UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): August 7, 2007

TARGACEPT, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation) 000-51173 (Commission File Number) 56-2020050 (IRS Employer Identification No.)

200 East First Street, Suite 300 Winston-Salem, North Carolina (Address of principal executive offices)

27101 (Zip Code)

 $(336) \ 480 - 2100$ Registrant's telephone number, including area code

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:									
	Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)								
	Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)								
	Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))								
	Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))								

Item 2.02 Results of Operations and Financial Condition.

On August 7, 2007, Targacept, Inc. issued a press release relating to its financial results for the second quarter ended June 30, 2007. The full text of the press release is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information in this Current Report on Form 8-K (including Exhibit 99.1) shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The following exhibit is furnished with this report:

Exhibit				
Number	Description			
99 1	Press release da			

Press release dated August 7, 2007

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

TARGACEPT, INC.

Date: August 7, 2007 /s/ Alan A. Musso

Alan A. Musso

Vice President, Chief Financial Officer and Treasurer

EXHIBIT INDEX

Exhibit Number 99.1

Description
Press release dated August 7, 2007



Targacept Reports Second Quarter 2007 Financial Results

Winston-Salem, North Carolina, August 7, 2007 – Targacept, Inc. (NASDAQ: \underline{TRGT}), a clinical-stage biopharmaceutical company developing a new class of drugs known as NNR TherapeuticsTM, today reported its financial results for the second quarter ended June 30, 2007.

Targacept reported a net loss of \$8.3 million for the second quarter of 2007, compared to a net loss of \$4.6 million for the second quarter of 2006. For the six months ended June 30, 2007, Targacept reported a net loss of \$13.1 million, compared to a net loss of \$9.9 million for the corresponding period in 2006. As of June 30, 2007, cash, cash equivalents and short-term investments totaled \$63.0 million. After the end of the quarter, on July 27, 2007, Targacept entered into a strategic alliance with GlaxoSmithKline. In connection with the alliance, GlaxoSmithKline made an initial payment of \$35.0 million to Targacept, which includes a non-refundable payment of \$20.0 million and the purchase of 1,275,502 shares of Targacept's common stock for an aggregate purchase price of \$15.0 million.

"Since the beginning of the year, we have continued to advance our pipeline of NNR Therapeutics, which now includes five clinical-stage and two late preclinical product candidates," said J. Donald deBethizy, Ph.D., Targacept's President and Chief Executive Officer. "We believe that, together with the broad development of our lead product candidate, AZD3480, by our collaborator AstraZeneca, our recently announced alliance with GlaxoSmithKline validates both the importance of NNRs in the potential treatment of CNS diseases and disorders and our leadership position in the NNR space. We look forward to the advancement of our product candidates that are subject to these strategic relationships, as well as to progressing our promising depression and anxiety and alpha7 NNR programs."

Recent Highlights

- AstraZeneca initiated a Phase IIb clinical trial of AZD3480 (TC-1734) in mild to moderate Alzheimer's disease, with plans to initiate a separate Phase IIb clinical trial of AZD3480 (TC-1734) in cognitive deficits in schizophrenia in August 2007;
- Formed a strategic alliance with GlaxoSmithKline to discover, develop and market novel therapeutics that selectively target specified NNR subtypes in five therapeutic focus areas: pain, smoking cessation, obesity, addiction and Parkinson's disease;
- Continued to conduct the ongoing Phase II clinical trial of TC-2696 in third molar extraction patients and remain on track for completion of the trial in the second half of 2007;
- Presented data from the completed Phase II clinical trial of mecamylamine hydrochloride as an add-on therapy to citalopram hydrobromide, a treatment combination known as TRIDMACTM, at the 2007 Summer Meeting of the British Association for Psychopharmacology;
- Conducted additional preparatory activities for the potential clinical development of TC-5214, an enantiomer of mecamylamine hydrochloride;

- Continued to conduct the ongoing Phase I clinical trial of TC-2216, a selective inhibitor of the alpha4beta2 NNR in development for depression and anxiety disorders;
- Initiated a Phase I clinical trial of TC-5619, the most advanced compound in Targacept's chemically diverse alpha7 NNR program;
- Continued to conduct manufacturing activities necessary to support the planned initiation of clinical development of TC-6499, a preclinical product candidate for neuropathic pain, in the second half of 2007;
- Added Ralph Snyderman, M.D., an internationally recognized health care expert who combines a distinguished career in medicine with substantial industry experience, to the board of directors; and
- J. Donald deBethizy, President and Chief Executive Officer, testified before the Senate Committee on Health, Education, Labor and Pensions Subcommittee on Retirement Security and Aging on current and future breakthrough research in Alzheimer's disease.

Financial Results

Targacept reported a net loss of \$8.3 million for the second quarter of 2007, compared to a net loss of \$4.6 million for the second quarter of 2006. For the six months ended June 30, 2007, Targacept reported a net loss of \$13.1 million, compared to a net loss of \$9.9 million for the corresponding period in 2006. The higher net loss for each of the 2007 periods was principally attributable to increased research and development expenses and stock-based compensation expense, partially offset by increased revenue.

Revenue totaled \$2.8 million for the second quarter of 2007, compared to \$589,000 for the corresponding period in 2006. The increase was primarily attributable to an increase of \$2.3 million, to \$2.6 million, in revenue derived under Targacept's collaboration agreement with AstraZeneca for the 2007 period, compared to \$313,000 for the 2006 period. For the six months ended June 30, 2007, Targacept reported revenue of \$4.9 million, compared to \$1.2 million for the corresponding period in 2006. The increase was primarily attributable to an increase of \$3.7 million, to \$4.3 million, in revenue derived under the AstraZeneca agreement for the 2007 period, compared to \$583,000 for the 2006 period.

Research and development expenses totaled \$9.1 million for the second quarter of 2007, compared to \$4.6 million for the corresponding period in 2006. For the six months ended June 30, 2007, research and development expenses totaled \$15.3 million, compared to \$9.4 million for the corresponding period in 2006. The increase in research and development expenses for each of the 2007 periods was principally attributable to increased contracted research and development services and greater occupancy, salary and benefit, recruitment, supply and infrastructure costs incurred in connection with increased activity in Targacept's preclinical research collaboration with AstraZeneca and in the development of Targacept's product pipeline.

General and administrative expenses totaled \$2.6 million for the second quarter of 2007, compared to \$1.3 million for the corresponding period in 2006. For the six months ended June 30, 2007, general and administrative expenses totaled \$4.0 million, compared to \$2.5 million for the corresponding period in 2006. The increase in general and administrative expenses for each of the 2007 periods was primarily attributable to additional stock-based compensation expense resulting primarily from option grants to members of Targacept's board of directors. Targacept's board of directors did not receive any equity compensation in 2006.

Interest income, net of interest expense, totaled \$808,000 for the second quarter of 2007, compared to \$698,000 for the corresponding period in 2006. Interest income, net of interest expense, totaled \$1.7 million for the six months ended June 30, 2007, compared to \$974,000 for the corresponding period in 2006. The increase was primarily attributable to a higher average cash balance during the 2007 period following the receipt of a \$20.0 million milestone payment from AstraZeneca in January 2007.

Financial Guidance

Based on current operating plans and taking into account the \$35.0 million in initial proceeds received from GlaxoSmithKline, Targacept expects that its cash, cash equivalents and short-term investments will be at least \$75.0 million at December 31, 2007.

Conference Call

As previously announced, Targacept will be hosting a conference call and webcast today, August 7, 2007, at 5:00 p.m. EDT. A live webcast of the conference call will be available on the Investor Relations page of Targacept's website, www.targacept.com. An archived version of the webcast will also be available on the Event Calendar section of the Investor Relations page of Targacept's website for at least two weeks following the call.

The second quarter earnings conference call may be accessed by dialing 866-510-0711 for domestic participants and 617-579-5379 for international callers (reference passcode 57296653). A replay of the conference call may be accessed through August 21, 2007 by dialing 888-286-8010 for domestic callers and 617-801-6888 for international callers (reference passcode 42193450).

About Targacept

Targacept is a clinical-stage biopharmaceutical company that discovers and develops NNR Therapeutics TM , a new class of drugs for the treatment of central nervous system diseases and disorders. Targacept's product candidates selectively modulate neuronal nicotinic receptors that serve as key regulators of the nervous system to promote therapeutic effects and limit adverse side effects. Targacept has product candidates in development for Alzheimer's disease and cognitive deficits in schizophrenia, pain, and depression and anxiety disorders, as well as multiple preclinical programs. Targacept also has strategic alliances with AstraZeneca and GlaxoSmithKline. Targacept's news releases are available on its website at www.targacept.com.

Forward-Looking Statements

Any statements in this press release about strategies, prospects, plans, expectations or objectives for Targacept, Inc., including, without limitation, statements regarding the progress, timing or scope of the research and development of our product candidates or related regulatory filings or clinical trials, our future operations, financial position, revenues or costs, and all other statements that are not purely historical in nature, constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Without limiting the foregoing, the words "may," "will," "could," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "project," "potential," "promise," "continue," "ongoing" and similar expressions are intended to identify forward-looking statements. Actual results may differ materially from those expressed or implied by forward-looking statements as a result of various important factors, including our critical accounting policies and risks and uncertainties relating to: the success of our collaboration with AstraZeneca and our alliance with GlaxoSmithKline; the amount and timing of resources that AstraZeneca devotes to the development of AZD3480 (TC-1734); AstraZeneca's right to terminate the preclinical research collaboration that we and AstraZeneca are currently conducting prior to the end of the planned four-year term; our ability to discover and develop product candidates under our alliance with GlaxoSmithKline; the position of applicable regulatory authorities with regard to a treatment combination that includes mecamylamine hydrochloride, which is a racemate, as compared to one of its constituent enantiomers such as TC-5214; the results of clinical trials and non-clinical studies and assessments with respect to our current and future product candidates in development; the conduct of such trials, studies and assessments, including the performance of third parties that we engage to execute them and difficulties or delays in the completion of patient enrollment or data analysis; the timing and success of submission, acceptance and approval of regulatory filings; our ability to obtain substantial additional funding; and our ability to establish additional strategic alliances. Risks and uncertainties that we face are described in greater detail under the heading "Risk Factors" in our most recent Annual Report on Form 10-K and in other filings that we make with the Securities and Exchange Commission. As a result of the risks and uncertainties, the results or events indicated by the forward-looking statements may not occur. We caution you not to place undue reliance on any forwardlooking statement.

In addition, any forward-looking statements in this release represent our views only as of the date of this release and should not be relied upon as representing our views as of any subsequent 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, whether as a result of new information, future events or otherwise, we specifically disclaim any obligation to do so, except as required by applicable law. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

Contacts:

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TARGACEPT, INC

Unaudited Condensed Statements of Operations (in thousands, except share and per share amounts)

	Three Months Ended		Six Months Ended		
	June 30, 2007	June 30, 2006	June 30, 2007	June 30, 2006	
Total operating revenues	\$ 2,842	\$ 589	\$ 4,893	\$ 1,195	
Operating expenses					
Research and development	9,079	4,595	15,270	9,356	
General and administrative	2,629	1,331	3,967	2,499	
Cost of product sales	205	(22)	370	169	
Total operating expenses	11,913	5,904	19,607	12,024	
Operating loss	(9,071)	(5,315)	(14,714)	(10,829)	
Interest income, net	808	698	1,658	974	
Net loss	(8,263)	(4,617)	(13,056)	(9,855)	
Preferred stock accretion		(529)		(3,333)	
Net loss attributable to common stockholders	\$ (8,263)	\$ (5,146)	\$ (13,056)	\$ (13,188)	
Net loss per share attributable to common stockholders—basic and diluted	\$ (0.43)	\$ (0.33)	\$ (0.68)	\$ (1.65)	
Weighted average common shares outstanding—basic and diluted	19,147,011	15,595,020	19,141,932	7,976,519	

TARGACEPT, INC

Unaudited Condensed Balance Sheets (in thousands)

	Jui	ne 30, 2007	December 31, 2006	
Cash and cash equivalents	\$	42,585	\$	41,744
Short-term investments		20,412		12,445
Collaboration receivables and other current assets		3,759		24,664
Property and equipment, net		2,700		2,040
Other assets, net		456		475
Total assets	\$	69,912	\$	81,368
Current liabilities	\$	8,370	\$	8,949
Noncurrent liabilities		7,577		7,420
Total stockholders' equity		53,965		64,999
Total liabilities and stockholders' equity	\$	69,912	\$	81,368