compensation paid to Dr. Hill, see the "Summary Compensation Table" on page 123.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($) (1)	Restricted Stock ($) (4)	Total ($)
Charles A. Blixt	60,000	44,125	20,300	124,425
Julia R. Brown	55,000	44,125	20,300	119,425
Errol B. De Souza	60,000	44,125	20,300	124,425
Alan W. Dunton	52,500	44,125	20,300	116,925
John P. Richard(2)	72,500	97,275	20,300	190,075

(1) The amounts in this column reflect the aggregate grant date fair value of stock options granted during fiscal 2014 calculated in accordance with ASC 718, disregarding the potential for forfeitures. The assumptions that we used to calculate these amounts are discussed in Note 9 to our audited financial statements included elsewhere in this Annual Report on Form 10-K. All of these stock options were granted on June 12, 2014 at an exercise price of $4.29 per share, the closing price of our common stock on the NASDAQ Global Select Market on the grant date, with the exception of Mr. Richard (see note (3)).

(2) On January 8, 2014 Mr. Richard was granted an option to purchase 10,000 shares of the Company's common stock with an exercise price of $4.31 per share, the closing price of our common stock on the NASDAQ Global Select Market on the grant date. This grant was in accordance with the terms of our 2006 Plan following his appointment as Chairman of the Board and is scheduled to vest quarterly beginning March 31, 2014 and vesting in full on January 8, 2017.

(3) The amounts in this column reflect the aggregate grant date fair value of restricted stock granted during fiscal 2014 calculated in accordance with ASC 718, disregarding the potential for forfeitures. The assumptions used to calculate these amounts are discussed in Note 9 to our audited financial statements included in this Annual Report on Form 10-K. All of these restricted stock awards were made on December 11, 2014. The closing price of our common stock on the NASDAQ Global Select Market on the award date was $2.47.

Outstanding Equity as of December 31, 2014

The table below sets forth the aggregate number of shares underlying outstanding stock options held as of December 31, 2014 by individuals who served on our Board during fiscal 2014.

Name	Stock Options
Charles A. Blixt	70,000
Julia R. Brown	53,400
Errol B. De Souza	85,000
Alan W. Dunton	72,000
John P. Richard(1)	65,000

(1) In 2013, Mr. Richard was elected non-executive chairman of the Board effective January 1, 2014. In connection with his appointment, and in accordance with the 2006 Plan and our non-employee director compensation program as described starting on page 106, Mr. Richard received on January 8, 2014 an Initial Option to purchase 10,000 shares of our common stock.

Compensation Discussion and Analysis

The Compensation Discussion and Analysis ("CD&A") explains the key elements of our executive compensation program and compensation decisions for our named executive officers, which we refer to as NEOs.

The Compensation Committee of our Board of Directors, with input from its independent compensation consultant and our President and Chief Executive Officer, oversees this program and determines compensation for our NEOs.

For the fiscal year ended December 31, 2014, our NEOs are:

Stephen A. Hill	President and Chief Executive Officer
Alan A. Musso	Former Senior Vice President, Finance and Administration, Chief Financial Officer and Treasurer (resigned in 2014)
Mauri K. Hodges	Vice President, Finance and Administration, Chief Financial Officer and Treasurer (interim appointment in 2014)
Patrick C. Rock	Senior Vice President, General Counsel and Secretary
Steven M. Toler	Vice President, Clinical Pharmaceutical Sciences
Scott N. Cullison	Vice President, Business Development

I. Executive Summary

The Compensation Committee is committed to designing compensation policies and practices that promote pay for performance and use key corporate performance measurements that provide an alignment between the interests of our NEOs and our stockholders. This executive summary provides an overview of our 2014 company performance, compensation framework and pay actions, targeted total direct compensation, pay for performance and governance practices.

2014 Corporate Developments

- We progressed our business development efforts, which focused on external, non-nicotinic strategic opportunities and recently culminated in our announcement, on March 5, 2015, of our entry into the definitive Merger Agreement with Catalyst, pursuant to which a wholly-owned subsidiary of ours will be merged with and into Catalyst, with Catalyst continuing as the surviving corporation. Under the terms of the Proposed Merger, the security holders of Catalyst will become the majority owners of the outstanding shares of common stock of the combined company.
- We ended the fiscal year with $110.8 million in cash and investments, which we expect to be sufficient to meet our reduced operating requirements for several years, or, if we are successful in consummating the proposed merger, we believe we have sufficient capital to fund the operations of the combined company through projected milestones that have potential for value creation.
- We initiated and maintained on-schedule enrollment of a Phase Ib exploratory trial as a treatment for diabetic gastroparesis.
- We completed our Phase 2b monotherapy trial of TC-1734 as a treatment for mild to moderate Alzheimer’s disease. In the trial, TC-1734 did not meet the objective of showing superiority to donepezil, the marketed medication most often prescribed for Alzheimer’s disease, after 52 weeks of treatment. Based on these results, the Company decided not to pursue further development of TC-1734.
- We completed our Phase 2b trial of TC-5214 as a treatment for overactive bladder (OAB). In the trial, the high dose of TC-5214 demonstrated mixed results on the co-primary endpoints and did not reach statistical significance on episodes of urinary incontinence per 24 hours after 12 weeks of treatment. Based on these results, the Company decided not to pursue further development of TC-5214 in OAB.
- AstraZeneca AB, or AstraZeneca, terminated its 2005 collaborative research and license agreement with us, which was initially focused in cognitive disorders, effective January 2015. All remaining rights and licenses to compounds granted by us under the agreement to AstraZeneca terminated and reverted to us, including the rights and license relating to our product candidate TC-6683 (also known as AZD1446).

- Changes in our senior leadership included:
  - The assumption by John P. Richard of his role as our new Chairman of the Board effective January 1, 2014.
  - The departure of our Vice President, Clinical Development and Regulatory Affairs, David A. Hosford, M.D. Ph.D., effective September 21, 2014.
  - The departure of our Senior Vice President, Finance and Administration, Chief Financial Officer and Treasurer, Alan A. Musso, effective November 18, 2014.
  - The appointment of Mauri K. Hodges to serve on an interim basis as the Company's Vice President, Finance and Administration, Chief Financial Officer and Treasurer, effective December 11, 2014.

2014 Compensation Framework

The Compensation Committee is responsible for, among other things, establishing the compensation of our executive officers, including our NEOs. The compensation of our NEOs for the fiscal years ended December 31, 2014, 2013, and 2012 is set forth in the Summary Compensation Table on page 123 of this Annual Report on Form 10-K. The Compensation Committee has designed our executive compensation program to achieve three primary objectives:

1) remain competitive with comparable companies in our industry in order to attract and retain talented individuals to contribute to our long-term success;

2) provide substantial incentive to achieve our business objectives and build stockholder value, thereby aligning the interests of our executives with the interests of our stockholders and paying for performance; and

3) achieve internal pay equity within our executive management team.

In furtherance of these objectives, our executive compensation program is and has historically been comprised principally of three elements:

- base salary, which does not vary based on our performance or results;
- eligibility for an annual cash bonus under an annual cash incentive award program, which incentivizes and rewards the achievement of pre-defined corporate performance objectives or other accomplishments that the Compensation Committee believes advance our business interests and contribute to our success and the creation of stockholder value; and
- stock-based awards, which align the interests of our executive officers with the interests of our stockholders and play an important role as a recruitment and retention tool as we compete for talent with companies that in some cases are larger, are at a more advanced stage or offer potential for high growth.

2014 Compensation Committee pay actions under this program are summarized below.

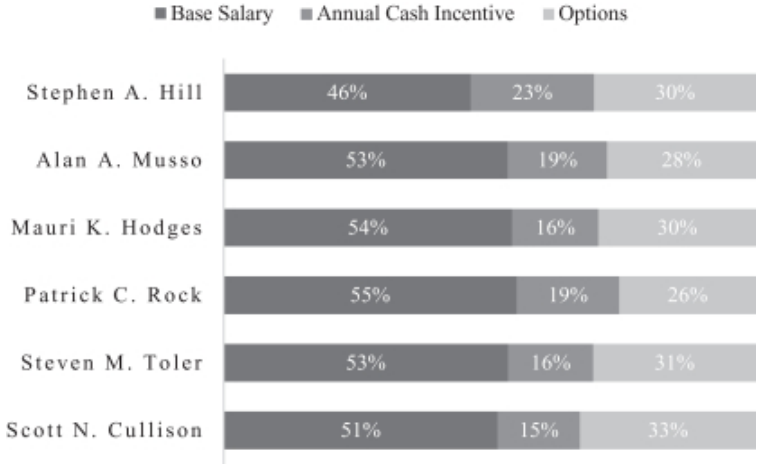
Compensation Element	Rationale	Compensation Committee Actions
Base Salary	*Provides a degree of financial certainty and stability.* *Recognizes competitive market conditions for top talent and/or rewards individual performance through periodic increases.*	Approved base salary increase of 5% for Mr. Cullison and 3% for the remaining NEOs, effective January 1, 2014. Approved an interim base salary increase of 21.4% for Mauri K. Hodges in recognition of her December 11, 2014, appointment to serve on an interim basis as Chief Financial Officer.
Annual Cash Incentive	*Motivates NEOs to meet or exceed our annual corporate performance objectives and positions the Company for longer-term success.*	In January 2015, approved 52.9% of target payout under the 2014 program after determining achievement of specified criteria for clinical operations (30%), financial (15%), and leadership (7.9%) objectives.
Long-Term Incentive	*Uses equity-based awards (e.g., time-vested stock options) to (i) motivate behavior intended to result in stock price appreciation, (ii) focus NEOs on executing the Company's long-term strategy, (iii) align NEO and stockholder interests, and (iv) attract and retain talent.*	Approved the grant of incentive stock options to substantially all employees. Dr. Hill was granted 175,000 options, Mr. Musso was granted 55,000 options, Mr. Rock and Dr. Toler each were granted 45,000 options, and Ms. Hodges and Mr. Cullison each were granted 40,000 options. The options vest quarterly over four years and have an exercise price of $4.74 per share, the closing price of our common stock on the grant date. Granted as a retention incentive, and in lieu of 2015 stock-based awards, restricted stock to the NEOs and other select, key personnel. Dr. Hill was granted 175,000 shares, Mr. Musso was granted 55,000 shares, Mr. Rock and Dr. Toler each were granted 45,000 shares, and Ms. Hodges and Mr. Cullison each were granted 40,000 shares. The restricted stock vests in two equal annual installments of 50% on December 31, 2015 and 50% on December 31, 2016. Mr. Musso's restricted shares were forfeited upon his resignation.

2014 Targeted Total Direct Compensation

The Compensation Committee seeks to balance the cash-versus stock-based elements and the fixed- versus variable incentive-based elements of our executive compensation program. Toward that end, with respect to each of our NEOs, the Compensation Committee generally aims for annual base salary, annual cash incentive compensation and annual equity grants to be at or near the 50 th percentile for the comparable position or level of

responsibility (e.g., chief executive, senior vice president, vice president) for companies in our peer group. However, the Compensation Committee does not rely solely on peer group data and is not bound by and does not rigidly adhere to a formulaic application of a predetermined percentile level within the peer group in determining compensation for our NEOs.

The table below shows the percentage breakdown of targeted total direct compensation ("TDC") for each NEO in fiscal 2014 (consisting of base salary, target annual cash incentive, and target long-term incentive calculated using the target annual salary, without adjustment for actual time worked during 2014, and valuing time-vested stock options as described in note 3 to the Summary Compensation Table on page 123). A significant portion of our NEOs' targeted TDC is variable, at-risk pay in the form of annual and long-term incentives; namely, 54% for our CEO and 45% to 48% for our other NEOs.



Governance Practices

The Company has several governance practices that it believes reinforce the soundness of our compensation programs:

- The Compensation Committee is made up entirely of independent directors meeting the enhanced independence requirements under the NASDAQ listing standards;
- The Compensation Committee retains an independent compensation consultant working under the exclusive direction of the Committee;
- A change in control of the Company, alone, would not give rise to severance payments under any of our employment agreements;
- None of our employment agreements provide for an excise tax gross up; and
- Our insider trading policy prohibits trading in derivative instruments involving our securities, a practice often referred to as "hedging."

Stockholder Say-on-Pay

In 2014, we sought an advisory vote from our stockholders regarding our executive compensation program. Over 97% of the votes cast supported the program. The Compensation Committee considers the results of the advisory vote as it completes its annual review of each pay element and the compensation packages provided to our NEOs and other executives. Given the significant level of stockholder support received for this matter in

2014, the Committee concluded that the objectives of our executive compensation program are appropriate for a company of our size and stage of development and that our compensation policies and practices help meet those objectives. In addition, the Committee believes the program achieves an appropriate balance between fixed and variable incentive compensation, encourages long-term retention, and promotes alignment between the interests of our NEOs and stockholders.

Accordingly, the Committee determined not to make any significant changes to our executive compensation program as a result of the vote in 2014. The Committee will continue to consider the outcome of our say-on-pay votes and our stockholder views in making future compensation decisions for the NEOs and other executives.

II. Objectives of Executive Compensation

The primary objectives of our executive compensation program as it relates to our NEOs are described below.

Remain competitive with comparable companies in our industry in order to attract and retain talented individuals to contribute to our long-term success.

The Compensation Committee believes that our long-term success depends substantially on our ability to attract and retain highly qualified, experienced individuals to serve as our executive officers. We compete for skilled executives in our industry, often with companies that are larger, are at a more advanced stage of drug development or offer potential for high growth. As a result, the Compensation Committee believes that the total compensation package for each of our NEOs must be at least competitive with comparable companies in our industry. Also, because we compete on a national scale for executive talent, the Compensation Committee assesses the competitiveness of our compensation in the United States as a whole, rather than regionally.

In furtherance of this objective, the Compensation Committee generally aims for annual base salary and total target cash compensation (which takes into account base salary and target cash incentives) for each of our NEOs to be at or near the 50th percentile for the comparable position for comparable companies in our industry. However, for each of our NEOs, the targeted percentile represents a key data point but is not the sole factor in compensation determinations.

Provide substantial incentive to our NEOs to achieve our business objectives and build stockholder value, thereby aligning their interests with the interests of our stockholders and paying for performance.

The Compensation Committee believes it is important for our compensation program to align the interests of our NEOs with the interests of our stockholders to ensure our NEOs are invested in our long-term success and our goal of building stockholder value. To accomplish this alignment of interests, the compensation of each NEO includes, in addition to base salary, the opportunity to receive an annual cash incentive bonus and eligibility for the grant of stock-based awards, which have historically been stock options.

The annual cash incentive bonus is intended to make a substantial portion of each NEO’s potential total annual compensation contingent on the achievement of corporate performance objectives that the Compensation Committee believes advance our business interests and contribute to our future success and the building of stockholder value. Accordingly, the dollar amount of annual cash incentive bonuses paid to our NEOs depends heavily on the extent to which the performance objectives are achieved. The Compensation Committee believes that stock option grants also serve to align the interests of our NEOs with the interests of our stockholders. Because the exercise price of each stock option granted by the Compensation Committee is at least equal to the fair market value of the underlying stock as of the date of grant, the stock option provides a financial reward for the NEO only if the market price of our common stock increases after the grant date.

Together, these components of our executive compensation, which are described in more detail below under "Elements of and Rationale for Executive Compensation," are designed to incentivize our NEOs to work towards the achievement of our objectives in furtherance of our long-term success.

Achieve internal pay equity within our executive management team.

The Compensation Committee believes it is important that our executive compensation structure promote a cohesive management team and that our success, both in the short-term and the long-term, depends on interdisciplinary contribution across the team. Accordingly, the Committee seeks to achieve internal equity in compensating our NEOs. In particular, our goal is that the compensation paid to our NEOs be equitable and commensurate with his or her position, experience, responsibilities and contributions to our overall performance and achievements and the compensation paid to other NEOs.

Elements of and Rationale for Executive Compensation

Base Salary

Base salary for each of our NEOs is determined at or about the beginning of each year, and may in some cases be re-evaluated during the year, taking into account:

- the individual responsibilities of the NEO;
- an assessment of the NEO's individual performance, development and contributions to the achievement of our corporate performance objectives or otherwise to our achievements during the preceding year, as well as expected future contributions;
- base salary data for our peer group or, where publicly available data for a particular position in our peer group is limited, other relevant comparables;
- the historical base salary of the NEO during his or her employment with us, including the amount and timing of previous adjustments; and
- the base salaries of our other NEOs.

Annual Cash Incentive Bonus

Each of our executive officers, including our NEOs, participates in an annual cash incentive program. Under this program, each executive officer is eligible to receive an annual cash bonus in an amount based on:

- a target bonus percentage of his or her base salary, which in some cases is subject to a minimum percentage specified in the executive officer's employment agreement; and
- our satisfaction of target or, in some cases, threshold or maximum criteria for achieving pre-defined corporate performance objectives, and in some cases other corporate accomplishments, that the Compensation Committee believes advance our business interests and contribute to our future success and the building of stockholder value.

The Compensation Committee believes that, as a clinical-stage biopharmaceutical company, our performance is measured generally by our ability to advance product candidates into and through the clinic towards the market, to attract collaborators with particularized expertise and substantial resources, to secure capital to fund our programs and to operate our business efficiently. Accordingly, our specified performance objectives have typically related to one or more of the following areas—the progression or advancement of our product candidates, development program execution or outcomes, the enhancement of our product portfolio, business development, alliance management, regulatory operations, capital or operational efficiency, human resources matters and employee and investor communications matters.

Under our annual cash incentive award program, at or about the beginning of each fiscal year, the Compensation Committee establishes corporate performance objectives for that year and ascribes a percentage weighting to each performance objective. Following the end of the fiscal year, the Compensation Committee determines the achievement level of the program for that year. In determining the achievement level, the Compensation Committee (i) calculates the weightings ascribed to those specified performance objectives that have been met, (ii) determines whether to award all or any portion of the weighting ascribed to any performance objective that has not been met (i.e., because the objective was achieved only in part or on a delayed basis, because a strategic change occurred during the year making the objective unachievable, or for any other reason), and (iii) determines whether to make any adjustment based on other corporate accomplishments or events that occurred during the year.

Beginning with fiscal 2013, the mechanics of the program call for the Compensation Committee to establish for each performance objective at the beginning of the year target criteria for achievement and, in some cases, threshold and/or maximum criteria for achievement. For each performance objective that has a threshold criterion, the weighting for the objective is not credited if the threshold criterion is not met and 50% of the weighting for the objective is credited if the threshold (but not the target or, if applicable, maximum) criterion is met; if the target (but not the maximum, if applicable) criterion is met for a performance objective, 100% of its weighting is credited; and for each performance objective that has a maximum criterion, 150% of the weighting for the objective is credited if the maximum criterion is met; in each case subject to any discretionary adjustments that may be made by the Compensation Committee. As a result, the maximum weighting for all of the performance objectives in the aggregate can be up to 150% of the target.

Because the Compensation Committee believes the achievement of our objectives and our overall success require interdisciplinary contribution across our executive management team and that the achievement of, or failure to achieve, any particular objective reflects the performance of all of the members of our executive management team collectively, 100% of the annual cash bonus paid to our NEOs and the other members of our executive management team is based on the achievement level determined by the Compensation Committee for the program and not on individual performance. Accordingly, the amount of each of these participants' (including each NEO's) cash incentive bonus for a particular fiscal year is determined by multiplying his or her base wages received for that year by his or her assigned target bonus percentage and then by the achievement level for the program determined by the Compensation Committee for that year. All of our other employees also participate in the incentive award program. For each of these employees, 50% of the annual cash bonus is based on the achievement level determined by the Compensation Committee as described above and the other 50% is based on an assessment of individual performance.

The Compensation Committee believes that the annual cash incentive award program furthers our executive compensation objectives by:

- focusing our NEOs' attention directly on, and incentivizing them to achieve, performance objectives that are designed to contribute to our future success and to building stockholder value;
- making a substantial portion of the annual compensation for our NEOs contingent on achievement of the specified criteria, thereby aligning their interests with the interests of our stockholders and paying for performance; and
- balancing the fixed cash compensation that, in some cases, may be lower than our NEOs could potentially obtain at larger or more mature companies with which we may compete, thereby better enabling us to attract and retain executive talent.

Stock-Based Awards

Our NEOs, other executive officers, other employees, and directors are also eligible to be granted stock options or other stock-based awards under our 2006 Stock Incentive Plan, as amended and restated, which is referred to in this Annual Report on Form 10-K as the "*2006 Plan*" or the "*Plan*."

The Compensation Committee has historically awarded stock options as our standard form of stock-based compensation due primarily to the expectation and familiarity of stock options as part of compensation packages for personnel in our industry and to enable greater flexibility for our employees in tax planning. All stock options granted to our NEOs and other employees in 2014 have been designated as incentive options, subject to applicable limits imposed by applicable tax law or regulation. Incentive options provide the potential for more favorable tax treatment for employees than nonqualified options.

The granting of stock options to our NEOs furthers our executive compensation objectives by:

- aligning the interests of the NEO with the interests of our stockholders, inasmuch as the NEO only receives a financial reward if we perform such that the market price of our common stock increases after the grant is made (grants of stock options are priced at no less than fair market value), and the financial reward would be no greater than that experienced by any third party who purchased shares of our common stock on the grant date at a price equal to that day's closing price; and

- serving as a powerful retention tool because stock options granted to our NEOs typically have vesting schedules that extend over a four-year period.

We do not have any program, plan or practice to select dates for stock options to be granted in coordination with the release of material non-public information. The Compensation Committee generally considers making stock option grants in January of each year, when the extent to which we have achieved our corporate performance objectives for the preceding year is known, so as to coordinate consideration of stock-based compensation with consideration of the other elements of our executive compensation. However, the Committee sometimes grants stock options later in the year if circumstances warrant.

In 2014, the Compensation Committee for the first time granted restricted stock to our NEOs and other select, key personnel, which brings our stock-based compensation practices into closer alignment with those of our peer group.

III. Compensation Decision-Making Process

Role of the Compensation Committee in the Compensation Process

The Compensation Committee is responsible for establishing the components and amounts of compensation for each of our executive officers, including our NEOs. The current members of the Committee are Ms. Brown, Dr. Dunton and Mr. Richard, with Ms. Brown serving as chairperson.

The Compensation Committee works closely with its independent consultant and meets regularly, including in executive session without management present, to make decisions on our executive compensation program and on the compensation of our executives. The Committee reviews a variety of market data and information, including Company, peer group, and industry compensation information. The Committee Chair reports the actions of the Compensation Committee to the Board at each regular meeting.

The Committee's responsibilities include reviewing and approving our:

- Compensation peer group;
- Compensation philosophy and objectives;
- Amount and form of executive compensation (e.g., pay increases, equity grants);
- CEO's performance and compensation;
- Annual cash incentive plan metrics and goals and achievement of goals;
- Employment, severance, and change in control agreements for our chief executive officer and other executive officers; and

- Annual CD&A disclosure, which the Committee recommends to the Board for inclusion in our annual report on Form 10-K (either directly or by incorporation by reference to our subsequently filed proxy statement).

Role of the Independent Compensation Consultant

The Compensation Committee's charter authorizes it to retain outside advisors, including independent compensation experts, as it deems appropriate to advise it in connection with its responsibilities and to approve related fees and engagement terms. Any advisor retained reports directly to the Compensation Committee. The Committee has retained the services of Radford, an Aon Hewitt company ("Radford"), as its independent compensation consultant since the third quarter of 2011. Radford performs the following responsibilities:

- Attends or participates by phone in Committee meetings, including non-management executive sessions, when requested by the Committee;
- Provides independent advice to the Committee on current trends and best practices in compensation design and program alternatives, and advises on plans or practices that may improve effectiveness;
- Provides and discusses peer group and survey data for competitive comparisons and, based on this information, offers independent recommendations on CEO and NEO compensation;
- Reviews the CD&A, compensation tables, and other compensation-related disclosures in our annual report on Form 10-K or proxy statements;
- Offers recommendations, insights and perspectives on compensation-related matters;
- Evaluates and advises the Committee regarding enterprise and related risks associated with executive compensation components, plans and structures; and
- Supports the Committee to ensure executive compensation programs are competitive and align the interests of our executives with those of our stockholders.

A Radford representative participated throughout 2014 in several Compensation Committee meetings and consulted frequently with the Committee chairperson. Representatives from Radford reviewed this CD&A and the compensation-related tables contained in this Annual Report on Form 10-K.

In 2014, our management engaged affiliates of Aon Corporation, Radford's parent company, to provide retirement benefit plan and insurance brokerage advisory services. We paid $12,967 in professional fees for the retirement benefit plan services in 2014. For the insurance brokerage services, Aon is paid by third party insurance companies and not by us. Those third party payments amounted to less than 1% of Aon's 2014 revenues. The Compensation Committee has considered various factors, including our engagements of Radford affiliates, and does not believe that Radford has a conflict of interest in fulfilling its engagement to the Compensation Committee.

Role of the CEO in Compensation Decisions

As described above, on an annual basis for each of our executive officers, including our NEOs, the Compensation Committee determines base salary and considers whether to make any adjustment in target bonus percentage. As part of the process, the Compensation Committee's consultant or, if none is engaged for any particular year and our CEO or the chairperson of the Compensation Committee so directs, our Controller assembles: a tally sheet for each executive officer; data showing the relationship of the executive officer's compensation to the compensation of our other executive officers; and base and total compensation data for executives in comparable positions in our then-current peer group or comparable companies in our industry based on number of employees as reflected in the applicable Radford Life Sciences survey. In addition, where the Compensation Committee has engaged a consultant, our Controller or Human Resources function may provide

information requested by the consultant, such as job codes used to correlate our executive officers with positions in the Radford survey as well as burn rate and overhang calculations.

For each executive officer other than himself, Dr. Hill makes a recommendation regarding base salary and, in some cases, target bonus percentage to the Compensation Committee, taking into account the factors discussed above. At or about the same time, Dr. Hill proposes for consideration by the Compensation Committee corporate performance objectives and, beginning with fiscal 2013, associated threshold, target or maximum achievement criteria, determined in consultation with our executive management team, for the annual cash incentive award program. He then participates in the meeting at which the Compensation Committee determines the base salary and target bonus percentage for our executive officers and the performance objectives and associated criteria for the incentive award program. No other member of management is present for the portion of this meeting during which these matters are finally determined. As required by the Compensation Committee's charter, Dr. Hill is excused from the portion of the meeting during which his performance is considered and his base salary and target bonus percentage are finally determined.

With respect to the granting of stock based awards, the Compensation Committee has historically determined the period over which the shares reserved under our equity plans are intended to be available for consideration for potential issuance. In making that determination, the Compensation Committee takes into account market data relating to burn rate for our peer group, overall employee ownership, dilutive effects and the role of stock-based awards in meeting the objectives of our compensation program. Based on the guidance received from the Compensation Committee, Dr. Hill may from time to time propose that the Compensation Committee consider the grant of stock based awards. In that event, Dr. Hill typically recommends a number of awards proposed to be granted to each of our executive officers based on our executive compensation objectives and the factors discussed above. The Compensation Committee then makes the determination whether to grant any or all of the awards and, if it determines to make a grant, the individuals who will receive an award, the number of shares to be subject to such award and any particular terms to be applicable to such award. As discussed above, the Compensation Committee has determined that, as a general matter, it will consider making stock option grants as part of the annual performance assessment process in or about January of each year.

In addition, Dr. Hill may from time to time propose that the Compensation Committee consider granting stock-based awards to NEOs and other key personnel as a retention incentive where circumstances warrant.

IV. Compensation Competitive Analysis

Benchmarking the compensation that we pay to our executives against compensation paid to executives in comparable positions at comparable companies helps the Compensation Committee assess market competitiveness and meet our objectives. Accordingly, in determining the compensation for our NEOs for any particular year, the Compensation Committee utilizes compensation data and information for drug development companies it believes have profiles sufficiently similar to ours so as to constitute an appropriate peer group. When selecting companies to include in the peer group, the Compensation Committee has considered a variety of factors, including stage of development, market capitalization, company size and, in some cases, company location or various financial metrics. The Compensation Committee does not emphasize revenue when selecting a peer group because clinical-stage companies typically do not have product revenue. Once the peer group is selected, the Compensation Committee benchmarks various elements or measures of our executive compensation against the peer group. Where, for any particular position, the peer group does not provide sufficient information to provide an appropriate benchmark, the Compensation Committee utilizes data for the position from a broader market survey of companies considered generally similar to us.

The Compensation Committee currently targets the 50th percentile of our peer group for the corresponding position or level of responsibility, subject to discretionary consideration of individual or company performance or other case-by-case circumstances as the Compensation Committee considers appropriate.

The Compensation Committee periodically considers the continued appropriateness of the peer group used to benchmark our executive compensation. Based on the recommendation of Radford, the Committee substantially modified the peer group in 2012, and apart from removing one company due to insolvency, the Committee left the peer group unchanged in 2013. Recognizing our continuing clinical setbacks and the need for stability in our compensation program as we reassessed our strategic direction, the Committee decided in 2014 to defer reviewing the appropriateness of the peer group until 2015.

Our current peer group is comprised of the following 14 companies: Alimera Sciences, Inc.; Amicus Therapeutics, Inc.; Array Biopharma Inc.; BioCryst Pharmaceuticals, Inc.; Celldex Therapeutics, Inc.; Cytokinetics, Incorporated; Infinity Pharmaceuticals, Inc.; Keryx Biopharmaceuticals, Inc.; Omeros Corporation; OncoGenex Pharmaceuticals, Inc.; Sangamo BioSciences, Inc.; Sunesis Pharmaceuticals, Inc.; Synta Pharmaceuticals Corp.; and XenoPort, Inc.

V. Fiscal 2014 Compensation

Decision to Pay Each Element and Determination of Amounts for 2014

In determining the elements and amounts of compensation to be paid to each of our NEOs, the Compensation Committee reviews each NEO's historical compensation, utilizing executive compensation statements, or tally sheets, that include information on various aspects of current and historical compensation to facilitate its review.

Base Salary

In January 2014, the Compensation Committee approved the following increases in the base salaries for our NEOs with effect from January 1, 2014:

Named Executive Officer	($) 2013 Base Salary	($) 2014 Base Salary	(%) Increase
Stephen A. Hill	500,000	515,000	3
Alan A. Musso	343,417	353,720	3
Patrick C. Rock	316,000	325,480	3
Steven M. Toler	257,500	265,225	3
Mauri K. Hodges	240,000	247,200	3
Scott N. Cullison	200,000	210,000	5

The Committee based its approval of these changes on a review of peer group benchmarking data, individual performance, skills, criticality of position, and a need to maintain market competitiveness. In December 2014, the Compensation Committee approved an interim annual base salary increase of $52,800 for Ms. Hodges effective November 21, 2014, in recognition of the added responsibilities that accompanied her appointment by our Board of Directors to serve on an interim basis as Vice President, Finance and Administration, Chief Financial Officer and Treasurer, following the November 18, 2014, resignation of Alan M. Musso. This interim salary approximates the 25th percentile of base salaries for top financial executives in our peer group.

Cash Incentive Bonus

In January 2014, the Compensation Committee established performance objectives, associated weightings, and criteria for measuring achievement under our annual cash incentive award program for fiscal 2014.

Objectives	Target*	Weighting
Clinical Science	Positive top-line results in our Phase 2b trial of TC-5214 in overactive bladder	30%
Clinical Operations	All ongoing clinical programs to be completed within three months of plan, within 2% of budget, and with no meaningful quality issues at year-end	20%
Portfolio Enhancement	Supplement existing pipeline with a Phase 2b or later stage asset by year-end 2014 that offers meaningful value inflection point by year-end 2015	30%
Financial	Complete all planned activities within budget leaving at least $100M in cash and investments at year-end	10%
Leadership	Achieve grand mean employee engagement score of 4.5 or greater on Gallup Company Survey	10%

* *Target criteria are those used for assessing baseline achievement (i.e., 100%) of a specific objective. All objectives also have threshold (50%) and maximum (150%) criteria parameters.*

In January 2015, the Compensation Committee determined that the achievement level to be applied under our incentive award program for fiscal 2014 was 52.9% of target. In setting the achievement level, the Compensation Committee made the following performance determinations:

- The TC-5214 trial results did not meet the primary endpoint, thereby failing to satisfy the target criterion (0% of weighting, or 0% of target);
- All 2014 clinical programs were on or ahead of schedule, within budget and executed with no meaningful quality issues, thereby satisfying the maximum criterion (150% of weighting, or 30% of target);
- The portfolio enhancement criteria were not satisfied (0% of weighting, or 0% of target);
- Capital efficiency efforts resulted in expenditures of less than 95% of budget and a cash balance in excess of $105M at year-end, thereby satisfying the maximum criterion (150% of weighting, or 15% of target); and
- Achieved by year-end a grand mean employee engagement score of 4.29 on the Gallup Company Survey, thereby achieving at a level between the threshold and target criteria (79.5% of weighting, or 7.9% of target).

Applying our NEOs' respective target bonus percentages for fiscal 2014 to the 52.9% of target achievement level determined by the Compensation Committee, Dr. Hill received a cash incentive bonus of $129,532, Mr. Rock received a cash incentive bonus of $60,263, Dr. Toler received a cash incentive bonus of $40,051, Ms. Hodges received a cash incentive bonus of $35,435, and Mr. Cullison received a cash incentive bonus of $28,885. Mr. Musso received no cash incentive bonus as he left employment with us in November 2014.

Stock-Based Awards

Stock Options. In January 2014, the Compensation Committee granted stock options to each of our NEOs as well as to substantially all of our other employees. In establishing the number of shares to be subject to the stock options granted to each of our NEOs, the Compensation Committee considered:

- the value of stock options as an incentive and retention tool, particularly in light of the disappointing results from the Phase 2b clinical trial of TC-5619 in schizophrenia announced in December 2013;

- the limited retention value of the NEOs' outstanding stock options, recognizing that approximately 90% of the existing grants held by those individuals were underwater;
- the number of shares available for issuance under the 2006 Plan;
- data provided by Radford for the comparable position level in the peer group regarding the estimated value and company ownership percentage represented by the most recent annual stock-based awards, including an analysis of equity vehicle mix (e.g., stock options vs. restricted stock);
- additional data provided by Radford for us and for the peer group regarding "burn rate" (a measure of shares subject to stock-based awards granted as a percentage of shares issued and outstanding) over one- and three-year periods and regarding "total equity overhang" (a measure of shares subject to stock-based awards outstanding or reserved for future grant as a percentage of shares issued and outstanding); and
- stock-based plan management guidelines for burn rate published by proxy advisory groups.

The Compensation Committee agreed to an annual grant award based on these considerations and applying its equity grant philosophy of targeting annual equity grants at the 50th percentile of the comparable level of responsibility for our peer group.

All of these stock options have an exercise price of $4.74 per share, the closing price of our common stock on the NASDAQ Global Select Market on the date of grant, January 23, 2014, and vest quarterly over four years, contingent on continued service through the applicable vesting date. In the case of Mr. Musso, 81% of the stock option grant was forfeited upon his November 18, 2014, resignation.

Restricted Stock. In October 2014, the Compensation Committee elected to grant restricted stock awards to all NEOs and certain other key personnel in lieu of 2015 annual stock-based awards. The Committee believed the timing of this award—aligned with the Company's consideration of a broad range of strategic transaction alternatives—was critical to ensuring optimal alignment between employee and shareholder interests. The use of restricted stock, as opposed to stock options, was considered to be the optimal tool for helping to ensure the long-term retention of the key personnel needed to execute any one of a range of those transactions. The NEO restricted stock award amounts were:

Named Executive Officer	Restricted Stock Awards
Stephen A. Hill	175,000
Alan A. Musso	55,000
Patrick C. Rock	45,000
Steven M. Toler	45,000
Mauri K. Hodges	40,000
Scott N. Cullison	40,000

In establishing the number of shares to be subject to the grants, the Compensation Committee considered, among other things, the Company's peer group practices, burn rate, and market dilution.

The restricted stock vests in equal amounts over two years of service, with 50% vesting on December 31, 2015, and 50% vesting on December 31, 2016, subject to continued employment. All restricted stock awarded to Mr. Musso was forfeited upon his resignation in November 2014.

VI. Other Benefits and Compensation

Executive Benefits

Our NEOs and other executives receive the same benefits as those generally available to our other employees. Both Company-subsidized and voluntary benefit programs are provided and include medical, dental, life insurance, vision, flexible spending accounts, travel and disability coverage.

Retirement Plans

The Company retirement plan, or 401(k) Plan, is available to all employees and all 401(k) Plan participants are eligible to receive the same level of matching contributions (4%) from us. The NEO's are limited to their matching contributions based on the maximum amount of recognizable compensation allowed under the Internal Revenue Code's qualified plan rules. The limit for 2014 was $10,400. Unlike traditional pension plans, the retirement benefits from our 401(k) Plan are based on the investment return on the employee's own investment elections, with the participant bearing the investment risk.

Change in Control

The Committee believes that a change in control ("CIC") employment agreement provision benefits stockholders by providing an important incentive to senior executives to remain focused on running the business in the case of a pending or actual change in control event.

Accordingly, the Company's current employment agreements with each of its NEOs contain a CIC provision that provides compensation in the form of monthly cash payments, acceleration of vesting of equity awards, and other benefits, all for a set period of time following termination, in the event of a qualifying termination (termination by the executive for good reason or by the Company without just cause) within 12 months following, or in connection with but prior to, a change in control of the Company (a "double-trigger" provision). Further details are set forth in the section of this Annual Report on Form 10-K entitled "Employment Agreements."

Tax Gross-Ups

We do not provide tax gross-ups, except for payroll taxes associated with limited business-related payments such as reimbursement of certain moving and relocation expenses.

VII. Actions Taken in Fiscal 2015

On January 21, 2015, the Compensation Committee:

- Upon the recommendation of Dr. Hill, elected not to increase NEO base salaries for 2015, except in the case of Mr. Cullison, whose base salary was increased 19% (from $210,000 to $250,000) to bring his base pay into closer alignment with the 50 th percentile of our peer group;
- Giving consideration to the value of stock options as an incentive and retention tool, granted a stock option to purchase shares of our common stock to substantially all employees who met their individual performance goals during 2014. All options vest over a four-year period, subject to continued employment, and have an exercise price of $2.52 per share, the closing price of our common stock on the NASDAQ Global Select Market on the grant date. The NEOs and other key personnel who were awarded restricted stock in October 2014 were excluded from this grant of stock options; and
- Developed performance objectives and associated weightings and achievement criteria for the incentive award program for fiscal 2015 without materially changing the mechanics of the program established in fiscal 2014. The performance objectives for 2015 include the achievement of specified goals with respect to: the outcome of our Phase 1b exploratory trial of TC-6499 in diabetic gastroparesis; satisfactory completion of our Proposed Merger with Catalyst; monetizing or attracting investment in the Company's NNR portfolio; and increased market value.

VIII. Considerations of Risk in our Compensation Programs

The Board of Directors has ultimate responsibility for risk oversight. The Compensation Committee assists the Board in overseeing potential risks that may be associated with the Company's compensation program. The

Company's senior management has established a cross-functional team for assessing, mitigating, and monitoring compensation risk. The Committee receives periodic reports with respect to the team's activities and findings.

The Compensation Committee does not believe that our compensation policies and practices are reasonably likely to have a material adverse effect on us. In assessing whether our compensation programs encourage excessive or inappropriate risk taking, the Compensation Committee gave particular consideration to our annual cash incentive bonus program. The performance objectives for the program are set by the Compensation Committee at the beginning of each year and are designed to further our business interests. It is possible that circumstances may evolve in any particular year such that achievement of a performance objective defined at the beginning of the year would no longer be beneficial to us. In that event, the Compensation Committee expects that the circumstances would be discussed at meetings of the Board held throughout the year and that the Compensation Committee would consider taking discretionary action—either during the year or when determining the achievement level under the incentive award program at the end of the year—with regard to the affected performance objective(s). The Compensation Committee believes that the discretion that it retains to modify any performance objective during the year or to credit any performance objective that may not have been met for a particular reason (such as, for example, a strategic change that occurs during the year) substantially eliminates any risk that may be associated with a change in circumstances. In addition, the Compensation Committee believes that the use of multiple performance objectives for the program each year reduces any risk that may otherwise be associated with any particular indicator of performance.

Pay practices that are commonly cited as corporate governance concerns are not part of our executive compensation program. For example, as noted above, a change in control of Targacept, alone, would not give rise to the payment of severance under any of our employment agreements with our NEOs. Severance under these agreements is not triggered unless employment of the executive is terminated other than for a defined cause or by the executive for a defined good reason. In addition, none of our employment agreements provides for an excise tax gross up.

Compensation Committee Report

The Compensation Committee has reviewed and discussed the CD&A that appears in this Annual Report on Form 10-K with Targacept's management. Based on its review and discussions, the Compensation Committee recommended to the Board that the CD&A be included in this Annual Report on Form 10-K for the year ended December 31, 2014.

This Compensation Committee report shall not be deemed to be "soliciting material" or subject to Regulation 14A or Regulation 14C under the 1934 Act, shall be deemed furnished in Targacept's Annual Report on Form 10-K for the year ended December 31, 2014, is otherwise not incorporated by reference into any of Targacept's previous filings with the SEC and is not to be incorporated by reference into any of Targacept's future filings with the SEC, irrespective of any general statement included in any such filing that incorporates this Annual Report on Form 10-K by reference, unless such filing explicitly incorporates this Compensation Committee report by reference.

Respectfully submitted,
Julia R. Brown, Chairperson
Alan W. Dunton, M.D.
John P. Richard

Summary Compensation

The following table contains information regarding the total compensation for the fiscal years ended December 31, 2014, 2013 and 2012 of our chief executive officer, the two individuals who served as our chief financial officer during fiscal year 2014, the two other most highly compensated executive officers who were serving as executive officers on December 31, 2014, and one other individual who served as an executive officer during fiscal 2014. We refer to these individuals in this Annual Report on Form 10-K as our "*named executive officers*" or "*NEOs*."

SUMMARY COMPENSATION TABLE

Summary Compensation Table

Name and principal position	Year	Salary ($)	Bonus ($)(1)	Stock Awards ($)(2)	Option Awards ($)(3)	Non-Equity Incentive Plan Compensation ($)(1)	All Other Compensation ($)(4)	Total ($)
Stephen A. Hill(5)	2014	515,000	129,532	339,500	682,500	0	10,775	1,677,307
President and Chief Executive Officer	2013	500,000	187,500	0	0	0	11,868	699,368
	2012	41,666	0	0	1,180,600	0	1,672	1,223,938
Alan A. Musso(6)	2014	313,813	0	106,700	214,500	0	25,705	660,718
Senior Vice President, Finance and Administration, Chief	2013	343,417	156,830	0	205,270	0	10,200	715,717
Financial Officer, Treasurer and Assistant Secreteary	2012	333,415	52,504	0	301,990	5,835	10,000	703,744
Mauri K. Hodges(7)	2014	258,523	35,435	77,600	156,000	0	10,400	537,958
Vice President, Finance and Administration, Chief Financial Officer, Treasurer								
Scott Cullison(7)	2014	210,000	28,885	77,600	156,000	0	10,400	482,885
Vice President, Business Development								
Patrick Rock(8)	2014	325,480	60,263	87,300	175,500	0	10,400	658,943
Senior Vice President, General Counsel and Secretary	2013	111,410	29,245	0	365,400	0	13,777	519,832
Steve Toler(7)	2014	265,225	40,051	87,300	175,500	0	10,400	578,476
Vice President, Clinical Pharmaceutical Sciences								

(1) The amounts in the columns titled "Bonus" and "Non-Equity Incentive Plan Compensation," together, reflect cash payments made in January of the following year pursuant to our annual cash incentive award program. Our annual cash incentive award program is discussed above under "—Compensation Discussion and Analysis." For 2013, the amounts in the column titled "Bonus" for Mr. Musso, also reflects a cash retention award per his 2012 agreement of $66,683. In addition, in 2013, Mr. Musso received $35,000 in additional compensation for responsibilities assumed during 2012 as a member of the Office of the Chairman during the pendency of our search for a new chief executive officer. Mr. Rock's 2013 bonus is a prorated amount based on his August 26, 2013 hire date.

(2) The amounts in this column reflect the aggregate grant date fair value of restricted stock awarded during the year calculated in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, *Compensation—Stock Compensation*, or ASC 718, disregarding the potential for forfeitures, regardless of the period in which the corresponding compensation expense was recorded in accordance with ASC 718. The assumptions used to calculate grant date fair value are discussed in Note 9 to our audited financial statements included on page 88 of this Annual Report on Form 10-K for the fiscal year ended December 31, 2014. For Mr. Musso, 100% of the amount shown in this column for 2014 is attributable to restricted stock that was forfeited upon the end of his employment with us on November 18, 2014.

(3) The amounts in this column reflect for each fiscal year shown the aggregate grant date fair value of stock options granted during the year calculated in accordance with ASC 718, disregarding the potential for forfeitures, regardless of the period in which the corresponding compensation expense was recorded in accordance with ASC 718. The assumptions used to calculate grant date fair value are discussed in Note 9 to our audited financial statements included on page 88 of this Annual Report on Form 10-K. For Mr. Musso, $174,281 of the amount shown in this column for 2014 is attributable to stock options forfeited upon the end of his employment with us on November 18, 2014.

(4) The amounts in this column represent matching contributions that we made under our 401(k) plan, except that for (a) Mr. Musso the amount for 2014 reflects $15,305 in additional compensation for vacation that was earned but unused as of the end of his employment with us, (b) Dr. Hill received a reimbursement of $375 for personal airline mileage in 2014, and (c) Dr. Hill and Mr. Rock received non-qualified moving expenses of $1,668 and $9,307, respectively, associated with the start of their employment with us.

(5) Dr. Hill became our President and Chief Executive Officer on December 1, 2012.

(6) Mr. Musso’s employment with us ended on November 18, 2014.

(7) Mr. Cullison, Ms. Hodges, and Dr. Toler were not named executive officers for fiscal years 2013 and 2012.

(8) Mr. Rock joined the Company on August 26, 2013, and became our Senior Vice President, General Counsel and Secretary effective October 1, 2013.

Information Relating to Plan-Based Awards

The following table contains information regarding grants of plan-based awards to our NEOs made during the fiscal year ended December 31, 2014.

2014 GRANTS OF PLAN-BASED AWARDS

Name	Grant & Approval Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards (1)			All Other Stock Awards: Number of Shares of Stock(2)	All Other Option Awards: Number of Securities Underlying Options(3)	Exercise or Base Price of Option Awards ($/Share)(4)	Grant Date Fair Value of Awards ($)(5)
		Threshold ($)	Target ($)	Maximum ($)				
Stephen A. Hill		—	$257,500	$386,250	—	—		—
	1/23/2014	—	—	—	—	175,000		$682,500
	10/11/2014	—	—	—	175,000	—		$339,500
Alan A. Musso		—	—	—	—	—		—
	1/23/2014	—	—	—	—	55,000		$214,500(6)
	10/11/2014	—	—	—	55,000	—		$106,700(7)
Mauri K. Hodges		—	$ 77,557	$116,335	—	—		—
	1/23/2014	—	—	—	—	40,000		$156,000
	10/11/2014	—	—	—	40,000	—		$ 77,600
Scott N. Cullison		—	$ 63,000	$ 94,500	—	—		—
	1/23/2014	—	—	—	—	40,000		$156,000
	10/11/2014	—	—	—	40,000	—		$ 77,600
Patrick C. Rock		—	$113,918	$170,877	—	—		—
	1/23/2014	—	—	—	—	45,000		$175,500
	10/11/2014	—	—	—	45,000	—		$ 87,300
Steven M. Toler		—	$ 79,568	$119,351	—	—		—
	1/23/2014	—	—	—	—	45,000		$175,500
	10/11/2014	—	—	—	45,000	—		$ 87,300

(1) Our annual cash incentive award program is considered a non-equity incentive plan and is discussed above under "—Compensation Discussion and Analysis." For fiscal 2014, there was no threshold amount payable under the program. The amounts shown in the "Target" column reflect each named executive officer's target bonus percentage of base salary set by the Compensation Committee for fiscal 2014. The amounts shown in the "Maximum" column reflect the maximum amount payable to each named executive officer under the program based on his or her target bonus percentage and the aggregate weight for all of the corporate performance objectives approved by the Compensation Committee initially in January 2014. The amounts actually paid to our named executive officers under the program for fiscal 2014 were as follows: $129,532 for Dr. Hill, $60,263 for Mr. Rock, $40,051 for Dr. Toler, $0 for Mr. Musso, $35,435 for Ms. Hodges, and $28,885 for Mr. Cullison. All amounts awarded under the program for fiscal 2014 were paid in January 2015. Mr. Musso's employment with us ended on November 18, 2014 and he did not receive a cash incentive bonus under the program for fiscal 2014.

(2) Award of restricted stock under the 2006 Equity Plan that vests in equal installments on December 31, 2015 and on December 31, 2016.

(3) The options reflected in this column were granted under the 2006 Plan and vest and become exercisable in equal installments on the last day of 16 consecutive calendar quarters beginning with March 31, 2014.

(4) The exercise price per share of each option shown is equal to the closing price of our common stock on the NASDAQ Global Select Market on the grant date.

(5) The grant date fair value of option awards and restricted stock awards is calculated in accordance with ASC 718 as described in footnotes 2 and 3 to the Summary Compensation Table.

(6) Of the amount shown, $174,281 is attributable to stock options forfeited upon the end of Mr. Musso's employment with us on November 18, 2014.

(7) Of the amount shown, $106,700 is attributable to restricted stock forfeited upon the end of Mr. Musso's employment with us on November 18, 2014.

Additional discussion regarding factors that may be helpful in understanding the information included in the Summary Compensation Table and 2014 Grants of Plan-Based Awards table is included above under "—Compensation Discussion and Analysis."

Employment Agreements

In 2014, we entered into an employment agreement with Mr. Cullison, an amendment to our employment agreement with Dr. Hill, and an amended and restated agreement with Mr. Musso. The changes to the employment agreements with Dr. Hill and Mr. Musso were made principally to more closely align the terms of those agreements with those of the employment agreement terms of our other senior executives. We previously entered into employment agreements with Ms. Hodges, Mr. Rock, and Dr. Toler. Mr. Musso's employment agreement was automatically terminated by operation of its terms upon his November 18, 2014 resignation.

Employment Agreement with Dr. Hill

Our employment agreement with Dr. Hill, as amended, continues until terminated either by us or by him. The employment agreement provides for a minimum annual base salary that is to be reviewed and subject to increase in accordance with our policies and procedures. Dr. Hill is also eligible to receive stock-based awards and to earn an annual bonus based on a target percentage of 50% of his annual base salary or such higher amount as the Board or Compensation Committee may approve.

If Dr. Hill's employment with us terminates for any reason, he is entitled to receive a lump sum equal to (i) any base salary earned and due but not yet paid through the effective date of termination plus (ii) any bonus or other compensation earned and due pursuant to the express terms of any Company plan or program but not yet paid through the effective date of termination. In addition, if we (or a successor) terminate Dr. Hill's employment other than for "Just Cause," or if he terminates his employment within one year following the first occurrence of "Good Reason," he is entitled to receive:

- severance following termination equal to his then-current base salary for 12 months (or, if the termination is concurrent with or within 12 months following, or in connection with but prior to, a defined change in control of us, equal to his then-current base salary and a prorated portion of his then-current target bonus for 18 months), payable monthly, except that any amount that would exceed the exemption under Section 409A of the Internal Revenue Code of 1986, as amended, would be payable in a lump sum two and one-half months following the end of our taxable year in which the termination occurs;
- if the termination is concurrent with or within 12 months following, or in connection with but prior to, a defined change in control of us, full acceleration of unvested options to purchase capital stock or restricted stock; and otherwise six (6) months acceleration of vesting for unvested options to purchase any capital stock, and restricted stock or other equity-based awards outstanding as of the effective date of termination;
- 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, provided Dr. Hill (i) makes a timely election of continuation under the Consolidated Omnibus Budget Reconciliation Act of 1985 (commonly referred to as "COBRA") and (ii) continues paying the same percentage of the total cost for such life insurance or health care coverage as he was paying at the time of termination; and
- up to $10,000 in outplacement counseling services, if incurred by him and paid by us within specified time periods.

"Just Cause" under the employment agreement means Dr. Hill's: (i) willful and material breach of the agreement and his continued failure to cure the breach for a specified period; (ii) conviction of, or entry of a plea of guilty or nolo contendere to a felony or a misdemeanor involving moral turpitude; (iii) willful commission of an act of fraud, breach of trust, or dishonesty including, without limitation, embezzlement, that results in material damage or harm to our business, financial condition or assets; (iv) intentional damage or destruction of substantial property of ours; or (v) a violation of specified company policies or an act or omission contrary to generally expected ethical or professional standards.

"Good Reason" under the employment agreement means: (i) the material breach by us (or a successor) of any material provision of the agreement; (ii) any purported termination of Dr. Hill's employment that is not effected in accordance with the agreement; (iii) any uncured failure by us (or a successor) to pay Dr. Hill any amounts of salary or bonus compensation that have become due and payable; (iv) a reduction in Dr. Hill's annual base salary, unless the reduction is part of, and at the same percentage as, an across-the-board salary reduction for all similarly-situated executives; (v) any material diminution in Dr. Hill's duties, responsibilities, authority, reporting structure, status or title, unless approved by him; or (vi) Dr. Hill being required to relocate to a location more than fifty (50) miles from his initial worksite (Winston-Salem, North Carolina); in each case conditional on Dr. Hill providing written notice of the initial existence of Good Reason within 90 days and the Good Reason continuing to exist 30 days after the notice.

The employment agreement provides that Dr. Hill shall at all times maintain the confidentiality of our proprietary information and shall not engage in a business defined in the agreement as competitive to us until 12 months after termination of employment with us.

Employment Agreements with Mr. Cullison, Ms. Hodges, Mr. Rock and Dr. Toler

Our employment agreements with each of Mr. Cullison, Ms. Hodges, Mr. Rock and Dr. Toler provide for a minimum annual base salary that is to be reviewed and subject to increase in accordance with our policies and procedures. Each of Mr. Cullison, Ms. Hodges, Mr. Rock and Dr. Toler also is eligible to receive stock-based awards and to earn an annual cash bonus based on a target percentage of his or her annual base salary. Each of the employment agreements provides for a minimum target bonus percentage, which may be increased at the discretion of the Board or Compensation Committee. For fiscal 2014, the target bonus percentage for Mr. Cullison, Ms. Hodges and Dr. Toler was 30% and the target bonus percentage for Mr. Rock was 35%.

If any of these executives' employment with us terminates for any reason, then each are entitled to receive a lump sum equal to any salary, bonus and other compensation earned and due but not yet paid.

In addition, if we (or a successor) terminate the employment of Mr. Cullison, Ms. Hodges, Mr. Rock or Dr. Toler other than for defined "Just Cause," or if Mr. Cullison, Ms. Hodges, Mr. Rock or Dr. Toler terminates his or her employment within one year following the first occurrence of defined "Good Reason," then he or she is entitled to receive:

- severance following termination equal to his or her then-current monthly base salary for nine months except that any amount that would exceed the exemption under Section 409A of the Internal Revenue Code of 1986, as amended, would be payable in a lump sum two and one-half months following the end of our taxable year in which the termination occurs;
- six months acceleration of unvested options to purchase capital stock, restricted stock, or other equity-based awards;
- continuation of the health and life insurance benefits coverage provided to him or her as of the date of termination for the period during which he or she receives severance; and
- up to $10,000 in outplacement counseling services, if incurred by him or her and paid by us within specified time periods.

If we (or a successor) terminate the employment of Mr. Cullison, Ms. Hodges, Mr. Rock or Dr. Toler other than for defined "Just Cause," or if Mr. Cullison, Ms. Hodges, Mr. Rock or Dr. Toler terminates his or her employment within one year following the first occurrence of defined "Good Reason," and the termination is concurrent with or within 12 months following, or in connection with but prior to, a defined change in control of us, then he or she is entitled to receive:

- severance following termination equal to his or her then-current monthly base salary and one-twelfth of his or her target annual bonus for twelve months except that any amount that would exceed the exemption

under Section 409A of the Internal Revenue Code of 1986, as amended, would be payable in a lump sum two and one-half months following the end of our taxable year in which the termination occurs;

- full acceleration of all unvested options to purchase capital stock, restricted stock, or other equity-based awards;
- continuation of the health and life insurance benefits coverage provided to him or her as of the date of termination for the period during which he receives severance; and
- up to $10,000 in outplacement counseling services, if incurred by him or her and paid by us within specified time periods.

"Just Cause" under each of Mr. Cullison's, Ms. Hodges', Mr. Rock's and Dr. Toler's employment agreements means his or her: (i) willful and material breach of the agreement and his or her continued failure to cure the breach for a specified period; (ii) conviction of, or entry of a plea of guilty or nolo contendere to a felony or a misdemeanor involving moral turpitude; (iii) willful commission of an act of fraud, breach of trust, or dishonesty including, without limitation, embezzlement, that results in material damage or harm to our business, financial condition or assets; (iv) intentional damage or destruction of substantial property of ours; (v) violation of policies prohibiting employment discrimination or workplace harassment; or (vi) commission of any act (or omission) contrary to the ethical or professional standards expected in his profession. For Mr. Rock, "Just Cause" shall not mean any action or inaction to the extent it results from his required compliance with an ethical legal obligation applicable to his conduct as an attorney-at-law.

"Good Reason" under each of Mr. Cullison's, Ms. Hodges', Mr. Rock's and Dr. Toler's employment agreements means: (i) any purported termination of his or her employment that is not effected in accordance with the agreement; or (ii) any uncured failure to confer the benefits and compensation provided under the agreement or, in some cases, to comply with any other material provision of the agreement, in each case conditional on his or her providing written notice of the initial existence of Good Reason within 90 days and the Good Reason continuing to exist 30 days after the notice.

The employment agreement with each of Mr. Cullison, Ms. Hodges, Mr. Rock and Dr. Toler provides that he or she shall at all times maintain the confidentiality of our proprietary information and shall not engage in a business defined in the agreement as competitive to us until nine months after termination of employment with us.

Change in Control

The employment agreements define "change in control" to mean, generally: (1) the acquisition by any person of 50% or more of our outstanding common stock; (2) the consummation of a merger or consolidation involving the Company if the stockholders of the Company immediately before such merger or consolidation do not, as a result of such merger or consolidation, own, directly or indirectly, more than 50% of the outstanding common stock of the surviving company; (3) a sale or other disposition of all or substantially all of the assets of the Company; or (4) a change in the majority composition of the board of directors not approved by a majority of the directors in office before the change.

Information Relating to Equity Awards

The following table contains information for each of our named executive officers regarding equity awards outstanding as of December 31, 2014.

OUTSTANDING EQUITY AWARDS AT 2014 FISCAL YEAR-END

	Option Awards				Stock Awards	
Name	Number of Securities Underlying Unexercised Option (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares of Stock That Have Not Vested (#)(7)	Market Value of Shares of Stock That Have Not Vested ($)(8)
Stephen A. Hill	200,000	200,000(1)	$ 4.50	12/2/2022		
	43,750	131,250(2)	$ 4.74	1/22/2024		
					45,000	$ 118,350
Alan A. Musso	49,107	—	$ 5.55	2/16/2015		
	37,324	—	$ 8.51	2/16/2015		
	36,094	—	$ 2.93	2/16/2015		
	50,000	—	$ 20.68	2/16/2015		
	46,875	—	$ 26.05	2/16/2015		
	62,500	—	$ 4.59	2/16/2015		
	28,437	—	$ 4.63	2/16/2015		
	10,312	—	$ 4.74	2/16/2015		
					—	$ 0
Mauri K. Hodges	6,198	—	$ 5.55	8/15/2016		
	18,390	—	$ 8.51	12/18/2017		
	28,001	—	$ 2.93	1/8/2019		
	35,000	—	$ 20.68	1/18/2020		
	30,500	—	$ 26.05	3/28/2021		
	41,250	18,750(3)	$ 4.59	5/3/2022		
	19,999	20,001(4)	$ 4.63	1/16/2023		
	10,000	30,000(2)	$ 4.74	1/22/2024		
					40,000	$ 105,200
Scott N. Cullison	1,079	—	$ 8.51	12/18/2017		
	4,000	—	$ 2.93	1/8/2019		
	24,375	—	$ 20.68	1/18/2020		
	500	—	$ 19.66	3/30/2020		
	24,750	—	$ 26.05	3/28/2021		
	15,723	7,147(3)	$ 4.59	5/3/2022		
	7,500	7,500(4)	$ 4.63	1/16/2023		
	6,562	8,438(5)	$ 5.70	5/29/2023		
	10,000	30,000(2)	$ 4.74	1/22/2024		
					40,000	$ 105,200
Patrick C. Rock	31,250	68,750(6)	$ 5.31	9/29/2023		
	11,250	33,750(2)	$ 4.74	1/22/2024		
					45,000	$ 118,350
Steven M. Toler	3,000	—	$ 8.99	9/27/2017		
	525	—	$ 8.51	12/18/2017		
	3,500	—	$ 7.27	6/29/2018		
	17,000	—	$ 2.93	1/8/2019		
	15,000	—	$ 20.68	1/18/2020		
	25,625	—	$ 26.05	3/28/2021		
	51,562	23,438(3)	$ 4.59	5/3/2022		
	22,499	22,501(4)	$ 4.63	1/16/2023		
	11,250	33,750(2)	$ 4.74	1/22/2024		
					45,000	$ 118,350

(1) The unexercisable portion of this option as of December 31, 2014 vests and becomes exercisable in equal installments on the last day of 9 consecutive calendar quarters beginning with March 31, 2015.

(2) The unexercisable portion of this option as of December 31, 2014 vests and becomes exercisable in equal installments on the last day of 12 consecutive calendar quarters beginning with March 31, 2015.

(3) The unexercisable portion of this option as of December 31, 2014 vests and becomes exercisable in equal installments on the last day of 5 consecutive calendar quarters beginning with March 31, 2015.

(4) The unexercisable portion of this option as of December 31, 2014 vests and becomes exercisable in equal installments on the last day of 8 consecutive calendar quarters beginning with March 31, 2015.

(5) The unexercisable portion of this option as of December 31, 2014 vests and becomes exercisable in equal installments on the last day of 9 consecutive calendar quarters beginning with March 31, 2015.

(6) The unexercisable portion of this option as of December 31, 2014 vests and becomes exercisable in equal installments on the last day of 10 consecutive calendar quarters beginning with March 31, 2015.

(7) Restricted stock granted on October 11, 2014, which vests in equal installments on December 31, 2015 and on December 31, 2016.

(8) Based on the closing price of our stock on December 31, 2014 ($2.63), the last trading day of the 2014 fiscal year.

2014 Option Exercises and Stock Vested

No NEO exercised any options to purchase our common stock or had restricted stock vest during fiscal 2014.

Payments Upon Termination in Certain Circumstances

Our employment agreements with our named executive officers provide for payments and benefits if we terminate (or if a successor following a change in control terminates) his or her employment other than for a defined Just Cause or, subject to certain timing and other conditions, he or she terminates his or her employment for a defined Good Reason. Certain of these employment agreements also provide for payments and benefits if a termination occurs in connection with a Change in Control. The terms “Just Cause,” “Good Reason,” and “Change in Control” are discussed above under “—Employment Agreements.”

Under SEC rules, we are required to estimate and quantify the payments and benefits that would be payable by us upon the occurrence of a triggering event, as if the triggering event had occurred as of the last business day of the last fiscal year. For each of Dr. Hill, Ms. Hodges, Mr. Rock, Dr. Toler, and Mr. Cullison, the following table sets forth the estimated payments and benefits that would have become payable if the noted triggering event occurred on December 31, 2014, the last business day of our most recently completed fiscal year. These amounts reflect the additional payments or benefits each executive officer would be entitled to receive pursuant to his employment agreement, as such existed on December 31, 2014. The amounts shown reflect only the additional payments or benefits that an executive officer would have received upon the occurrence of the respective triggering events listed below. These amounts do not include the value of payments or benefits that would have been earned, or any amounts associated with equity awards that would have vested, absent the triggering event. Receipt of any of the payments and benefits set forth below is contingent on the delivery by the executive officer of a release and waiver of legal claims related to the employment relationship.

For Mr. Musso, who resigned from the Company effective November 18, 2014, the table sets forth the payments and benefits that became payable upon the end of his employment with us on November 18, 2014.

	SUMMARY OF POTENTIAL PAYMENTS UPON TERMINATION					
	Base Salary Continuation(1)	Severance Pay—Annual Bonus (2)	Value of Accelerated Options (3)	Continuation of Health, Dental and Life Insurance(4)	Outplacement Counseling Services	Total
Stephen A. Hill						
Termination Without Just Cause or By Executive For Good Reason (no Change in Control)	$ 515,000	$ —	$ —	$ 28,431	$ 10,000	$ 553,431
Termination Related to Change of Control	$ 772,500	$ 386,250	$ —	$ 42,646	$ 10,000	$ 1,211,396
Voluntary/Death	$ 9,904	$ —	$ —	$ —	$ —	$ 9,904
Disability	$ 19,808	$ —	$ —	$ 28,047	$ —	$ 47,854
Alan A. Musso						
Voluntary	$ 15,305	$ —	$ —	$ —	$ —	$ 15,305
Mauri K Hodges						
Termination Without Just Cause or By Executive For Good Reason (no Change in Control)	$ 225,000	$ —	$ —	$ 9,639	$ 10,000	$ 244,639
Termination Related to Change of Control	$ 300,000	$ 90,000	$ —	$ 12,852	$ 10,000	$ 412,852
Voluntary/Death	$ 3,029	$ —	$ —	$ —	$ —	$ 3,029
Disability	$ 14,567	$ —	$ —	$ 12,468	$ —	$ 27,035
Scott N. Cullison						
Termination Without Just Cause or By Executive For Good Reason (no Change in Control)	$ 157,500	$ —	$ —	$ 16,317	$ 10,000	$ 183,817
Termination Related to Change of Control	$ 210,000	$ 63,000	$ —	$ 21,755	$ 10,000	$ 304,755
Voluntary/Death	$ 4,038	$ —	$ —	$ —	$ —	$ 4,038
Disability	$ 12,115	$ —	$ —	$ 21,371	$ —	$ 33,487
Patrick C. Rock						
Termination Without Just Cause or By Executive For Good Reason (no Change in Control)	$ 244,110	$ —	$ —	$ 8,986	$ 10,000	$ 263,096
Termination Related to Change of Control	$ 325,480	$ 113,918	$ —	$ 11,981	$ 10,000	$ 461,379
Voluntary/Death	$ 6,259	$ —	$ —	$ —	$ —	$ 6,259
Disability	$ 12,518	$ —	$ —	$ 11,597	$ —	$ 24,116
Steven A. Toler						
Termination Without Just Cause or By Executive For Good Reason (no Change in Control)	$ 198,919	$ —	$ —	$ 18,490	$ 10,000	$ 227,409
Termination Related to Change of Control	$ 265,225	$ 79,568	$ —	$ 24,653	$ 10,000	$ 379,445
Voluntary/Death	$ 5,100	$ —	$ —	$ —	$ —	$ 5,100
Disability	$ 15,301	$ —	$ —	$ 24,269	$ —	$ 39,570

(1) The amounts in this column reflect the continuation of base salary that is payable as described in the Employment Agreements section above and summarized below:

a) Dr. Hill would receive 12 months base salary continuation for termination without Just Cause or for Good Reason and would receive 18 months base salary continuation for termination related to a Change in Control.

b) Mr. Cullison, Ms. Hodges, Mr. Rock and Dr. Toler each would receive 9 months base salary continuation for termination without Just Cause or for Good Reason, and they each would receive 12 months base salary continuation for termination related to a Change in Control.

c) Voluntary termination without Good Reason or termination by death would result in the payment for accrued and unused vacation as of December 31, 2014.

d) Termination related to disability assumes that the disability occurred as of December 31, 2014 and therefore the severance includes 10 days salary continuance for Mr. Cullison, Ms. Hodges, and Dr. Toler and 5 days salary continuance for Dr. Hill and Mr. Rock, prior to commencement of third-party disability benefits, plus any accrued and unused vacation as of December 31, 2014.

(2) The amounts in this column reflect the severance payable that is based on the target annual bonus as described in the Employment Agreements section above and summarized below:

a) Dr. Hill would receive his then-current target annual bonus for 18 months for termination related to a Change in Control.

b) Mr. Cullison, Ms. Hodges, Mr. Rock and Dr. Toler each would receive his or her then-current target annual bonus for 12 months for termination related to a Change in Control.

(3) As of December 31, 2014, upon termination related to Change in Control, there is full acceleration (100%) on the vesting for each of Dr. Hill, Mr. Cullison, Ms. Hodges, Mr. Rock and Dr. Toler. In addition, as of December 31, 2014, Dr. Hill, Mr. Cullison, Ms. Hodges, Mr. Rock and Dr. Toler each would receive 6 months acceleration of unvested options upon termination without just cause or for good reason which is not related to a Change in Control.

a) The amounts in this column are calculated based on the positive difference between (i) $2.63, the closing price of our common stock on the NASDAQ Global Select Market on December 31, 2014, and (ii) the exercise price per share of each option for which vesting would be accelerated. Stock options with an exercise price per share above $2.63are disregarded for this purpose.

(4) The amounts in this column are calculated based on (a) the duration of the respective continuation periods and (b) the monthly premiums that we pay for the medical, dental and life insurance coverage received by the named executive officer as of December 31, 2014. For purposes of termination related to disability, the benefits are estimated to be paid for up to 12 months provided the executive officer makes a timely election of continuation under COBRA (Consolidated Omnibus Budget Reconciliation Act of 1985) and continues to pay the required premiums.

EQUITY COMPENSATION PLAN INFORMATION

The following table contains information regarding securities authorized for issuance under our equity compensation plans in effect as of December 31, 2014. Our equity compensation plans consist of the 2006 Plan and our 2000 Equity Incentive Plan. We also granted a standalone inducement stock option to Dr. Hill upon commencement of his employment with us in December 2012.

Plan Category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	3,483,974	$ 9.44	3,149,324(1)
Equity compensation plans not approved by security holders	400,000(2)	4.50	—
Total	3,883,974	$ 8.93	3,149,324(1)

(1) Represents shares of common stock available for future issuance under the 2006 Plan upon the exercise of stock options that may be granted after December 31, 2014, restricted stock or other stock-based awards.

(2) Represents share of common stock issuable pursuant to the inducement grant to Dr. Hill. On December 3, 2012, the first trading day after Dr. Hill's first day of employment with us, Dr. Hill was granted an option to purchase 400,000 shares of our common stock at an exercise price per share equal to $4.50, the closing price of our common stock on the NASDAQ Global Select Market on the grant date. The grant, which was not made under the 2006 Plan, was approved by both the Compensation Committee and the Board of Directors. The grant was made as an inducement material to Dr. Hill entering into employment with us as contemplated by NASDAQ Listing Rule 5635(c)(4) and is governed by terms substantially similar to the terms of the 2006 Plan.

Of the 400,000 shares issuable pursuant to the option, 200,000 shares, or 50%, of this option are vested and exercisable as of December 31, 2014. The remaining 200,000 shares, or 50%, of this option are scheduled to vest and become exercisable in equal installments on the last day of each of the 8 consecutive calendar quarters beginning on March 31, 2015 and ending on December 31, 2016.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Our common stock is our only class of voting security. The table below sets forth information regarding the beneficial ownership of our common stock as of March 11, 2015 for:

- each of the individuals identified as named executive officers in the Summary Compensation Table on page 123;
- each of our directors and director nominees;
- all of our directors and executive officers as a group; and
- each person, entity or group of affiliated persons or entities known by us to beneficially own more than 5% of our common stock.

Beneficial ownership is determined under SEC rules and includes sole or shared power to vote or dispose of shares of our common stock. The number and percentage of shares beneficially owned by a person or entity also include shares of common stock subject to stock options that are currently exercisable or become exercisable within 60 days of March 11, 2015. However, these shares are not deemed to be outstanding for the purpose of computing the percentage of shares beneficially owned of any other person or entity. Except as indicated in footnotes to the table below or, where applicable, to the extent authority is shared by spouses under community property laws, the beneficial owners named in the table have, to our knowledge, sole voting and dispositive power with respect to all shares of common stock shown to be beneficially owned by them. Percentage of shares beneficially owned is based on 34,306,435 shares of common stock outstanding on March 11, 2015. Unless otherwise indicated, the address of each beneficial owner named in the table is c/o Targacept, Inc., 100 North Main Street, Suite 1510, Winston-Salem, North Carolina 27101.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
More than 5% Stockholders		
BVF Inc. and affiliates	6,655,128(1)	19.4%
900 North Michigan Avenue, Suite 1100 Chicago, Illinois 60611		
New Enterprise Associates 10, Limited Partnership and affiliates	4,566,666(2)	13.3%
1954 Greenspring Drive, Suite 600 Timonium, Maryland 21093		
RTW Investments, LLC, 250 W. 55th Street	2,665,643(3)	7.82%
New York, NY 10019		

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
Directors and Named Executive Officers		
John P. Richard	91,971(4)	*
Charles A. Blixt	80,000(5)	*
Julia R. Brown	69,400(6)	*
Errol B. De Souza	100,333(7)	*
Alan W. Dunton	82,000(8)	*
Stephen A. Hill	474,687(9)	1.4%
Mauri K. Hodges	239,347(10)	*
Scott N. Cullison	140,293(11)	*
Patrick C. Rock	96,562(12)	*
Steven M. Toler	206,273(13)	*
All directors and executive officers as a group (10 persons)	1,440,573(14)	4.1%

* Represents beneficial ownership of less than one percent of our common stock

(1) The information reported is based on a Schedule 13G/A filed with the SEC on February 9, 2015, which reports that, as of the close of business on February 9, 2015, (i) Biotechnology Value Fund, L.P. ("BVF") beneficially owned 2,977,919 shares, (ii) Biotechnology Value Fund II, L.P. ("BVF2") beneficially owned 1,713,907 shares, (iii) BVF Investments, L.L.C. ("BVLLC") beneficially owned 349,482 shares, (iv) Investment 10, L.L.C. ("ILL10") beneficially owned 1,130,361 shares, and (v) MSI BVF SPV, LLC ("MSI") beneficially owned 483,459 shares of common stock. BVF Partners L.P. ("Partners") as the general partner of BVF and BVF2, the manager of BVLLC and the investment adviser to each of ILL10 and MSI, may be deemed to beneficially own the 6,655,128 shares beneficially owned in the aggregate by BVF, BVF2, BVLLC, ILL10 and MSI. BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 6,655,128 shares of common stock beneficially owned by Partners. Mark N. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the 6,655,128 shares of common stock beneficially owned by BVF Inc. Partners, BVF Inc. and Mr. Lampert share voting and dispositive power over the shares beneficially owned by BVF, BVF2, BVLLC, ILL10 and MSI. Each of Partners, BVF Inc. and Mr. Lampert disclaims beneficial ownership of the shares beneficially owned by BVF, BVF2, BVLLC, ILL10 and MSI.

(2) The information reported is based on information provided by New Enterprise Associates, Inc. on March 4, 2015. Includes 4,563,512 shares owned of record by New Enterprise Associates 10, Limited Partnership (NEA 10) and 3,154 shares owned of record by NEA Ventures 2002, L.P. (NEA Ventures 2002). The shares directly held by NEA 10 are indirectly held by NEA Partners 10, Limited Partnership ("NEA Partners 10"), the sole general partner of NEA 10, and each of the individual partners of NEA Partners 10. The individual general partners (collectively, the "Individual GPs") of NEA Partners 10 are M. James Barrett, Peter J. Barris and Scott D. Sandell. NEA Partners 10 and the Individual GPs share voting and dispositive power with regard to the shares of the Company's securities held by NEA 10. Pamela J. Clark, the general partner of NEA Ventures 2002, shares voting and dispositive power with regard to the shares of the Company's securities held by NEA Ventures 2002.

(3) The information reported is based on a Schedule 13G/A filed with the SEC on February 17, 2015 by RTW Investments, LLC.

(4) Includes 7,500 shares owned of record by The Richard Family Revocable Trust, for which Mr. Richard serves as a co-trustee. Also includes 69,138 shares subject to options exercisable currently or within 60 days of March 11, 2015.

(5) Includes 70,000 shares subject to options exercisable currently or within 60 days of March 11, 2015.

(6) Includes (i) 6,000 shares owned of record by the Julia R. Brown Trust, for which Ms. Brown is the sole trustee, and (ii) 53,400 shares subject to options exercisable currently or within 60 days of March 11, 2015.

(7) Includes 85,000 shares subject to options exercisable currently or within 60 days of March 11, 2015.

(8) Includes 72,000 shares subject to options exercisable currently or within 60 days of March 11, 2015.

(9) Includes 279,687 shares subject to options exercisable currently or within 60 days of March 11, 2015.

(10) Includes 198,088 shares subject to options exercisable currently or within 60 days of March 11, 2015.

(11) Includes 100,293 shares subject to options exercisable currently or within 60 days of March 11, 2015.

(12) Includes 51,562 shares subject to options exercisable currently or within 60 days of March 11, 2015.

(13) Includes 160,293 shares subject to options exercisable currently or within 60 days of March 11, 2015.

(14) Includes the shares held, and shares subject to options exercisable currently or within 60 days of March 11, 2015, by the directors and executive officers named in the table, and as set forth in footnotes 4 through 13.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Related Person Transactions Policy

The Board has adopted a written policy pursuant to which each actual or proposed financial transaction, arrangement or relationship (including any indebtedness or guarantee of indebtedness) or series of similar financial transactions, arrangements or relationships, other than specified employment and compensatory matters, in which (i) we were or would be a participant, (ii) the amount involved exceeds $120,000 and (iii) a "related person" (as defined under Item 404 of Regulation S-K) has a direct or indirect material interest, is submitted to our Audit Committee for its review and approval or, if applicable, ratification. These transactions, arrangements or relationships are known as "*related person transactions.*"

Under the policy, our Chief Financial Officer and General Counsel consult with regard to any proposed transaction, arrangement or relationship that is identified as a possible related person transaction. If they determine we desire to proceed with the proposed transaction, arrangement or relationship and the General Counsel determines, based on available information, that the proposed transaction may constitute a related person transaction, it is submitted to the Audit Committee for its consideration. The Audit Committee is to consider all available relevant facts and circumstances, including the benefits to us, the impact on a director's independence in the event the related person is a director (or a family member or entity affiliated with a director), the availability of other sources for comparable products or services, the proposed terms and the terms available to or from parties that are not related persons. Absent special circumstances, the Audit Committee may approve only those related person transactions that it determines to be in or not contrary to the best interests of us and our stockholders. No member of the Audit Committee may participate in any review, consideration or approval of any related person transaction with respect to which the member or any of his or her immediate family members is the related person.

Indemnification Agreements

We have entered into indemnification agreements with each of our directors and with each member of our executive management committee. Pursuant to the indemnification agreements, we have agreed to indemnify and hold harmless these directors and officers to the fullest extent permitted by the Delaware General Corporation Law. The agreements generally cover expenses that a director or officer incurs or amounts that a director or officer becomes obligated to pay because of any proceeding to which he or she is made or threatened to be made a party or participant by reason of his or her service as a current or former director, officer, employee or agent of us. The agreements also provide for the advancement of expenses to the directors and officers subject to specified conditions. There are certain exceptions to our obligation to indemnify the directors and officers, including any intentional malfeasance or act where the director or officer did not in good faith believe he or she was acting in our best interests, with respect to "short-swing" profit claims under Section 16(b) of the 1934 Act and, with certain exceptions, with respect to proceedings that he or she initiates.

Item 14. Principal Accounting Fees and Services.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FEE INFORMATION AND AUDIT COMMITTEE PRE-APPROVAL POLICY

The following table sets forth the fees for professional services rendered by Ernst & Young LLP in connection with the audits of our annual financial statements for the years ended December 31, 2014 and 2013 and for other services rendered by Ernst & Young during those periods.

	Fiscal 2014	Fiscal 2013
Audit Fees(1):	$ 360,000	$ 343,900
Audit-Related Fees(2):	—	—
Tax Fees(3):	7,420	—
All Other Fees(4):	1,735	1,500
Total Fees:	$ 369,155	$ 345,400

(1) Audit Fees include fees billed for the applicable year for services: (a) in connection with the audit of our financial statements included in our annual report on Form 10-K and the review of our financial statements included in our quarterly reports on Form 10-Q; (b) in connection with the audit of our internal control over financial reporting; (c) in connection with our registration statements on Form S-8 filed with the SEC in January 2013 and June 2013 and our shelf registration statement on Form S-3 filed with the SEC in November 2013; (d) in connection with the review of other documents filed with the SEC and accounting consultations; and (e) normally provided by the independent registered public accounting firm in connection with statutory and regulatory filings or engagements.

(2) Audit-Related Fees include fees for assurance and related services by the principal accountant that are reasonably for the performance of the audit or review of our financial statements and are not reported under Audit Fees.

(3) Tax Fees include fees billed in the applicable year for tax return preparation, assistance with tax return examinations, research and technical tax advice.

(4) All Other Fees reflect fees billed in the applicable year for a license to Ernst & Young's web-based accounting research tool.

Audit Committee Pre-Approval Policy

The Audit Committee has adopted a policy that requires the Audit Committee to approve all audit and permissible non-audit services to be provided by the independent registered public accounting firm prior to its engagement to provide such services. The Audit Committee has established a pre-approval policy for certain audit and non-audit services, up to a specified amount for each identified service that may be provided by the independent registered public accounting firm. In addition, the Chairman of the Audit Committee, or any member of the Audit Committee designated by the Chairman, may specifically approve any service that is not a prohibited non-audit service if the fees for such service are not reasonably expected to exceed $10,000. Any such approval by the Chairman or his designee must be reported to the Audit Committee at its next scheduled meeting. The pre-approved services of the independent registered public accounting firm, and corresponding maximum fees, are reviewed annually by the Audit Committee.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a)(1) *Financial Statements.* For a list of the financial statements included in this annual report, see “Index to the Financial Statements” on page .

(a)(2) *Financial Statement Schedules.* All schedules are omitted because they are not applicable or because the required information is shown under Item 8, “Financial Statements and Supplementary Data.”

(a)(3) *Exhibits.* The list of exhibits filed as a part of this annual report is set forth on the Exhibit Index immediately preceding such exhibits and is incorporated by reference in this Item 15(a)(3).

(b) *Exhibits*. See Exhibit Index.

(c) *Separate Financial Statements and Schedules*. None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: March 16, 2015

Targacept, Inc.

By: /s/ Stephen A. Hill
Stephen A. Hill
Chief Executive Officer and President

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Stephen A. Hill **Stephen A. Hill**	Chief Executive Officer, President and Director (principal executive officer)	March 16, 2015
/s/ Mauri K. Hodges **Mauri K. Hodges**	Vice President, Finance and Administration, Chief Financial Officer and Treasurer (principal financial officer and principal accounting officer)	March 16, 2015
/s/ John P. Richard **John P. Richard**	Chairman of the Board of Directors	March 16, 2015
/s/ Charles A. Blixt **Charles A. Blixt**	Director	March 16, 2015
/s/ Julia R. Brown **Julia R. Brown**	Director	March 16, 2015
/s/ Errol B. De Souza **Errol B. De Souza**	Director	March 16, 2015
/s/ Alan W. Dunton **Alan W. Dunton**	Director	March 16, 2015

EXHIBIT INDEX

Exhibit Number	Description
2.1	Agreement and Plan of Merger dated as of March 5, 2015 by and among the Company, Catalyst Biosciences, Inc. and Talos Merger Sub, Inc. (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K, as filed with the SEC on March 6, 2015)
3.1	Fourth Amended and Restated Certificate of Incorporation of the Company (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8, as filed with the SEC on May 8, 2006 (Registration No. 333-133881))
3.2	Bylaws of the Company, as amended and restated effective as of March 5, 2015 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K, as filed with the SEC on March 6, 2015)
4.1	Specimen common stock certificate (incorporated by reference to Exhibit 4.1 to Amendment No. 3 to the Company's Registration Statement on Form S-1, as filed with the SEC on March 16, 2006 (Registration No. 333-131050))
4.2(a)	Third Amended and Restated Investor Rights Agreement, dated as of May 12, 2004, by and among the Company and certain stockholders of the Company (incorporated by reference to Exhibit 4.2(a) to the Company's Registration Statement on Form S-1, as filed with the SEC on January 17, 2006 (Registration No. 333-131050))
4.2(b)	Amendment No. 1, dated December 6, 2004, to Third Amended and Restated Investor Rights Agreement, dated May 12, 2004 (incorporated by reference to Exhibit 4.2(b) to the Company's Registration Statement on Form S-1, as filed with the SEC on January 17, 2006 (Registration No. 333-131050))
4.2(c)	Amendment No. 2, dated March 16, 2006, to Third Amended and Restated Investor Rights Agreement, dated May 12, 2004 (incorporated by reference to Exhibit 4.2(c) to Amendment No. 4 to the Company's Registration Statement on Form S-1, as filed with the SEC on March 24, 2006 (Registration No. 333-131050))
10.1*	Form of Indemnification Agreement between the Company and each of its directors and members of executive management (incorporated by reference to Exhibit 10.1 to Amendment No. 3 to the Company's Registration Statement on Form S-1, as filed with the SEC on March 16, 2006 (Registration No. 333-131050))
10.2	Sublease, dated December 4, 2012, by and between the Company and B/E Aerospace, Inc. (incorporated by reference to Exhibit 10.2 to the Company's Annual Report on Form 10-K for the Year Ended December 31, 2012).
10.3(a)*	Amended and Restated Targacept, Inc. 2000 Equity Incentive Plan (incorporated by reference to Exhibit 99 to the Company's Registration Statement on Form S-8, as filed with the SEC on May 8, 2006 (Registration No. 333-133882))
10.3(b)*	Form of Incentive Stock Option Agreement under Targacept, Inc. 2000 Equity Incentive Plan (incorporated by reference to Exhibit 10.5(b) to the Company's Registration Statement on Form S-1, as filed with the SEC on January 17, 2006 (Registration No. 333-131050))
10.3(c)*	Form of Non-employee Director Nonqualified Stock Option Agreement under Targacept, Inc. 2000 Equity Incentive Plan (incorporated by reference to Exhibit 10.5(c) to the Company's Registration Statement on Form S-1, as filed with the SEC on January 17, 2006 (Registration No. 333-131050))
10.3(d)*	Form of Restricted Stock Award Agreement under Targacept, Inc. 2000 Equity Incentive Plan (incorporated by reference to Exhibit 10.5(d) to the Company's Registration Statement on Form S-1, as filed with the SEC on January 17, 2006 (Registration No. 333-131050))

Exhibit Number	Description
10.4(a)*	Targacept, Inc. 2006 Stock Incentive Plan, as amended and restated through March 9, 2011 and further amended on December 7, 2012, March 13, 2013 and April 10, 2013 (incorporated by reference to Exhibit 99 to the Company's Registration Statement on Form S-8, as filed with the SEC on June 6, 2013 (Registration No. 333-189143))
10.4(b)*	Form of Incentive Stock Option Agreement under Targacept, Inc. 2006 Stock Incentive Plan (incorporated by reference to Exhibit 10.6(a) to Amendment No. 3 to the Company's Registration Statement on Form S-1, as filed with the SEC on March 16, 2006 (Registration No. 333-131050))
10.4(c)*	Form of Nonqualified Stock Option Agreement under Targacept, Inc. 2006 Stock Incentive Plan (incorporated by reference to Exhibit 10.6(b) to Amendment No. 3 to the Company's Registration Statement on Form S-1, as filed with the SEC on March 16, 2006 (Registration No. 333-131050))
10.4(d)*	Form of Non-employee Director Nonqualified Stock Option Agreement under Targacept, Inc. 2006 Stock Incentive Plan (incorporated by reference to Exhibit 10.6(c) to Amendment No. 3 to the Company's Registration Statement on Form S-1, as filed with the SEC on March 16, 2006 (Registration No. 333-131050))
10.4(e)*	Form of Restricted Stock Award Agreement under Targacept, Inc. 2006 Stock Incentive Plan (updated 2014)
10.5*	Separation Agreement and Release, dated June 21, 2012, by and between the Company and J. Donald deBethizy (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the Quarter Ended June 30, 2012)
10.6(a)*	Employment Agreement, dated as of February 8, 2002, by and between the Company and Alan A. Musso (incorporated by reference to Exhibit 10.11 to the Company's Registration Statement on Form S-1, as filed with the SEC on January 17, 2006 (Registration No. 333-131050))
10.6(b)*	Amendment No. 1, dated March 13, 2008, to Employment Agreement, dated as of February 8, 2002, by and between the Company and Alan A. Musso (incorporated by reference to Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q for the Quarter Ended March 31, 2008)
10.7*	Separation Agreement and Release, dated as of March 29, 2013, by and between the Company and Jeffrey P. Brennan (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the Quarter Ended March 31, 2013)
10.8*	Transition Services Agreement, effective as of August 13, 2013, by and between the Company and Peter A. Zorn (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on August 13, 2013)
10.9*	Employment Agreement, effective as of November 14, 2012, by and between the Company and Stephen A. Hill (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on November 16, 2012)
10.10*	Nonqualified Stock Option Agreement, dated December 3, 2012, by and between the Company and Stephen A. Hill (incorporated by reference to Exhibit 99.1 to the Company's Registration Statement on Form S-8, as filed with the SEC on January 4, 2013 (Registration No. 333-185888))
10.11*	Form of Retention Award Agreement by and between the Company and its executive officers and certain other personnel (incorporated by reference to Exhibit 10.11 to the Company's Annual Report on Form 10-K for the Year Ended December 31, 2012)
10.12(a)+	Amended and Restated License Agreement, dated as of March 9, 2004, by and between the Company and University of South Florida Research Foundation, Inc. (incorporated by reference to Exhibit 10.16 to the Company's Registration Statement on Form S-1, as filed with the SEC on January 17, 2006 (Registration No. 333-131050))

Exhibit Number	Description
10.12(b)+	Amendment No. 1, effective September 21, 2009, to Amended and Restated License Agreement dated March 9, 2004, by and between the Company and University of South Florida Research Foundation, Inc. (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the Quarter Ended September 30, 2009)
10.13(a)+	License Agreement, dated May 26, 1999, by and between the Company and University of Kentucky Research Foundation (incorporated by reference to Exhibit 10.18(a) to the Company's Registration Statement on Form S-1, as filed with the SEC on January 17, 2006 (Registration No. 333-131050))
10.13(b)+	Amendment No. 1, dated August 16, 2005, to License Agreement, dated May 26, 1999, by and between the Company and University of Kentucky Research Foundation (incorporated by reference to Exhibit 10.18(b) to Amendment No. 5 to the Company's Registration Statement on Form S-1, as filed with the SEC on April 6, 2006 (Registration No. 333-131050))
10.14+	Amended and Restated Supply Agreement, effective December 3, 2009, by and among the Company, Interchem Corporation and Euticals S.p.A. (as successor to Poli Industria Chimica, SPA) (incorporated by reference to Exhibit 10.19 to the Company's Annual Report on Form 10-K for the Year Ended December 31, 2009)
10.15*	Description of Annual Cash Incentive Program (incorporated by reference to Exhibit 10.16 to the Company's Annual Report on Form 10-K for the Year Ended December 31, 2012)
10.16*	Description of Non-Employee Director Compensation Program (incorporated by reference to Exhibit 10.17 to the Company's Annual Report on Form 10-K for the Year Ended December 31, 2012)
10.17*	Employment Agreement, effective as of August 26, 2013 by and between the Company and Patrick C. Rock (incorporated by reference in Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the Quarter Ended September 30, 2013)
10.18*	Form of Non-employee Director Nonqualified Stock Option Agreement under Targacept, Inc. 2006 Stock Incentive Plan (incorporated by reference in Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the Quarter Ended September 30, 2013)
10.19	At-the-Market Issuance Sales Agreement, dated November 26, 2013, by and between the Company and MLV & Co., LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on November 26, 2013)
10.20*	Employment Agreement, effective as of June 28, 2013, by and between the Company and Steven M. Toler, Ph.D. (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the Quarter Ended June 30, 2013)
10.21*	Employment Agreement, effective as of June 28, 2013, by and between the Company and David A. Hosford, M.D. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on June 28, 2013)
10.22*	Amendment No. 1 to Employment Agreement, dated January 24, 2014, by and between the Company and Stephen A. Hill (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on January 28, 2014)
10.23*	Amended and Restated Employment Agreement, dated January 24, 2014, by and between the Company and Alan A. Musso (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, as filed with the SEC on January 28, 2014)
10.24*	Employment Agreement, effective as of October 8, 2014, by and between the Company and Scott N. Cullison

Exhibit Number	Description
10.25*	Employment Agreement, effective as of June 28, 2013, by and between the Company and Mauri K. Hodges (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on December 16, 2014)
10.26	Form of Targacept Voting Agreement dated as of March 5, 2015 entered into by and among the Company, Catalyst and certain stockholders of Targacept (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on March 6, 2015)
10.27	Form of Catalyst Voting Agreement dated as of March 5, 2015 entered into by and among Catalyst, the Company and certain stockholders of Catalyst (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, as filed with the SEC on March 6, 2015)
10.28	Form of Lock-Up Agreement dated as of March 5, 2015 entered into by and among Catalyst, the Company and certain stockholders of Catalyst (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K, as filed with the SEC on March 6, 2015)
23.1	Consent of Ernst & Young LLP
31.1	Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101	The following materials from the Company's Annual Report on Form 10-K for the year ended December 31, 2014, formatted in XBRL (eXtensible Business Reporting Language): (i) the Balance Sheets, (ii) the Statements of Operations, (iii) the Statements of Stockholders' Equity, (iv) the Statements of Cash Flows, and (v) Notes to Financial Statements, tagged as blocks of text.

+ Confidential treatment has been granted with respect to certain portions of this Exhibit, which portions have been omitted and filed separately with the SEC as part of an application for confidential treatment.

++Confidential treatment has been requested with respect to certain portions of this Exhibit, which portions have been omitted and filed separately with the SEC as part of an application for confidential treatment.

* Denotes management contract, compensatory plan or arrangement.

Our SEC file number for documents filed with the SEC pursuant to the Securities Exchange Act of 1934, as amended, is 000-51173.

Exhibit 10.4(e)

TARGACEPT, INC.
2006 STOCK INCENTIVE PLAN

Restricted Stock Award Agreement

THIS AGREEMENT (together with Schedule A, attached hereto, the "Agreement"), effective as of the date specified as the "Grant Date" on Schedule A, attached hereto, between TARGACEPT, INC. a Delaware corporation (the "Corporation"), and the individual identified on Schedule A, attached hereto, an Employee, Director or Independent Contractor of the Corporation or an Affiliate (the "Participant");

R E C I T A L S :

In furtherance of the purposes of the Targacept, Inc. 2006 Stock Incentive Plan, as amended and restated and as it may be further 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, 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 the Administrator determines otherwise. Unless otherwise defined herein, capitalized terms in this Agreement shall have the same definitions as set forth in 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 the individual identified on Schedule A.

(b) The "Grant Date" is the grant date specified on Schedule A.

(c) The "Restriction Period" is the period beginning on the Grant Date and ending on such date or dates and satisfaction of such conditions as described in Schedule A, which is attached hereto and expressly made a part of this Agreement.

(d) The number of shares of Common Stock subject to the Restricted Stock Award granted under this Agreement shall be such number of shares (the "Shares") as specified on Schedule A.

3. Grant of Restricted Stock Award. Subject to the terms of this Agreement and the Plan, the Corporation hereby grants the Participant, as a matter of separate inducement and agreement in connection with his or her employment with or service to the Corporation, and not in lieu of any salary or other compensation for his or her service, a Restricted Stock Award (the "Award") for that number of Shares of Common Stock as is set forth in Section 2. The Participant expressly acknowledges that the terms of Schedule A shall be incorporated herein by reference and shall constitute part of this Agreement. The Corporation and the Participant further acknowledge that the signatures of the Corporation and the Participant on the Grant Notice contained in Schedule A shall constitute their acceptance of all of the terms of this Agreement and their agreement to be bound by the terms of this Agreement.

4. Vesting and Earning of Award.

(a) Subject to the terms of the Plan and this Agreement, the Award shall be deemed vested and earned upon such date or dates, and subject to such conditions, as are described in this Agreement, including but not limited to the terms of Schedule A, attached hereto. 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. The Participant expressly acknowledges that the Award shall vest only upon such terms and conditions as are provided in this Agreement (including but not limited to Schedule A) and otherwise in accordance with the terms of the Plan. In addition, notwithstanding any other provision of the Agreement to the contrary, in the event that the Participant has entered into an employment agreement or similar agreement with the Corporation that provides for vesting of the Award in whole or in part upon the occurrence of a change in control or termination of employment under certain conditions or other event(s), the Participant shall be entitled to the greater of the benefits provided under the employment agreement or similar agreement or this Agreement, and such employment agreement or similar agreement shall not be construed to reduce in any way the benefits otherwise provided to the Participant under this Agreement, or vice versa.

(b) The Administrator has sole authority to determine whether and to what degree the Award has vested and been earned and is payable and to interpret the terms and conditions of this Agreement and the Plan.

5. Effect of Termination of Employment or Service; Forfeiture of Award. Except as may be otherwise provided in the Plan or this Agreement (including but not limited to Schedule A), in the event that the employment or service of the Participant is terminated for any reason (whether by the Corporation or the Participant, and whether voluntary or involuntary) and all or part of the Award has not been earned or vested as of the Participant's Termination Date pursuant to the terms of this Agreement, 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 or her employment or service shall (except as may otherwise be provided in this Agreement or the Plan) result in forfeiture of the Award and the Shares to the extent the Award has not been earned and vested as of his or her Termination Date.

6. Settlement of Award. The Award shall be payable in whole shares of Common Stock. The total number of Shares that may be acquired upon vesting of the Award (or portion thereof) shall be rounded down to the nearest whole share.

7. No Right of Employment or Service or Future Awards. Neither the Plan, this Agreement nor any other action related to the Plan shall confer upon the Participant any right to continue in the employment or service of the Corporation or an Affiliate or interfere in any way with the right of the Corporation or an Affiliate to terminate the Participant's employment or service at any time. Except as otherwise expressly provided in the Plan or this Agreement (including but not

limited to Schedule A), all rights of the Participant with respect to the unvested portion of the Award shall terminate upon termination of the employment of the Participant with the Corporation or an Affiliate. The grant of the Award does not create any obligation to grant further awards.

8. Nontransferability of Award and Shares. The Award shall not be transferable (including by sale, assignment, pledge or hypothecation) other than by will or the laws of intestate succession. The designation of a beneficiary in accordance with the Plan does not constitute a transfer. The Participant shall not sell, transfer, assign, pledge or otherwise encumber the Shares subject to the Award (except as provided in Section 12 herein) until the Restriction Period has expired and all conditions to vesting and transfer have been met.

9. Superseding Agreement; Binding Effect. This Agreement supersedes any statements, representations or agreements of the Corporation with respect to the grant of the Award, any other equity-based awards or any related rights, and the Participant hereby waives any rights or claims related to any such statements, representations or agreements. This Agreement does not supersede or amend any existing confidentiality agreement, nonsolicitation agreement, noncompetition agreement, employment agreement or any other similar agreement between the Participant and the Corporation, including, but not limited to, any restrictive covenants contained in such 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.

10. 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, and in accordance with applicable federal laws of the United States.

11. 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. Notwithstanding the foregoing, the Administrator shall have unilateral authority to amend the Plan and this Agreement (without Participant consent) to the extent necessary to comply with Applicable Law or changes to Applicable Law (including but not limited to federal securities laws and Code Section 409A). 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.

12. Certificates for Shares; Rights as 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 Award and shall not have any rights of a stockholder unless and until certificates for such shares have been issued to him or her or them. A certificate or certificates for Shares subject to the Award shall be issued in the name of the Participant as soon as practicable after the Award has been granted. Notwithstanding the foregoing, the Administrator may require that (a) the Participant deliver the certificate(s) for the Shares to the Administrator or its designee to be held in escrow until the Award vests (in which case the Shares will be released to the Participant) or is forfeited (in which case the Shares shall be returned to the Corporation); and/or (b) the Participant deliver to the Corporation a stock power or similar instrument, endorsed in blank, relating to the Shares subject to the Award which are subject to forfeiture. Except as otherwise provided in the Plan or the Agreement, the Participant will have all voting, dividend and other rights of a stockholder with respect to the Shares following issuance of the certificate or certificates for the Shares; provided, however, that if any cash or non-cash dividends are declared and paid by the Corporation with respect to any such Shares, such dividends shall be subject to the same vesting schedule, forfeiture terms and other restrictions as are applicable to the Shares upon which such dividends are paid.

13. Withholding; Tax Matters.

(a) The Participant acknowledges that the Corporation shall require the Participant to pay the Corporation in cash the amount of any local, state, federal, foreign 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 or any other benefit, to satisfy such obligations. Notwithstanding the foregoing, the Administrator may establish procedures to permit the Participant to satisfy such obligations in whole or in part, and any other local, state, federal, foreign or other income tax obligations relating to the Award, by electing (the "election") to have the Corporation withhold shares of Common Stock from any Shares to which the Participant 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.

(b) The Participant acknowledges that the Corporation has made no warranties or representations to the Participant with respect to the tax consequences (including but not limited to income tax consequences) related to 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. The Participant acknowledges that there may be adverse tax consequences upon the grant or vesting of the Award and/or the acquisition or disposition of the Shares subject to the Award and that he or she has been advised that he or she should consult with his or her own attorney, accountant and/or tax advisor regarding the decision to enter into this Agreement and the consequences thereof. The Participant also acknowledges that the Corporation has no responsibility to take or refrain from taking any actions in order to achieve a certain tax result for the Participant.

14. 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, and the Administrator shall have all powers with respect to this Agreement as are provided in the Plan, including but not limited to the sole authority to determine whether and to what degree the Award has been earned and vested. Any interpretation of the Agreement by the Administrator and any decision made by it with respect to the Agreement is final and binding.

15. Notices. Except as may be otherwise provided by the Plan or determined by the Administrator, 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 on Schedule A (or at such other address as may be designated by the Participant in a manner acceptable to the Administrator), or if to the Corporation, at the Corporation's principal office, attention Chief Financial Officer, Targacept, Inc. Notice may also be provided by electronic submission, if and to the extent permitted by the Administrator.

16. 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.

17. Restrictions on Award and Shares. The Corporation may impose such restrictions on the Award and any Shares or other benefits underlying the Award 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, state or foreign securities laws applicable to such Award or 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, make any other distribution of benefits, or take any other action, unless such delivery, distribution or action is in compliance with all Applicable Law (including but not limited to the requirements of the Securities Act). The Corporation may cause a restrictive legend or legends (including but in no way limited to any legends which may be necessary or appropriate pursuant to Section 12 herein) 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.

18. Effect of Changes in Status. Unless the Administrator, in its sole discretion, determines otherwise (or unless required by Code Section 409A), the Award shall not be affected by any change in the terms, conditions or status of the Participant's employment or service, provided that the Participant continues to be in the employment of, or in service to, the Corporation or an Affiliate. Without limiting the foregoing, the Administrator has sole discretion to determine, subject to Code Section 409A, at the time of grant of the Award or at any time thereafter, the effect, if any, on the Award if the Participant's status as an Employee, Director or Independent Contractor changes, including but not limited to a change from full-time to part-time, or vice versa, or if other similar changes in the nature or scope of the Participant's employment or service occur.

19. Right of Offset. Notwithstanding any other provision of the Plan or the Agreement, the Corporation may (subject to any Code Section 409A considerations) reduce the amount of any payment otherwise payable to or on behalf of the Participant by the amount of any obligation of the Participant to the Corporation that is or becomes due and payable and the Participant shall be deemed to have consented to such reduction.

20. Counterparts; Further Instruments. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. The parties hereto agree to execute such further instruments and to take such further action as may be reasonably necessary to carry out the purposes and intent of this Agreement.

21. Compliance with Recoupment, Ownership and Other Policies or Agreements. As a condition to receiving this Award, the Participant agrees that he or she shall abide by all provisions of any equity retention policy, compensation recovery policy, stock ownership guidelines and/or other similar policies maintained by the Corporation, each as in effect from time to time and to the extent applicable to the Participant from time to time. In addition, the Participant shall be subject to such compensation recovery, recoupment, forfeiture or other similar provisions as may apply at any time to the Participant under Applicable Law.

[Signatures of the Corporation and the Participant follow on Schedule A/Grant Notice]

TARGACEPT, INC.
2006 STOCK INCENTIVE PLAN
Restricted Stock Award Agreement

Schedule A/Grant Notice

1. Grant Terms. Pursuant to the terms and conditions of the Corporation's 2006 Stock Incentive Plan, as amended and restated and as it may be further amended (the "Plan"), and the Restricted Stock Award Agreement attached hereto (the "Agreement"), you (the "Participant") have been granted a Restricted Stock Award (the "Award") for shares of Common Stock (the "Shares"). Unless otherwise defined herein, capitalized terms in this Schedule A shall have the same definitions as set forth in the Agreement and the Plan.

Name of Participant: _____
Address: _____
_____
_____
Grant Date: _____
Shares Subject to Award: _____

2. Vesting of Award*. In addition to any vesting terms stated in the Plan or the Agreement, the following terms shall apply:

(a) *General Vesting Terms*.

(i) The Award shall be deemed vested with respect to percent (%) of the Shares subject to the Award on , 20 , subject to the continued employment or service of the Participant with the Corporation or an Affiliate through such vesting date;

(ii) The Award shall be deemed vested with respect to an additional percent (%) (for a total of percent (%)) of the Shares subject to the Award on , 20 , subject to the continued employment or service of the Participant with the Corporation or an Affiliate through such vesting date;

(iii) The Award shall be deemed vested with respect to an additional percent (%) (for a total of percent (%)) of the Shares subject to the Award on , 20 , subject to the continued employment or service of the Participant with the Corporation or an Affiliate through such vesting date; and

(iv) The Award shall be deemed vested with respect to an additional percent (%) (for a total of one hundred percent (100%)) of the Shares subject to the Award on , 20 , subject to the continued employment of the Participant with the Corporation or an Affiliate through such vesting date.

[Modify vesting schedule as appropriate.]

* Subject to terms and conditions of the Plan and/or the Agreement.

3. By my signature below, I, the Participant, hereby acknowledge receipt of this Grant Notice and the Restricted Stock Award Agreement (the "Agreement") dated , 20 , between the Participant and Targacept, Inc. (the "Corporation"), which is attached to this Grant Notice. I understand that the Grant Notice and other provisions of Schedule A herein are incorporated by reference into the Agreement and constitute a part of the Agreement. By my signature below, I further agree to be bound by the terms of the Plan and the Agreement, including but not limited to the terms of this Grant Notice and the other provisions of Schedule A contained herein. The Corporation reserves the right to treat the Award and the Agreement as cancelled, void and of no effect if the Participant fails to return a signed copy of the Grant Notice within 30 days of receipt.

Signature: _____ Date: _____

Agreed to by:

TARGACEPT, INC

By: _____
Name: Stephen A. Hill
Title: President and Chief Executive Officer

ATTEST:

_____
Patrick C. Rock
Senior Vice President, General Counsel and Secretary

Note: If there are any discrepancies in the name shown above, please make the appropriate corrections on this form and return to Targacept, Inc., attention Vice President, Human Resources. Please retain a copy of the Agreement, including this Grant Notice, for your files.

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT (this "**Agreement**") is made effective as of October 8, 2014 (the "**Effective Date**") by and between Targacept, Inc., a Delaware corporation ("**Employer**" or the "**Company**"), and Scott N. Cullison, 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 continue 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, Business Development of Employer. Employee will be located at Employer's principal executive offices in Winston-Salem, NC or such other location as may be approved by Employer's chief executive officer. Employee hereby accepts and agrees to such employment. Employee shall perform such duties and shall have such powers, authority and responsibilities as are customary for one holding the position of Vice President, Business 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 Employee's assigned manager, Employer's chief executive officer or Employer's Board of Directors (the "**Board**").

2. Term of Employment. Employee's employment with Employer shall continue until terminated as provided in Section 6 or Section 7 (the period from the Effective Date to the effective date of such termination, the "**Term**"). Any termination of Employee's employment with Employer or 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, an annual base salary of not less than $210,000.00 (17,500.00 per month), 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.

(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 may be determined by the Board (or a compensation committee thereof) from time to time (Employee's "**Target Annual Bonus**"). Eligibility for the Target Annual Bonus shall be based upon the achievement of performance objectives established by, or in a manner approved by, the Board (or a compensation committee thereof) and shall be payable within thirty (30) days after 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 also be entitled during the Term to holidays, sick leave and other time off and to participate in those life, health or other insurance plans and other employee retirement and welfare benefit programs, plans, practices and benefits generally made available from time to time to similarly situated executives of Employer; provided that nothing herein shall obligate Employer to continue any of such programs, plans, practices or benefits for Employee if discontinued for all other similarly situated executives of Employer. Without limiting the foregoing, Employee shall be entitled to paid vacation during each fiscal year of the Term of not less than 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 the duties of his employment under this Agreement and also, to the extent consistent with Employer's policy, for any dues and costs of membership for appropriate professional organizations 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 executive or otherwise working in the same or similar capacity for 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 (including, without limitation, the NASDAQ Stock Market).

(b) Nondisclosure Covenant. The parties acknowledge that Employer and its affiliates are enterprises the success of which is attributable largely to the ownership, use and development of certain valuable confidential and proprietary information ("**Proprietary Information**") and that Employee's employment with Employer will involve access to and work with Proprietary Information. Employee acknowledges that his relationship with Employer is a confidential relationship and agrees that he shall: (i) keep and maintain all Proprietary Information in strictest confidence; (ii) not, either directly or indirectly, use any Proprietary Information for his own benefit; and (iii) not, either directly or indirectly, 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 or 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 information related to the business of Employer, any of its affiliates or any third party whose information Employee had access to by virtue of his employment with Employer, or to any of their respective products, services, sales or operations, that 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 or related source codes or object codes; improvements; inventions; techniques; business, operating, marketing, partnering or merger and acquisition plans; strategies; forecasts; copyrightable material; suppliers; vendors; 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, 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 that are made, furnished, sold, leased, used or developed by Employer or its affiliates or that pertain to the business of Employer (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 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) 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 this Section 5 are reasonably necessary for the protection of Employer, its affiliates and their respective 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 (i) nine (9) months following termination of Employee's employment with Employer, unless clause (ii) applies, or (ii) if applicable, the last day of the Severance Period pursuant to Section 7(d)(A).

(h) Noncompetition Area. The "**Noncompetition Area**" shall consist of the entire world, North America, the United States and Europe.

(i) Business. For the purposes of this Agreement, the "**Business**" shall mean the business of developing, manufacturing, marketing or selling any therapeutic product: (i) that contains or is comprised of, in whole or in part, a chemical compound that modulates or otherwise affects any nicotinic acetylcholine receptor in humans; or (ii) that is substantially similar to, or competitive with, any product candidate in development, or any product manufactured, marketed or sold, by Employer during Employee's employment with Employer; provided, however, that during the portion of the Noncompetition Period after termination of Employee's employment, no product or product candidate will be considered competitive with the Company's products or product candidates unless it is substantially similar to, or competitive with, a product candidate in development, or a product manufactured, marketed or sold, by Employer during the five (5)-year period ending on the date of termination of Employee's employment.

6. Disability. Upon the "disability" of Employee, this Agreement and the employment relationship hereunder may be terminated by action of the Board upon thirty (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 employment with Employer and this Agreement shall terminate at the effective time of the Disability Notice. 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 insurer 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 for six (6) 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 this Agreement and the employment relationship hereunder at any time, with or without Just Cause, effective at such time as may be determined by Employer's chief executive officer or the Board; provided that any termination with Just Cause shall require written notice to Employee. "**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 or workplace harassment; or (vi) Employee's commission of any act (or omission) contrary to the ethical or professional standards generally expected of Employer or 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 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 (i) any base salary earned and due but not yet paid through the effective date of termination plus (ii) any bonus or other compensation earned and due pursuant to the express terms of any Company plan or program but not yet paid through the effective date of termination, such lump sum to be payable within thirty (30) days after such effective date of termination.

In addition, if this Agreement and Employee's employment hereunder is terminated by Employer (or its successor) other than for Just Cause (and, for clarity, other than as a result of Employee's death), or by Employee within one (1) year following the first occurrence of Good Reason, Employee shall be entitled to the following:

(A) severance, payable monthly, in an amount and for a period as follows: (1) if such termination occurs concurrent with or within twelve (12) months following, or in connection with but prior to, a Change in Control, the sum of Employee's then current monthly base salary plus one-twelfth (1/12th) of Employee's Target Annual Bonus, for twelve (12) months following such termination; or (2) if otherwise, Employee's then current monthly base salary for nine (9) months following such termination (the time period in clause (1) or clause (2), whichever is applicable, the "**Severance Period**"); provided that, in the event the aggregate amount payable in the Severance Period based on the foregoing would exceed the greater of:

(x) two times the lesser of:

(aa) the sum of Employee's annualized compensation based upon his annual base salary for his taxable year preceding his taxable year in which his employment hereunder terminates (adjusted for any increase during that year that was expected to continue indefinitely if Employee's employment had not terminated); or

(bb) the maximum amount that may be taken into account under a qualified plan pursuant to Section 401(a)(17) of the Internal Revenue Code of 1986, as amended (the "**Code**"), for the year in which Employee's employment hereunder is terminated; or

(y) the maximum amount that would be exempt under Section 409A of the Code;

then, Employer (or its successor) shall pay the amount of such excess to Employee in a lump sum on the date that is two and one-half months following the end of Employer's (or its successor's) taxable year during which the termination of Employee's employment occurs.

(B) if such termination occurs concurrent with or within twelve (12) months following, or in connection with but prior to, a Change in Control, full acceleration of vesting for unvested options to purchase capital stock, and restricted stock or other equity- based awards (if any), of Employer (or its successor) held by Employee and outstanding as of the effective date of termination; and otherwise six (6) months acceleration of vesting for unvested options to purchase capital stock, and restricted stock or other equity-based awards (if any), of Employer (or its successor) held by Employee and outstanding as of the effective date of termination. The terms of this clause (B) shall be deemed incorporated into each option or similar agreement evidencing an award made to Employee before or after the Effective Date.

(C) continuation of (1) the life insurance benefits coverage and (2) the health care (including medical and dental) benefits coverage, in each case provided to Employee (and, if applicable, his spouse and dependents) at his date of termination 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; provided that (x) Employer shall have no obligation under the foregoing clause (2) unless Employee shall have made a timely election of continuation under the Consolidated Omnibus Budget Reconciliation Act of 1985 (commonly referred to as "COBRA") and (y) the same percentage of the total cost for such life insurance or health care coverage as Employee was paying at the time of termination shall continue during the Severance Period to be paid by Employee. If the terms of any of Employer's group health, dental or term life insurance plans referred to in this section do not permit continued participation by Employee or if permitting such continued participation would result in the imposition of an excise tax against Employer under Section 4980D (or any successor section) of the Code, then Employer will arrange for other coverage providing substantially similar benefits at the same contribution level of Employee.

(D) outplacement counseling services selected by Employee, up to a maximum of $10,000 and provided that (1) such expense is incurred by Employee on or before the second anniversary of December 31 of the year during which the termination of Employee's employment occurs and (2) such amount is paid by Employer on or before the third anniversary of December 31 of the year during which the termination of Employee's employment occurs.

(e) If Employer (or its successor) terminates Employee's employment for Just Cause, Employee shall forfeit any unexercised vested or unvested stock options (and other equity-based awards, to the extent unvested, if any) 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, with respect to each vested stock option, until the earlier of (i) three (3) months from the date of termination or (ii) the last day of the applicable option period/term to exercise such vested stock option.

(f) For purposes of this Agreement:

"**Change in Control**" shall be deemed to have occurred on the earliest of the following dates:

(i) the date any entity or person shall have become the beneficial owner of, or shall have obtained voting control over, more than fifty percent (50%) of the outstanding Common Stock of Employer;

(ii) the date of the consummation of: (A) a merger, consolidation, reorganization or similar business transaction of Employer with or into another corporation or other business entity (each, a "corporation"), in which Employer is not the continuing or

surviving entity or pursuant to which any shares of Common Stock of Employer would be converted into cash, securities or other property of another entity, other than a transaction of Employer in which holders of Common Stock immediately prior to the transaction continue to own at least 50% of the outstanding Common Stock, or if Employer is not the surviving entity, the common stock (or other voting securities) of the surviving entity immediately after the transaction as immediately before; or (B) the sale or other disposition of all or substantially all of the assets of Employer; or

(iii) the date on which the Continuing Directors (as defined below) do not constitute a majority of the Board (or, if applicable, the Board of Directors of a successor corporation to the Company), where the term "**Continuing Director**" means at any date a member of the Board (A) who was a member of the Board on the date of this Agreement, or (B) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such nomination or election; provided, however, that there shall be excluded from this clause (B) any individual whose initial assumption of office occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board.

(For the 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 Securities Exchange Act of 1934, as amended (the "Exchange Act"), other than Employer, a subsidiary of Employer or any employee benefit plan(s) sponsored or maintained by Employer or any subsidiary thereof, and the term "beneficial owner" shall have the meaning given the term in Rule 13d-3 under the Exchange Act.)

The Board shall have full and final authority, in its discretion, to determine whether a Change in Control of Employer has occurred pursuant to the above definition, the date of the occurrence of such Change in Control and any incidental matters relating thereto.

"**Good Reason**" shall mean the occurrence of any of the following events without Employee's express written consent:

(i) the material breach by Employer (or its successor) of any material provision of this Agreement;

(ii) any purported termination of the employment of Employee by Employer (or its successor) that is not effected in accordance with this Agreement;

(iii) any failure of Employer (or its successor) to pay Employee any amounts of salary or bonus compensation that have become due and payable to Employee within thirty (30) days after Employee has given Employer (or its successor) notice of demand therefor;

(iv) a reduction in Employee's annual base salary unless the reduction is part of, and at the same percentage as, an across-the-board salary reduction for all similarly-situated executives;

(v) any material diminution in Employee's duties, responsibilities, authority, reporting structure, status or title, unless approved in writing by Employee; or

(vi) being required by Employer to relocate to a location more than fifty (50) miles from Employer's corporate offices as of the Effective Date (Winston-Salem, North Carolina);

provided that Good Reason pursuant to any of clauses (i), (ii), (iii), (iv), (v) or (vi) above shall be conditional on (A) Employee having provided written notice to Employer (or its successor) of the initial existence of any or all of the foregoing events within ninety (90) days of the initial existence of such event and (B) such event continuing to exist thirty (30) days after the date of such written notice from Employee.

(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 (i) the payment of any severance or other benefits pursuant to this Section 7 shall be contingent on the delivery by Employee to Employer of a release and waiver of legal claims related to the employment relationship between Employee and Employer in a form reasonably acceptable to Employer and (ii) 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. Notwithstanding anything to the contrary in this Section 7, any release referenced in this Section 7(g) must be executed and provided to Employer, and the period for revoking same must have expired, before the forty-fifth (45th) day following the effective date of termination of employment (or shall otherwise be structured in a manner so that all payments under this Section 7 are exempt from or made in compliance with Section 409A of the Code). Specifically but without limitation, if any payments made under this Section 7 are not exempt from Section 409A of the Code and if the forty-five (45) day period described in the preceding sentence begins in one tax year and extends into a second tax year, such payments shall commence during the second tax year.

(h) To the extent applicable, Employer and Employee intend that this Agreement comply with Section 409A of the Code. The parties hereby agree that this Agreement shall at all times be construed in a manner to comply with Section 409A and that should any provision be found not in compliance with Section 409A, the parties are hereby contractually obligated to execute any and all amendments to this Agreement deemed necessary and required by legal counsel to achieve compliance with Section 409A. In the event amendments are required to be made to this Agreement to comply with Section 409A, Employer shall use its best efforts to provide Employee with substantially the same payments he would have been entitled to pursuant to this Agreement had Section 409A not applied, but in a manner that is compliant with Section 409A. The manner in which the immediately preceding sentence shall be implemented shall be the subject of good faith negotiations of the parties. The parties also agree that in no event shall any payment required to be made pursuant to this Agreement that is considered deferred compensation within the meaning of Section 409A be accelerated in violation of Code Section 409A.

(i) Notwithstanding anything in this Agreement to the contrary, in the event it shall be determined that (i) any payment, award, benefit or distribution (or any acceleration of any payment, award, benefit or distribution) by Employer (or its successor) or any entity which effectuates a Change in Control (or any of its affiliated entities) to or for the benefit of Employee (whether pursuant to the terms of this Agreement or otherwise) (the "**Payments**") would be subject to the excise tax imposed by Section 4999 of the Code (the "**Excise Tax**"), and (ii) the reduction of the amounts payable to Employee under this Agreement to the maximum amount that could be paid to Employee without giving rise to the Excise Tax (the "**Safe Harbor Cap**") would provide Employee with a greater after-tax amount than if such amounts were not reduced, then the amounts payable to Employee under this Agreement shall be reduced (but not below zero) to the Safe Harbor Cap. Unless Employer (or its successor) and Employee agree otherwise, the reduction of the amounts payable hereunder, if applicable, shall be made to the extent necessary in the following order: (i) first, any such Payments that became fully vested prior to the Change in Control and that pursuant to paragraph (b) of Treas. Reg. § 1.280G-1, Q/A 24, are treated as contingent compensation payments solely by reason of the acceleration of their originally scheduled dates of payment will be reduced, by cancellation of the acceleration of their vesting; (ii) second, any severance payments or benefits, performance-based cash or equity incentive awards, or other contingent compensation payments the full amounts of which are treated as contingent on the Change in Control where paragraphs (b) and (c) of Treas. Reg. § 1.280G-1, Q/A 24 do not apply, will be reduced; and (iii) third, any cash or equity incentive awards, or nonqualified deferred compensation amounts, that vest solely based on Employee's continued service with Employer (or its successor), and that pursuant to paragraph (c) of Treas. Reg. § 1.280G-1, Q/A 24, are treated as contingent on the Change in Control because they become vested as a result of the Change in Control, will be reduced, first by cancellation of any acceleration of their originally scheduled dates of payment (if payment with respect to such items is not treated as automatically occurring upon the vesting of such items for purposes of Section 280G of the Code) and then, if necessary, by canceling the acceleration of their vesting. In each case, the amounts of the contingent compensation payments will be reduced in the inverse order of their originally scheduled dates of payment or vesting, as applicable, and will be so reduced only to the extent necessary to achieve the required reduction. For purposes of reducing the Payments to the Safe Harbor Cap, only amounts payable under this Agreement (and no other Payments) shall be reduced. If the reduction of the amounts payable hereunder would not result in a greater after-tax result to Employee, no amounts payable under this Agreement shall be reduced pursuant to this provision.

(A) All determinations required to be made under this Section 7(i) shall be made by the public accounting firm that is retained by Employer (or its successor) as of the date immediately prior to the Change in Control (the "**Accounting Firm**"), which shall provide detailed supporting calculations both to Employer (or its successor) and Employee within fifteen (15) business days of the receipt of notice from Employer (or its successor) or Employee that there has been a Payment, or such earlier time as is requested by Employer (or its successor). Notwithstanding the foregoing, in the event (i) the Board shall determine prior to the Change in Control that the Accounting Firm is precluded from performing such services under applicable auditor independence rules or (ii) the Audit Committee of the Board determines that it does not want the Accounting Firm to perform such services because of auditor independence concerns or (iii) the Accounting Firm is serving as accountant or auditor for the person(s) effecting the Change in Control, the Board shall appoint another nationally recognized public accounting firm to make the determinations required hereunder (which accounting firm shall then be referred to as the Accounting Firm hereunder). All fees, costs and expenses (including, but not limited to, the costs of retaining experts) of the Accounting Firm shall be borne by Employer (or its successor). If payments are reduced to the Safe

Harbor Cap or the Accounting Firm determines that no Excise Tax is payable by Employee without a reduction in payments, the Accounting Firm shall provide a written opinion to Employee to such effect, that Employee is not required to report any Excise Tax on Employee's federal income tax return, and that the failure to report the Excise Tax, if any, on Employee's applicable federal income tax return will not result in the imposition of a negligence or similar penalty. The determination by the Accounting Firm shall be binding upon Employer (or its successor) and Employee (except as provided in Section 7(i)(B) below).

(B) If it is established pursuant to a final determination of a court or an Internal Revenue Service (the "**IRS**") proceeding, which has been finally and conclusively resolved, that Payments have been made to, or provided for the benefit of, Employee by Employer (or its successor), which are in excess of the limitations provided in this Section 7(i) (referred to hereinafter as an "**Excess Payment**"), Employee shall repay the Excess Payment to Employer (or its successor) on demand, together with interest on the Excess Payment at the applicable federal rate (as defined in Section 1274(d) of the Code) from the date of Employee's receipt of such Excess Payment until the date of such repayment. As a result of the uncertainty in the application of Section 4999 of the Code at the time of the determination, it is possible that Payments which will not have been made by Employer (or its successor) should have been made (an "**Underpayment**"), consistent with the calculations required to be made under this Section 7(i). In the event that it is determined (i) by the Accounting Firm, Employer (or its successor) (which shall include the position taken by Employer (or its successor), or together with their consolidated group, on their federal income tax returns) or the IRS or (ii) pursuant to a determination by a court, that an Underpayment has occurred, Employer (or its successor) shall pay an amount equal to such Underpayment to Employee within ten (10) days of such determination together with interest on such amount at the applicable federal rate from the date such amount would have been paid to Employee until the date of payment. Employee shall cooperate, to the extent Employee's expenses are reimbursed by Employer (or its successor), with any reasonable requests by Employer (or its successor) in connection with any contests or disputes with the IRS in connection with the Excise Tax or the determination of the Excess Payment. Notwithstanding the foregoing, in the event that amounts payable under this Agreement were reduced pursuant to Section 7(i) and the value of stock options is subsequently re-determined by the Accounting Firm within the context of Treasury Regulation §1.280G-1 Q/A 33 that reduces the value of the Payments attributable to such options, Employer (or its successor) shall promptly pay to Employee any amounts payable under this Agreement that were not previously paid solely as a result of Section 7(i), subject to the Safe Harbor Cap.

(j) To the extent required by law or by any policy, plan or agreement (as each may be in effect from time to time) of Employer, Employer may require Employee to repay to Employer any bonus or other incentive-based or equity-based compensation paid to Employee and to comply with any equity retention policy, stock ownership guidelines or similar guidelines or policies as may be established by Employer, and Employee hereby expressly agrees to comply with any such requirements.

8. Best Efforts of Employee. Employee agrees that he will at all times during the Term 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 during the Term devote substantially all his professional

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 (including, without limitation, the NASDAQ Stock 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; provided that (i) notwithstanding the foregoing, the Proprietary Information, Inventions and Non-Competition Agreement dated October 1, 2007 between Employee and Employer (the "**PIIN Agreement**"), the Retention Award Agreement dated October 10, 2012 between Employee and Employer and all written agreements evidencing stock options granted prior to the Effective Date by Employer to Employee shall continue in full force and effect in accordance with their respective terms and (ii) to the extent of any conflict between the PIIN Agreement and this Agreement, this Agreement shall control from and after the Effective Date. Except as provided in the preceding proviso, any and all such agreements, understandings and arrangements are hereby terminated and of no force or effect and Employee hereby expressly disclaims any rights under any and all such agreements, understandings and arrangements. This Agreement may not be amended or terminated except by an agreement in writing signed by both parties or, for clarity in the case of termination, as provided in Section 6 or Section 7.

(c) This Agreement may be executed in two counterparts, each of which shall be deemed and original and both 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.
100 North Main Street, Suite 1510
Winston-Salem, North Carolina 27101
Attn: Chief Executive Officer

To Employee:

Scott N. Cullison
7847 Forsythia Circle
Clemmons, NC 27012

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 (3) days after deposit in the mails. Either party may designate by written notice to the other party in accordance herewith any other address to which notices addressed to such designating party 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 heirs, representatives, successors or assigns of either party.

(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 (including, without limitation, under Section 7(d)) shall survive any termination of this Agreement 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.

(j) Except as otherwise provided in this Section 9(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 then in effect, 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. Notwithstanding the foregoing, any claim or dispute with respect to or arising out of any of the covenants in Section 5 or the covenant in Section 8 related to Employee's interest in other businesses, or any statutory or common law claim of patent infringement, misappropriation of trade secrets, unfair competition, unfair or deceptive trade practices, interference with contract, or interference with actual or prospective economic or business relations, shall be excluded from this Section 9(j).

[*remainder of page intentionally left blank*]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the respective dates set forth below, effective as of the Effective Date.

Targacept, Inc.

By:	/s/ Stephen A. Hill		/s/ Scott Cullison
Name:	Stephen A. Hill		Scott N. Cullison
Title:	President & CEO		
Date:	October 8, 2014	Date:	October 8, 2014

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

- Registration Statement (Form S-8 No. 333-133882) pertaining to the Targacept, Inc. 2000 Equity Incentive Plan,
- Registration Statement (Form S-8 Nos. 333-189143, 333-133881 and 333-160331) pertaining to the Targacept, Inc. 2006 Stock Incentive Plan,
- Registration Statement (Form S-8 No. 333-185888) of Targacept, Inc. pertaining to the Nonqualified Stock Option Agreement between Targacept, Inc. and Dr. Stephen A. Hill dated December 3, 2012; and
- Registration Statement (Form S-3 No. 333-192552) of Targacept, Inc.;

of our reports dated March 16, 2015, with respect to the financial statements of Targacept, Inc. and the effectiveness of internal control over financial reporting of Targacept, Inc. included in this Annual Report (Form 10-K) of Targacept, Inc. for the year ended December 31, 2014.

/s/ Ernst & Young LLP

Raleigh, North Carolina
March 16, 2015

Exhibit 31.1

CERTIFICATION PURSUANT TO RULE 13a-14(a) AND 15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Stephen A. Hill, certify that:

1. I have reviewed this Annual Report on Form 10-K of Targacept, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 16, 2015

By: /s/ Stephen A. Hill

Stephen A. Hill
Chief Executive Officer and President
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO RULE 13a-14(a) AND 15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Mauri K. Hodges, certify that:

1. I have reviewed this Annual Report on Form 10-K of Targacept, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(e) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(f) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(g) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(h) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(b) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 16, 2015

By: /s/ Mauri K. Hodges

Mauri K. Hodges
Vice President, Finance and Administration,
Chief Financial Officer and Treasurer
(Principal Financial Officer and Principal Accounting Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Targacept, Inc. (the "Company") for the year ended December 31, 2014 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Stephen A. Hill, President and Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 16, 2015

By: /s/ Stephen A. Hill

Stephen A. Hill
Chief Executive Officer and President
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Targacept, Inc. (the "Company") for the year ended December 31, 2014 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Alan A. Musso, Senior Vice President, Finance and Administration, Chief Financial Officer and Treasurer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 16, 2015

By: /s/ Mauri K. Hodges

Mauri K. Hodges
Vice President, Finance and Administration,
Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)