
**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 5, 2010

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))
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Item 2.02 Results of Operations and Financial Condition.

On May 5, 2010, Targacept, Inc. issued a press release announcing its financial results for the first quarter ended March 31, 2010. 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:

<u>Exhibit Number</u>	<u>Description</u>
99.1	Press release dated May 5, 2010

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 5, 2010

/s/ PETER A. ZORN

Peter A. Zorn
Senior Vice President, Legal Affairs, General Counsel and Secretary

EXHIBIT INDEX

Exhibit
Number

Description

99.1

Press release dated May 5, 2010

Targacept Reports First Quarter 2010 Financial Results

Winston-Salem, North Carolina – May 5, 2010 – Targacept, Inc. (NASDAQ: TRGT), a clinical-stage biopharmaceutical company developing novel NNR Therapeutics™, today reported its financial results for the first quarter ended March 31, 2010.

Targacept reported net income of \$6.8 million for the first quarter of 2010, compared to a net loss of \$4.7 million for the first quarter of 2009. The net income position for the 2010 period was primarily due to the recognition into revenue of \$17.9 million of the \$200.0 million upfront payment received by Targacept in January 2010 under its collaboration agreement with AstraZeneca for TC-5214. As of March 31, 2010, cash, cash equivalents and investments totaled \$285.1 million.

“We are off to a strong start in 2010 as our portfolio of clinical-stage NNR Therapeutics continues to progress, highlighted by the expected mid-year initiation of Phase 3 development of TC-5214 as an adjunct to antidepressant therapy for major depressive disorder,” said J. Donald deBethizy, Ph.D., Targacept’s President and Chief Executive Officer. “Our recently announced amendment to our 2005 agreement with AstraZeneca to expand the development program for TC-5619 underscores the breadth and diversity of our pipeline. Parallel Phase 2 development of TC-5619 in cognitive dysfunction in schizophrenia and adults with ADHD while also conducting the work to support a potential additional Phase 2 clinical trial in Alzheimer’s disease represents a tremendous opportunity to leverage the promise of this highly selective modulator of the alpha7 NNR.”

Recent Highlights and Program Updates:*TC-5214 and 2009 Collaboration with AstraZeneca*

- Targacept received an upfront payment of \$200.0 million from AstraZeneca in January 2010;
- Targacept and AstraZeneca held an end of Phase 2 meeting with the FDA for TC-5214 and continue to share the goal of filing a new drug application in 2012;
- Targacept continues to expect Phase 3 clinical development of TC-5214 as an adjunct (or add-on) therapy in adults with major depressive disorder who do not respond adequately to first-line antidepressant treatment to be initiated in mid 2010 and a Phase 2 clinical trial of TC-5214 as a second-line “switch” monotherapy to be initiated in the second half of 2010;

*2005 Collaboration with AstraZeneca (Cognitive Disorders)**TC-5619*

- Targacept and AstraZeneca amended their 2005 collaborative research and license agreement to expand the development program for TC-5619, a product candidate highly selective for the alpha7 NNR, and modify the circumstances that trigger AstraZeneca’s option for an exclusive license to TC-5619 for various cognitive disorders; as part of the amendment, AstraZeneca agreed to pay Targacept \$11.0 million;

- Targacept's Phase 2 clinical proof of concept study of TC-5619 as a treatment for cognitive dysfunction in schizophrenia remains ongoing and is expected to complete in the fourth quarter of 2010;
- Targacept plans to initiate a separate Phase 2 clinical proof of concept study of TC-5619 in adults with ADHD in May 2010;
- Targacept and AstraZeneca have each agreed to conduct specified studies to support the potential advancement of TC-5619 into Phase 2 clinical development for Alzheimer's disease in the first half of 2011, with a decision as to whether to conduct Phase 2 development in Alzheimer's disease to be made in the future;

AZD3480 (TC-1734)

- Targacept continues to expect AstraZeneca to conduct additional development of AZD3480 as a treatment for ADHD, with the next clinical trial anticipated to be a Phase 2b study in adults with ADHD and to be initiated in the second half of 2010;

AZD1446 (TC-6683)

- AstraZeneca is currently conducting a number of clinical trials of AZD1446, including, among others, a safety and tolerability study as an add-on treatment to donepezil in subjects with Alzheimer's disease and a Phase 2 study in adults with ADHD that are expected to be completed in the second half of 2010;

TC-6987

- Targacept has completed a Phase 1 single rising dose clinical trial of TC-6987, a product candidate that modulates the activity of the $\alpha 7$ NNR, and has a Phase 1 multiple rising dose clinical trial ongoing; TC-6987 is under consideration for further development in various indications characterized by inflammation;

GlaxoSmithKline Alliance

- Targacept recently attracted grant funding to support its research program in Parkinson's disease, a therapeutic focus area of its alliance with GlaxoSmithKline, with an award of over \$300,000 from The Michael J. Fox Foundation for Parkinson's Research to fund a project entitled: "Development of an $\alpha 6^*$ -selective Neuronal Nicotinic Receptor (NNR) Imaging Agent as a Parkinson's Disease Biomarker"; and

Corporate Recognition

- Targacept was named one of the Top 30 Companies in The Scientist magazine's "Best Places to Work in Industry" for 2010, marking the fourth consecutive year Targacept has received such recognition.

Financial Results

Targacept reported net income of \$6.8 million for the first quarter of 2010, compared to a net loss of \$4.7 million for the first quarter of 2009. The net income position for the 2010 period was primarily due to the recognition into revenue of \$17.9 million of the \$200.0 million upfront payment received in January 2010 from AstraZeneca. The results included non-cash, stock-based compensation charges of \$1.2 million and \$573,000 for the first quarter of March 31, 2010 and 2009, respectively.

Net operating revenues totaled \$19.5 million for the first quarter of 2010, compared to \$6.1 million for the first quarter of 2009. The higher net operating revenues for the 2010 period were primarily attributable to the recognition of \$17.9 million of license fee revenue described above, partially offset by a decrease of \$2.5 million in aggregate payments received from GlaxoSmithKline upon achievement of milestone events under our alliance agreement, and decreases of \$1.5 million in collaboration research and development revenue and \$423,000 of license fee revenue derived from our 2005 agreement with AstraZeneca as a result of the completion in January 2010 of the preclinical research collaboration conducted under the agreement.

Research and development expenses totaled \$10.6 million for the first quarter of 2010, compared to \$9.5 million for the first quarter of 2009. The higher research and development expenses for the 2010 period were principally attributable to increases of \$1.3 million in compensation-related costs for research and development personnel and infrastructure costs and \$627,000 in costs incurred for third-party research and development services in connection with our clinical-stage product candidates, partially offset by a decrease of \$852,000 in costs incurred for third-party research and development services in connection with our preclinical programs. The increase in compensation-related costs was primarily due to a significantly higher value assigned to stock options granted in January 2010 as compared to stock options granted during and prior to the 2009 period. For the 2010 period, third-party research and development costs related to our clinical-stage product candidates totaled \$2.9 million and were incurred principally with respect to activities for the ongoing Phase 2 clinical proof of concept trial of TC-5619 in cognitive dysfunction in schizophrenia, preparatory activities with respect to Phase 3 development of TC-5214 and activities with respect to Phase 1 clinical development of TC-6987.

General and administrative expenses totaled \$1.8 million for the first quarter of 2010, compared to \$1.5 million for the first quarter of 2009. The higher general and administrative expenses for the 2010 period were principally attributable to increases of \$262,000 in patent-related expenses and \$184,000 in stock based compensation expense, partially offset by a \$200,000 rent abatement.

Interest income, net of interest expense, totaled \$332,000 for the first quarter of 2010, compared to \$302,000 for the first quarter of 2009. Interest income for the 2010 period reflected significantly increased cash and investment balances partially offset by lower short-term interest rates.

Income tax expense totaled \$626,000 for the first quarter of 2010, compared to an income tax benefit of \$73,000 for the first quarter of 2009. Income tax expense for the 2010 period was primarily due to the tax effect of the difference in treatment of stock-based compensation for income tax purposes as compared to U.S. generally accepted accounting principles.

Conference Call

As previously announced, Targacept will be hosting a conference call and webcast today, May 5, 2010, at 5:00 p.m. Eastern Daylight Time. The conference call may be accessed by dialing 800-299-7928 for domestic participants and 617-614-3926 for international callers (reference passcode 84591908). A replay of the conference call may be accessed from approximately 8:00 p.m. Eastern Daylight Time on May 5, 2010 through May 19, 2010 by dialing 888-286-8010 for domestic callers and 617-801-6888 for international callers (reference passcode 41944133).

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 with a vision of building health and restoring independence for patients. Targacept has leveraged its leadership position in NNR research to build a diverse pipeline of NNR Therapeutics™ in development to treat an array of central nervous system diseases and disorders, including major depressive disorder, attention deficit/hyperactivity disorder, Alzheimer's disease and cognitive dysfunction in schizophrenia. In addition, Targacept has alliances with the global pharmaceutical companies AstraZeneca and GlaxoSmithKline. Targacept's news releases are available on its website at www.targacept.com.

Forward-Looking Statements

This press release includes "forward-looking statements" made under the provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include statements other than statements of historical fact regarding, without limitation: the progress or scope of development of TC-5214, TC-5619, AZD3480, AZD1446, TC-6987 or any other Targacept product candidate or program, such as the size, design, population, conduct, duration or objective of any clinical trial, the timing for initiation or completion of any clinical trial, for availability of results from any clinical trial or for submission or approval of any regulatory filing (including a new drug application for TC-5214), or the target indication(s) for development; the competitive position of any Targacept product candidate or the commercial opportunity in any target indication; any payments that AstraZeneca or GlaxoSmithKline may make to Targacept; or Targacept's plans, expectations or future operations, financial position, revenues, costs or expenses. 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 without limitation Targacept's critical accounting policies and the risks and uncertainties relating to: Targacept's dependence on the success of its collaborations with AstraZeneca; the significant control that AstraZeneca has over the development of TC-5214, AZD3480 and AZD1446, including as to timing, as to the conduct of any further development of AZD3480 in ADHD or AZD1446 in Alzheimer's disease or ADHD and as to the scope and design of any future clinical trial of AZD3480 or AZD1446; the conduct and results of clinical trials and non-clinical studies and assessments of TC-5214, TC-5619, AZD3480, AZD1446, TC-6987 and any other Targacept product candidate, 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; the overall impact of GlaxoSmithKline's shift in discovery research focus on Targacept's alliance with GlaxoSmithKline; 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™ 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 share and per share amounts)

	Three Months Ended	
	March 31,	
	2010	2009
Net operating revenues	\$ 19,518	\$ 6,141
Operating expenses:		
Research and development	10,607	9,495
General and administrative	1,822	1,470
Cost of product sales	—	228
Total operating expenses	12,429	11,193
Operating income (loss)	7,089	(5,052)
Interest income, net	332	302
Income (loss) before income taxes	7,421	(4,750)
Income tax (expense) benefit	(626)	73
Net income (loss)	\$ 6,795	\$ (4,677)
Basic net income (loss) per share	\$ 0.24	\$ (0.19)
Diluted net income (loss) per share	\$ 0.23	\$ (0.19)
Weighted average common shares outstanding - basic	28,311,452	24,964,909
Weighted average common shares outstanding - diluted	29,172,218	24,964,909

TARGACEPT, INC**Unaudited Condensed Balance Sheets**
(in thousands)

	March 31,	December 31,
	2010	2009
Cash, cash equivalents and investments	\$ 285,090	\$ 111,066
Collaboration receivables and other current assets	2,346	203,363
Property and equipment, net	5,508	4,783
Other assets, net	163	167
Total assets	\$ 293,107	\$ 319,379
Current portion of deferred revenue	\$ 77,162	\$ 77,243
Other current liabilities	7,782	23,984
Deferred revenue, net of current portion	128,332	147,195
Long-term debt, net of current portion	1,593	1,966
Total stockholders' equity	78,238	68,991
Total liabilities and stockholders' equity	\$ 293,107	\$ 319,379