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 5, 2008

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

Delaware	**000-51173**	**56-2020050**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(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 5, 2008, Targacept, Inc. issued a press release relating to its financial results for the second quarter ended June 30, 2008. 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 dated August 5, 2008

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 5, 2008

/s/ Alan A. Musso

Alan A. Musso
Vice President, Chief Financial Officer and Treasurer

EXHIBIT INDEX

Exhibit Number	Description
99.1	Press release dated August 5, 2008

EXHIBIT 99.1

Targacept Reports Second Quarter 2008 Financial Results

Winston-Salem, North Carolina, August 5, 2008 – Targacept, Inc. (NASDAQ: TRGT), a clinical-stage biopharmaceutical company developing a new class of drugs known as NNR Therapeutics™, today reported its financial results for the second quarter ended June 30, 2008.

Targacept reported a net loss of $6.8 million for the second quarter of 2008, compared to a net loss of $8.3 million for the second quarter of 2007. For the six months ended June 30, 2008, Targacept reported a net loss of $12.6 million, compared to a net loss of $13.1 million for the corresponding period in 2007. As of June 30, 2008, cash, cash equivalents and short-term investments totaled $101.9 million.

“We look forward to AstraZeneca’s expected completion of the Phase 2b clinical trials of AZD3480 in mild to moderate Alzheimer’s disease and cognitive dysfunction in schizophrenia later this year,” said J. Donald deBethizy, Ph.D., Targacept’s President and Chief Executive Officer. “At the same time, Targacept continues to execute on the development of three other promising clinical-stage NNR Therapeutics in areas of great unmet medical need. Our recent progress is highlighted by the initiation of a Phase 2b clinical trial of TC-5214 as an augmentation therapy for major depressive disorder.”

Ongoing Phase 2b Clinical Trials of AZD3480 (TC-1734)

In addition to reporting its financial results, Targacept announced that it currently expects to report top-line results from the Phase 2b clinical trial of AZD3480 (TC-1734) being conducted by AstraZeneca in mild to moderate Alzheimer’s disease (the “Sirocco” trial) in September 2008. Targacept also confirmed that the Phase 2b clinical trial of AZD3480 (TC-1734) in cognitive dysfunction in schizophrenia (the “HALO” trial) is fully enrolled and remains on track to be completed by AstraZeneca by the end of 2008.

Recent Highlights

AstraZeneca Collaboration and Cognitive Disorders

- Initiated an exploratory Phase 2 clinical trial of AZD3480 (TC-1734) in adults with attention deficit/hyperactivity disorder in collaboration with AstraZeneca;
- Completed a Phase 1 single rising dose clinical trial in which TC-5619 was generally well tolerated at a dose at least 100 times greater than doses expected to have positive effects on cognition in humans based on Targacept’s preclinical work; TC-5619, a highly-selective alpha7 NNR-targeted product candidate, is planned for development for cognitive dysfunction in schizophrenia and potentially one or more other conditions characterized by cognitive impairment, and Targacept plans to initiate a Phase 1 multiple rising dose clinical trial in the third quarter of 2008;

Depression

- Completed the dosing phase of a Phase 1 single rising dose clinical trial of TC-5214;
- Initiated a Phase 2b clinical trial of TC-5214, the S+ enantiomer of mecamylamine hydrochloride and a broad spectrum NNR antagonist, as an augmentation therapy in subjects with major depressive disorder who do not respond or who only partially respond to first-line treatment with the marketed antidepressant citalopram hydrobromide;

GlaxoSmithKline Alliance and Pain

- Completed a Phase 1 single rising dose clinical trial of TC-6499, an alpha4beta2 NNR-targeted product candidate planned for development for neuropathic pain, and plan to initiate additional Phase 1 clinical development in the third quarter of 2008;

Corporate Developments

- Added to the Russell 3000® Index, which measures the performance of the 3,000 largest U.S. companies based on total market capitalization; and
- Recognized as one of the Top 30 Companies in The Scientist magazine's "Best Places to Work in Industry" 6th annual survey, ranking 16th overall. The survey was completed by almost 2,000 scientists representing 207 life sciences companies worldwide.

Financial Results

Targacept reported a net loss of $6.8 million for the second quarter of 2008, compared to a net loss of $8.3 million for the second quarter of 2007. For the six months ended June 30, 2008, Targacept reported a net loss of $12.6 million, compared to a net loss of $13.1 million for the corresponding period in 2007. The decreased net loss for each of the 2008 periods was principally attributable to increased operating revenues derived primarily from Targacept's collaboration with AstraZeneca and alliance with GlaxoSmithKline, partially offset by increased research and development expenses. The results included non-cash, stock-based compensation expense of $524,000 and $1.6 million for the second quarter of 2008 and 2007, respectively, and $1.0 million and $1.9 million for the six months ended June 30, 2008 and 2007, respectively.

Net operating revenues totaled $5.2 million for the second quarter of 2008, compared to $2.8 million for the second quarter of 2007. The higher net operating revenues were principally attributable to an increase of $1.8 million in milestones and license fees, which reflects the achievement of milestone events related to progress in the smoking cessation program under Targacept's agreement with GlaxoSmithKline and to the development of a product candidate in the preclinical research collaboration under Targacept's agreement with AstraZeneca resulting in an aggregate of $700,000 in payments to Targacept, as well as recognition of $1.1 million of deferred license fee revenue from payments received from GlaxoSmithKline and AstraZeneca in the second half of 2007. The GlaxoSmithKline alliance was formed in July 2007. The higher net operating revenues for the three-month period in 2008 were also attributable to an increase of $561,000 in collaboration research and development revenue derived under the AstraZeneca agreement. For the six months ended June 30, 2008, net operating revenues totaled $9.4 million, compared to $4.9 million for the corresponding period in 2007. The higher net operating revenues were principally attributable to an increase of $2.8 million in milestones and license fees, which reflects the achievement of milestone events as described above and recognition of $2.1 million of deferred license fee revenue from payments received from GlaxoSmithKline and AstraZeneca in the second half of 2007. The higher net operating revenues for the six-month period in 2008 were also attributable to an increase of $1.7 million in collaboration research and development revenue derived under the AstraZeneca agreement.

Research and development expenses totaled $10.5 million for the second quarter of 2008, compared to $9.1 million for the second quarter of 2007. The higher research and development expenses were principally attributable to an increase of $1.3 million in salary and benefit expenses, occupancy costs and supply and infrastructure costs resulting from an increased number of research and development personnel, as well as an increase of $905,000 in costs for third-party preclinical research and development services

incurred primarily in connection with the research collaboration with AstraZeneca and programs in the therapeutic focus areas of the alliance with GlaxoSmithKline. These increases were partially offset by an aggregate decrease of $520,000 in costs for third-party research and development services incurred in connection with Targacept's clinical-stage product candidates, primarily due to the timing of initiation and completion of clinical trials, and reduced spending of $291,000 on a product candidate no longer in clinical development.

For the six months ended June 30, 2008, research and development expenses totaled $19.6 million, compared to $15.3 million for the corresponding period in 2007. The higher research and development expenses were principally attributable to an increase of $2.8 million in salary and benefit expenses, occupancy costs and supply and infrastructure costs resulting from an increased number of research and development personnel, an aggregate increase of $1.2 million for third-party research and development services incurred in connection with Targacept's clinical-stage product candidates, and an increase of $926,000 in costs for third-party preclinical research and development services incurred primarily in connection with the research collaboration with AstraZeneca and programs in the therapeutic focus areas of the alliance with GlaxoSmithKline. The increased costs for third-party research and development services for the six-month period in 2008 were partially offset by reduced spending of $546,000 on a product candidate no longer in clinical development.

General and administrative expenses totaled $1.9 million for the second quarter 2008, compared to $2.6 million for the second quarter of 2007. For the six months ended June 30, 2008, general and administrative expenses totaled $3.6 million, compared to $4.0 million for the corresponding period in 2007. The decrease for both 2008 periods was primarily attributable to a decrease in stock-based compensation expense resulting from compensatory stock option grants, a non-cash item, partially offset by greater occupancy costs, salary and benefit expenses and recruitment costs.

Interest income, net of interest expense, totaled $630,000 for the second quarter of 2008, compared to $808,000 for the second quarter of 2007. For the six months ended June 30, 2008, interest income, net of interest expense, totaled $1.5 million, compared to $1.7 million for the corresponding period in 2007. The decrease for both 2008 periods was principally attributable to lower short-term interest rates, which more than offset a higher average cash balance, and increased indebtedness under loan facilities used to finance laboratory equipment, furniture and other capital equipment purchases.

Conference Call

As previously announced, Targacept will be hosting a conference call and webcast today, August 5, 2008, at 5:00 p.m. Eastern Daylight Time. 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 Investor Calendar section of the Investor Relations page of Targacept's website for at least two weeks following the call.

The conference call may be accessed by dialing 800-322-2803 for domestic participants and 617-614-4925 for international callers (reference passcode 23370280). A replay of the conference call may be accessed at least through August 20, 2008 by dialing 888-286-8010 for domestic callers and 617-801-6888 for international callers (reference passcode 59054894).

About Targacept

Targacept is a clinical-stage biopharmaceutical company that discovers and develops NNR Therapeutics™, 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, cognitive dysfunction in schizophrenia, pain and depression, 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, 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, such as the timing for reporting of results from AstraZeneca's Phase 2b clinical trial of AZD3480 (TC-1734) in mild to moderate Alzheimer's disease and for completion of AstraZeneca's Phase 2b clinical trial of AZD3480 (TC-1734) in cognitive dysfunction in schizophrenia, the dose at which TC-5619 is expected to have positive effects on cognition, or our plans, expectations, future operations, financial position, revenues, costs or expenses, constitute "forward-looking statements" made under the provisions of the Private Securities Litigation Reform Act of 1995. 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: our dependence on the success of our collaboration with AstraZeneca and our alliance with GlaxoSmithKline; the amount and timing of resources that AstraZeneca devotes to completion of its Phase 2b clinical trials of AZD3480 (TC-1734); the significant control that AstraZeneca has over the development of AZD3480 (TC-1734); the risk that successful results in clinical trials of AZD3480 (TC-1734) in a particular condition characterized by one degree of cognitive impairment may not be predictive of successful results in clinical trials of AZD3480 (TC-1734) in a condition characterized by more severe cognitive impairment or in cognitive impairment resulting from a different condition; the risk that positive findings in preclinical studies of TC-5619 may not be predictive of similar results in clinical trials in humans; 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 engaged to execute them and difficulties or delays in the completion of subject enrollment or data analysis; and the timing and success of submission, acceptance and approval of regulatory filings, such as regulatory filings with respect to TC-5619. These and other risks and uncertainties 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 forward-looking 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, we specifically disclaim any obligation to do so, except as required by applicable law.

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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, 2008	June 30, 2007	June 30, 2008	June 30, 2007
Net operating revenues	$ 5,156	$ 2,842	$ 9,432	$ 4,893
Operating expenses				
Research and development	10,517	9,079	19,599	15,270
General and administrative	1,894	2,629	3,585	3,967
Cost of product sales	178	205	381	370
Total operating expenses	12,589	11,913	23,565	19,607
Operating loss	(7,433)	(9,071)	(14,133)	(14,714)
Interest income, net	630	808	1,549	1,658
Net loss	(6,803)	(8,263)	(12,584)	(13,056)
Basic and diluted net loss per share	$ (0.27)	$ (0.43)	$ (0.52)	$ (0.68)
Weighted average common shares outstanding—basic and diluted	24,905,965	19,147,011	24,370,195	19,141,932

TARGACEPT, INC

Unaudited Condensed Balance Sheets
(in thousands)

	June 30, 2008	December 31, 2007
Cash, cash equivalents and short-term investments	$101,920	$ 87,040
Collaboration receivables and other current assets	4,910	5,373
Property and equipment, net	7,056	6,115
Other assets, net	419	437
Total assets	$114,305	$ 98,965
Current liabilities	$ 14,087	$ 15,196
Noncurrent liabilities	30,934	32,185
Total stockholders' equity	69,284	51,584
Total liabilities and stockholders' equity	$114,305	$ 98,965