UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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

Date of Report (Date of earliest event reported): May 11, 2009

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)

 $\begin{tabular}{ll} (336) \ 480-2100 \\ Registrant's telephone number, including area code \\ \end{tabular}$

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 May 11, 2009, Targacept, Inc. issued a press release announcing its financial results for the first quarter ended March 31, 2009. 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, as amended (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, as amended, 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 dated May 11, 2009

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: May 11, 2009 /s/ Alan A. Musso

Alan A. Musso

Vice President, Chief Financial Officer and Treasurer

EXHIBIT INDEX

Exhibit Number 99.1

Description
Press release dated May 11, 2009

Targacept Reports First Quarter 2009 Financial Results

Winston-Salem, North Carolina, May 11, 2009 – Targacept, Inc. (NASDAQ: <u>TRGT</u>), a clinical-stage biopharmaceutical company developing a new class of drugs known as NNR Therapeutics[™], today reported its financial results for the first quarter ended March 31, 2009.

Targacept reported a net loss of \$4.7 million for the first quarter of 2009, compared to a net loss of \$5.8 million for the first quarter of 2008. As of March 31, 2009, cash, cash equivalents and short-term investments totaled \$80.2 million.

"In the first quarter, we continued to make progress in the development of our clinical-stage pipeline and accomplished milestones that reinforce the value of our preclinical activities. Our focus on prioritization and the careful management of financial resources allowed us to end the quarter with over \$80 million," said J. Donald deBethizy, Ph.D., Targacept's President and Chief Executive Officer. "We are pleased with the positive outcome of the AZD3480 study in adult ADHD. We also remain enthusiastic about the therapeutic potential of TC-5214 and continue to anticipate top-line results from our trial in major depressive disorder in mid 2009."

Recent Highlights:

TC-5214

- Completed enrollment of the ongoing Phase 2b clinical trial of TC-5214 as an augmentation therapy for major depressive disorder and continued on track with our previously announced expectation of completing the trial and reporting top-line results in mid 2009;
- Initiated a Phase 2 exploratory study of TC-5214 as an augmentation therapy for resistant hypertension; we expect the single site study to enroll approximately 12 subjects and be completed in the second half of 2009;

AstraZeneca Collaboration and Cognitive Disorders

AZD3480 (TC-1734)

Achieved statistically significant results in favor of AZD3480 (TC-1734) on the primary outcome measure and a number of secondary outcome
measures in a Phase 2 study in adults with attention deficit/hyperactivity disorder, or ADHD; a decision by AstraZeneca with respect to potential
further development of AZD3480 in Alzheimer's disease or ADHD remains expected in the second quarter of 2009;

TC-5619

• Continued preparatory activities for planned Phase 2 development of TC-5619, a product candidate highly selective for the alpha7 NNR, in cognitive dysfunction in schizophrenia or potentially one or more other conditions characterized by cognitive impairment; AstraZeneca has the right to license TC-5619 following completion by Targacept of a planned Phase 2 clinical proof of concept trial;

AZD1446 (TC-6683)

AstraZeneca continued to progress Phase 1 clinical development of AZD1446; a product candidate that arose from Targacept's preclinical research
collaboration with AstraZeneca and is in development for Alzheimer's disease, ADHD or one or more other conditions characterized by cognitive
impairment; and

GlaxoSmithKline Alliance

Progressed multiple preclinical product candidates, generating \$2.5 million of milestone revenue from GlaxoSmithKline in the first quarter of 2009.

Financial Results

Targacept reported a net loss of \$4.7 million for the first quarter of 2009, compared to a net loss of \$5.8 million for the first quarter of 2008. Net operating revenues increased for the 2009 period compared to the 2008 period primarily as a result of revenues resulting from the achievement of milestone events under Targacept's alliance agreement with GlaxoSmithKline. The increase in net operating revenues for the 2009 period was partially offset by increased research and development expenses and reduced interest income. The results included non-cash, stock-based compensation charges of \$573,000 and \$503,000 for the first quarter of 2009 and 2008, respectively.

Net operating revenues totaled \$6.1 million for the first quarter of 2009, compared to \$4.3 million for the first quarter of 2008. The higher net operating revenues were primarily attributable to an increase of \$2.5 million in milestones and license fees from collaborations. The increase in milestones and license fees from collaborations reflected \$2.5 million in revenue from GlaxoSmithKline upon achievement of milestone events. The increase in milestones and license fees from collaborations was partially offset by a decrease of \$714,000 in collaboration research and development revenue.

Research and development expenses totaled \$9.5 million for the first quarter of 2009, compared to \$9.1 million for the first quarter of 2008. The higher research and development expenses were primarily attributable to an increase of \$586,000 in costs incurred for third-party research and development services in connection with preclinical programs, including programs in the therapeutic focus areas of the alliance with GlaxoSmithKline. This increase was partially offset by a decrease of \$218,000 in costs incurred for third-party research and development services in connection with clinical-stage product candidates. For the 2009 period, these third-party costs totaled \$2.2 million and were incurred principally for TC-5214 and TC-5619.

General and administrative expenses totaled \$1.5 million for the first quarter 2009, compared to \$1.7 million for the first quarter of 2008. The lower general and administrative expenses were primarily attributable to a decrease of \$271,000 in patent-related expenses.

Interest income, net of interest expense, totaled \$302,000 for the first quarter of 2009, compared to \$919,000 for the first quarter of 2008. The decrease was principally attributable to lower short-term interest rates, a lower average cash balance and increased indebtedness under loan facilities used to finance equipment, furnishings, software and other fixed assets.

Conference Call

As previously announced, Targacept will be hosting a conference call and webcast today, May 11, 2009, at 9:00 a.m. Eastern Daylight Time. The conference call may be accessed by dialing 800-291-9234 for domestic participants and 617-614-3923 for

international callers (reference passcode 29368344). A replay of the conference call may be accessed beginning at approximately 12:00 p.m. on May 11, 2009 and continuing at least through May 25, 2009 by dialing 888-286-8010 for domestic callers and 617-801-6888 for international callers (reference passcode 96577819).

A live audio webcast of the conference call will be accessible from the Investor Relations page of Targacept's website, www.targacept.com. To ensure a timely connection to the webcast, it is recommended that users register at least 15 minutes prior to the scheduled start time. An archived version of the webcast will also be available on the Investor Calendar section of the Investor Relations page of Targacept's website for at least two weeks following the call.

About Targacept

Targacept is a clinical-stage biopharmaceutical company that discovers and develops NNR TherapeuticsTM, a new class of drugs for the treatment primarily 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 clinical-stage product candidates in development for major depressive disorder, resistant hypertension, Alzheimer's disease, attention deficit/hyperactivity disorder and cognitive dysfunction in schizophrenia, as well as multiple preclinical programs. Targacept also has a cognition-focused collaboration with AstraZeneca and a strategic alliance with GlaxoSmithKline. Targacept's news releases are available on its website at www.targacept.com.

Forward-Looking Statements

Statements in this press release that are not purely historical in nature constitute "forward-looking statements" made under the provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include, without limitation, statements regarding the timing for a decision by AstraZeneca as to whether to conduct further development of AZD3480 (TC-1734) in Alzheimer's disease or ADHD, the progress or scope of the research and development of Targacept's product candidates, such as the number of subjects to be enrolled in any clinical trial, the timing for initiation or completion of or availability of results from any clinical trial or the indication(s) for which any of its product candidates may be developed, the benefits of Targacept's product candidates, or Targacept's plans, expectations or future operations, financial position, revenues, costs or expenses. Actual results may differ materially from those expressed or implied by forward-looking statements as a result of various important factors, including, without limitation, Targacept's critical accounting policies and risks and uncertainties relating to: Targacept's dependence on the success of its collaboration with AstraZeneca and its alliance with GlaxoSmithKline; the significant control that AstraZeneca has over the development of AZD3480, including as to whether to conduct any further development of AZD3480 in Alzheimer's disease or ADHD; difficulties or delays in the completion of analysis of data from the clinical trial of AZD3480 in ADHD in adults; the conduct and results of clinical trials and non-clinical studies and assessments of TC-5214 and Targacept's other product candidates, including the performance of third parties engaged to execute such trials, studies and assessments, delays resulting from any changes to the applicable protocols and difficulties or delays in the completion of subject enrollment or data analysis; Targacept's ability to establish additional strategic alliances, collaborations and licensing or other arrangements on favorable terms; and the timing and success of submission, acceptance and approval of regulatory filings. These and other risks and uncertainties are described in greater detail under the heading "Risk Factors" in Targacept's most recent Annual Report on Form 10-K and in other filings that it makes 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. Targacept cautions you not to place undue reliance on any forward-looking statement.

In addition, any forward-looking statement in this press release represents Targacept's views only as of the date of this press release and should not be relied upon as representing its views as of any subsequent date. Targacept disclaims any obligation to update any forward-looking statement, except as required by applicable law.

NNR Therapeutics TM is a trademark of Targacept, Inc. Any other service marks, trademarks and trade names appearing in this press release are the properties of their respective owners.

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TARGACEPT, INC

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

	Marc	Three Months Ended March 31, 2009 2008	
Net operating revenues	\$ 6,141	\$ 4,276	
Operating expenses:			
Research and development	9,495	9,082	
General and administrative	1,470	1,691	
Cost of product sales	228	203	
Total operating expenses	11,193	10,976	
Operating loss		(6,700)	
Interest income, net		919	
Net loss		\$ (5,781)	
Basic and diluted net loss per share		\$ (0.24)	
Weighted average common shares outstanding - basic and diluted	24,965	23,834	

TARGACEPT, INC

Unaudited Condensed Balance Sheets

(in thousands)

	March 31, 2009	De	cember 31, 2008
Cash, cash equivalents and short-term investments	\$80,238	\$	88,363
Collaboration receivables and other current assets	4,830		3,603
Property and equipment, net	6,008		6,401
Other assets, net	180		184
Total assets	\$91,256	\$	98,551
Current liabilities	\$12,256	\$	13,792
Noncurrent liabilities	25,802		27,386
Total stockholders' equity	53,198		57,373
Total liabilities and stockholders' equity	\$91,256	\$	98,551