
**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): May 6, 2008

TARGACEPT, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

000-51173
(Commission File Number)

56-202050
(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 May 6, 2008, Targacept, Inc. issued a press release relating to its financial results for the first quarter ended March 31, 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:

| <u>Exhibit Number</u> | <u>Description</u> |
|---------------------------|---------------------------------|
| 99.1 | Press release dated May 6, 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: May 6, 2008

/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 6, 2008

Targacept Reports First Quarter 2008 Financial Results

Winston-Salem, North Carolina, May 6, 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 first quarter ended March 31, 2008.

Targacept reported a net loss of \$5.8 million for the first quarter of 2008, compared to a net loss of \$4.8 million for the first quarter of 2007. The increased net loss for the 2008 period was principally attributable to an increase of \$2.9 million in research and development expenses, partially offset by an increase of \$2.2 million in net operating revenues derived primarily from Targacept's collaboration with AstraZeneca and alliance with GlaxoSmithKline. As of March 31, 2008, cash, cash equivalents and investments totaled \$110.7 million, which included \$16.5 million in investments not classified as short term.

“In the first part of 2008, we continued to demonstrate the breadth of our pipeline and our leadership position in the NNR space, with the completion of the initial Phase 1 trials of TC-5619 and TC-6499 and the entry of TC-5214 into clinical development. Each of these structurally and pharmacologically diverse product candidates represents a promising future therapy in a medical area where the unmet need is significant,” said J. Donald deBethizy, Ph.D., Targacept's President and Chief Executive Officer. “In addition, we are very pleased with the continued progress of the Phase 2b trials of AZD3480 (TC-1734) being conducted by AstraZeneca in mild to moderate Alzheimer's disease and cognitive dysfunction in schizophrenia. We believe that the strong scientific rationale for the NNR mechanism, positive results from our previous clinical and preclinical studies of AZD3480 and the broad scope of AstraZeneca's ongoing development activities bode well for the potential for AZD3480 to be advanced into Phase 3 development.”

Recent Highlights:*AstraZeneca Collaboration and Cognitive Disorders*

- Continue to expect AstraZeneca's Phase 2b clinical trials of AZD3480 (TC-1734) in mild to moderate Alzheimer's disease (the “Sirocco” trial) and cognitive dysfunction in schizophrenia (the “HALO” trial), which are together planned to enroll approximately 925 patients, to be completed in the second half of 2008;
- Expanded pipeline in the area of cognitive disorders with the advancement of a novel alpha4beta2 NNR-targeted compound into IND-enabling preclinical studies, triggering a milestone payment to Targacept;
- Completed a Phase 1 single rising dose clinical trial of TC-5619, an alpha7 NNR-targeted product candidate planned for development for cognitive dysfunction in schizophrenia and potentially one or more other conditions characterized by cognitive impairment, and expect to initiate a Phase 1 multiple rising dose clinical trial in the third quarter of 2008;

GlaxoSmithKline Alliance and Pain

- Completed a Phase 1 single rising dose clinical trial of TC-6499, a product candidate planned for development for neuropathic pain, and expect to initiate a Phase 1 multiple rising dose clinical trial in mid 2008;
- Announced that a novel product candidate discovered by Targacept has been designated as a lead compound in its smoking cessation program, triggering a milestone payment to Targacept under its alliance agreement with GlaxoSmithKline;

Depression

- Initiated a Phase 1 single rising dose clinical trial of TC-5214, the S+ enantiomer of mecamylamine hydrochloride, and continued to execute development activities in preparation for the planned initiation of a Phase 2 clinical proof of concept trial later in 2008; and

Corporate Developments

- Completed a public offering of 4,370,000 shares of common stock at \$7.07 per share in January 2008, resulting in \$29.1 million in proceeds, net of underwriters' discounts, commissions and offering expenses payable by Targacept.

Financial Results

Targacept reported a net loss of \$5.8 million for the first quarter of 2008, compared to a net loss of \$4.8 million for the first quarter of 2007. The results included non-cash, stock-based compensation expense of \$503,000 for the first quarter of 2008 and \$291,000 for the first quarter of 2007.

Net operating revenues totaled \$4.3 million for the first quarter of 2008, compared to \$2.1 million for the first quarter of 2007. The higher net operating revenues for the 2008 period were principally attributable to an increase of \$1.1 million, to \$2.3 million, in collaboration research and development revenue derived under Targacept's collaboration agreement with AstraZeneca, and to an increase of \$1.1 million, to \$1.6 million, in deferred license fee revenue recognized from payments previously received from AstraZeneca and GlaxoSmithKline.

Research and development expenses totaled \$9.1 million for the first quarter of 2008, compared to \$6.2 million for the first quarter of 2007. The higher research and development expenses for the 2008 period were principally attributable to an increase of \$1.7 million in contracted research and development services, which included incremental additional spending of \$657,000 for TC-5619, \$490,000 for TC-5214 and \$359,000 for TC-6499, and an increase of \$1.4 million in salary and benefit expenses, occupancy costs and third-party service, supply and infrastructure costs incurred in connection with activities under the AstraZeneca collaboration and other preclinical programs, including those in the therapeutic focus areas of the GlaxoSmithKline alliance. The increased contracted research and development services for the 2008 period were partially offset by reduced spending on TC-2696 following completion of a Phase 2 clinical trial in 2007.

General and administrative expenses totaled \$1.7 million for the first quarter 2008, compared to \$1.3 million for the first quarter of 2007. The increase for the 2008 period was principally attributable to an increase in non-cash stock-based compensation of \$153,000 resulting from compensatory stock option grants and greater occupancy costs, salary and benefit expenses and recruitment costs.

Interest income, net of interest expense, totaled \$919,000 for the first quarter of 2008, compared to \$850,000 for the first quarter of 2007. The increase for the 2008 period was attributable to increased interest income as a result of a higher average cash balance primarily due to the issuance of common stock for net proceeds of \$29.1 million in January 2008, partially offset by lower average interest rates.

Conference Call

As previously announced, Targacept will be hosting a conference call and webcast today, May 6, 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 800-798-2884 for domestic participants and 617-614-6207 for international callers (reference passcode 42221306). A replay of the conference call may be accessed at least through May 20, 2008 by dialing 888-286-8010 for domestic callers and 617-801-6888 for international callers (reference passcode 50691813).

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, any future payments that AstraZeneca or GlaxoSmithKline may make to us, or our plans, expectations, future operations, financial position, revenues, costs or expenses, constitute “forward-looking statements” within the meaning 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, and 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 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, including in particular regulatory filings and submissions with respect to TC-5619 and TC-5214. 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.

Contacts:

Alan Musso, VP and CFO

Targacept, Inc.

Tel: (336) 480-2186

Email: alan.musso@targacept.com

Michelle Linn

Linnden Communications

Tel: (508) 362-3087

Email: michelle@linndencom.com

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

| | Three Months Ended March 31, | |
|--|-------------------------------------|-------------------|
| | 2008 | 2007 |
| Net operating revenues | \$ 4,276 | \$ 2,051 |
| Operating expenses | | |
| Research and development | 9,082 | 6,190 |
| General and administrative | 1,691 | 1,338 |
| Cost of product sales | 203 | 166 |
| Total operating expenses | <u>10,976</u> | <u>7,694</u> |
| Operating loss | (6,700) | (5,643) |
| Interest income, net | 919 | 850 |
| Net loss | <u>\$ (5,781)</u> | <u>\$ (4,793)</u> |
| Basic and diluted net loss per share | <u>\$ (0.24)</u> | <u>\$ (0.25)</u> |
| Weighted average common shares outstanding—basic and diluted | <u>23,834,425</u> | <u>19,136,796</u> |

TARGACEPT, INC
Unaudited Condensed Balance Sheets
(in thousands)

| | March 31, | December 31, |
|--|-------------------|---------------------|
| | 2008 | 2007 |
| Cash, cash equivalents and short-term investments | \$ 94,251 | \$ 87,040 |
| Collaboration receivables and other current assets | 3,276 | 5,373 |
| Investments in auction rate securities | 16,453 | — |
| Property and equipment, net | 7,279 | 6,115 |
| Other assets, net | 428 | 437 |
| Total assets | <u>\$ 121,687</u> | <u>\$ 98,965</u> |
| Current liabilities | \$ 13,593 | \$ 15,196 |
| Noncurrent liabilities | 32,873 | 32,185 |
| Total stockholders' equity | 75,221 | 51,584 |
| Total liabilities and stockholders' equity | <u>\$ 121,687</u> | <u>\$ 98,965</u> |