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, 2011

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 May 5, 2011, Targacept, Inc. issued a press release announcing its financial results for the first quarter ended March 31, 2011. 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 5, 2011

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, 2011

/s/ Alan A. Musso

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

EXHIBIT INDEX

Exhibit Number	Description
99.1	Press release dated May 5, 2011

Exhibit 99.1

Targacept Reports First Quarter 2011 Financial Results

Winston-Salem, North Carolina, May 5, 2011 – 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, 2011.

Targacept reported net income of $12.6 million for the first quarter of 2011, compared to net income of $6.8 million for the first quarter of 2010. The improved financial results were principally due to an increase in amounts recognized into revenue from payments previously received from AstraZeneca and GlaxoSmithKline and recorded initially as deferred revenue, partially offset by increased research and development expenses. As of March 31, 2011, cash and investments in marketable securities totaled $230.3 million.

“This quarter we continued to focus on quality execution of the RENAISSANCE Program for TC-5214, where we expect to deliver top-line results from at least one of the pivotal studies by the end of the year. We were also pleased to further diversify our therapeutic focus into inflammatory disorders with the initiation of Phase 2 learning studies of TC-6987 in asthma and type 2 diabetes,” said J. Donald deBethizy, Ph.D., Targacept’s President and Chief Executive Officer. “In addition, we recently announced our retention of the full rights to TC-5619 and are actively planning for a Phase 2b trial of TC-5619 to further assess the unique potential of TC-5619 to treat negative and cognitive symptoms of schizophrenia.”

Recent Highlights and Program Updates:

TC-5214 (co-development with AstraZeneca)

- Execution continuing for the clinical studies comprising the RENAISSANCE Program, which is designed to support filing of a New Drug Application with the FDA planned for the second half of 2012 as an adjunct therapy for patients with major depressive disorder (MDD) who do not respond adequately to initial treatment with an SSRI or SNRI;
- First top-line results from the RENAISSANCE Program expected to become available in the fourth quarter of 2011;
- Began enrollment for a Phase 2b clinical trial, known as the EXPLORER study, as a “switch” monotherapy treatment for patients with MDD who do not respond adequately to initial treatment with an SSRI or SNRI.

TC-5619

- Announced that Targacept would retain full rights to TC-5619 following AstraZeneca’s decision not to exercise its option to license the compound; planning underway for Targacept’s next Phase 2 clinical trial in patients with schizophrenia;
- Presented results from a Phase 2 clinical proof of concept study as an augmentation therapy to improve cognition in patients with schizophrenia at the International Congress on Schizophrenia Research; met protocol-defined success criteria on the primary outcome measure, the Groton Maze Learning Task of the CogState Schizophrenia Battery, and showed statistically significant (1-sided p-value < 0.1) superiority over placebo on some secondary efficacy outcome measures that assessed improvement on cognitive or negative symptoms of schizophrenia;

- Reported top-line results from a Phase 2 study in adults with attention deficit/hyperactivity disorder (ADHD); did not meet the study's primary efficacy outcome measure, but did outperform placebo with statistical significance (1-sided p-value < 0.1) across the study's secondary efficacy outcome measures approximately seven times more often than placebo outperformed TC-5619 by the same standard;

AZD3480 and AZD1446

- Initiation of a Phase 2 clinical study of AZD3480 in Alzheimer's disease anticipated in the second half of 2011 following planned interactions with applicable European regulatory authorities;
- Decision by AstraZeneca regarding potential future development of AZD3480 in ADHD expected in the second half of 2011 and decision by AstraZeneca regarding potential further development of AZD1446 in Alzheimer's disease expected in the third quarter of 2011;

TC-6987

- Phase 2 clinical studies in asthma and type 2 diabetes currently enrolling, with the goal to complete both by year end; studies designed to guide the selection of the indication(s) for which TC-6987 is best suited for later-stage development;

Corporate Achievements

- Ranked 23rd in *The Scientist* magazine's "Best Places to Work in Industry" for 2011, marking the fifth consecutive year Targacept has received such recognition.

Financial Results

Targacept reported net income of $12.6 million for the first quarter of 2011, compared to net income of $6.8 million for the first quarter of 2010. The improved financial results were principally due to an increase in amounts recognized into revenue from payments that were initially recorded as deferred revenue when received from AstraZeneca and GlaxoSmithKline, partially offset by increased research and development expenses. In particular, as a result of the receipt in February 2011 of notice of termination of its product development and commercialization agreement with GlaxoSmithKline, Targacept recognized into revenue for the 2011 period the remaining $18.4 million in payments previously received from GlaxoSmithKline and recorded initially as deferred revenue, as compared to $826,000 of these payments recognized for the 2010 period. The results also included non-cash, stock-based compensation charges of $2.2 million and $1.2 million for the first quarter of 2011 and 2010, respectively.

Net operating revenues totaled $39.0 million for the first quarter of 2011, compared to $19.5 million for the first quarter of 2010. The higher net operating revenues were principally attributable to the recognition of $18.4 million in payments previously received from GlaxoSmithKline as discussed above and $2.4 million of the $11.0 million payment received from AstraZeneca in April 2010.

Research and development expenses totaled $23.5 million for the first quarter of 2011, compared to $10.6 million for the first quarter of 2010. The higher research and development expenses were principally attributable to increases of $10.5 million in costs incurred for third-party research and development services in connection with clinical-stage product candidates, $1.3 million in costs incurred for third-party research and development services in connection with preclinical programs and $1.1 million in other research and development-related operating costs, including compensation-related expenses for research

and development personnel and infrastructure costs. The higher costs incurred for third-party research and development services in connection with clinical-stage product candidates were principally due to an increase in the level of activities in the Phase 3 development program for TC-5214, the conduct of Phase 2 clinical development of TC-5619 for two indications, the conduct of Phase 2 clinical development of TC-6987 and activities in preparation of a potential additional Phase 2 clinical trial of AZD3480 in Alzheimer's disease.

General and administrative expenses totaled $3.2 million for the first quarter of 2011, compared to $1.8 million for the first quarter of 2010. The higher general and administrative expenses were principally attributable to increases of $513,000 in compensation-related expenses for general and administrative personnel and $837,000 in other general and administrative expenses, including infrastructure, insurance and patent-related costs.

Interest income, net of interest expense, totaled $285,000 for the first quarter of 2011, compared to $332,000 for the first quarter of 2010. The decrease reflected lower average cash and investment balances.

There was no income tax expense for the first quarter of 2011, compared to $626,000 of income tax expense for the first quarter of 2010. Income tax expense for the 2010 period was primarily due to the income tax effect of stock option exercises recognized in certain circumstances.

2011 Financial Guidance

Targacept is adjusting its revenue guidance for the year ending December 31, 2011 in light of the recognition into revenue of the remaining unrecognized amounts previously received from GlaxoSmithKline and recorded initially as deferred revenue. Targacept now expects its net operating revenues for the year to be in the range of $95 million to $105 million. Targacept continues to expect its operating expenses for the year ending December 31, 2011 to be in the range of $105 million to $115 million. Because the recognition of previously deferred revenue is a non-cash item, Targacept continues to expect its cash, cash equivalents and investments balance at December 31, 2011 to be at least $150 million and that its current cash resources will be sufficient to meet its operating requirements at least through the end of 2013. This financial guidance includes both cash and non-cash revenue and expense items and does not include amounts that Targacept could receive if any milestone events are achieved under its agreement with AstraZeneca for TC-5214.

Conference Call

As previously announced, Targacept will be hosting a conference call and webcast today, May 5, 2011, at 5:00 p.m. Eastern Time. The conference call may be accessed by dialing 866-202-3048 for domestic participants and 617-213-8843 for international callers (reference passcode 13322530). A replay of the conference call may be accessed from approximately 8:00 p.m. Eastern Time on May 5, 2011 through May 19, 2011 by dialing 888-286-8010 for domestic callers and 617-801-6888 for international callers (reference passcode 29298238).

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 developing a diverse pipeline of innovative NNR Therapeutics™ for difficult-to-treat diseases and disorders of the nervous system. NNR Therapeutics selectively modulate the activity of specific neuronal nicotinic receptors, a unique class of proteins that regulate vital biological functions that are impaired in various disease states. Targacept's lead program, TC-5214, is being co-developed with AstraZeneca and is in Phase 3 clinical trials as an adjunct treatment for major depressive disorder. Targacept leverages its scientific leadership and proprietary drug discovery platform Pentad™ to generate novel small molecule product candidates to fuel its pipeline and attract significant collaborations with global pharmaceutical companies. For more information, please visit www.targacept.com.

TARGACEPT

Building Health, Restoring Independence℠

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 target indication(s) for development, the size, design, population, conduct, duration or objective of any clinical trial or the timing for initiation or completion of any clinical trial, for availability of results from any clinical trial, for interactions with regulatory authorities or for submission or approval of any regulatory filing (such as a New Drug Application for TC-5214); the timing for a decision by AstraZeneca as to whether to conduct further development of either or both of AZD3480 in ADHD and AZD1446 in Alzheimer's disease; the competitive position of any Targacept product candidate or the commercial opportunity in any target indication; any payments that AstraZeneca 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 risks and uncertainties relating to: Targacept's dependence on the success of its collaborations with AstraZeneca; the control or significant influence that AstraZeneca has over the development of TC-5214, AZD3480 and AZD1446, including as to the timing, scope and design of any future clinical trials and as to the conduct at all of further development of AZD3480 in ADHD or AZD1446 in Alzheimer's disease; 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; whether positive findings from completed clinical trials of TC-5214 or TC-5619 will be replicated in ongoing or any future clinical trials of that product candidate; whether applicable regulatory authorities in Europe will approve the planned clinical trial of AZD3480 in Alzheimer's disease; whether AstraZeneca will decide to conduct any further development of AZD3480 in ADHD in light of reservations about the adequacy of the therapeutic margin; Targacept's ability to protect its intellectual property; 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™, Pentad™ and Building Health, Restoring Independence℠ are trademarks or service marks 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,	
	2011	2010
Net operating revenues	$ 38,994	$ 19,518
Operating expenses:		
Research and development	23,517	10,607
General and administrative	3,175	1,822
Total operating expenses	26,692	12,429
Operating income	12,302	7,089
Interest income, net of interest expense	285	332
Income before income taxes	12,587	7,421
Income tax expense	—	626
Net income	$ 12,587	$ 6,795
Basic net income per share	$ 0.43	$ 0.24
Diluted net income per share	$ 0.41	$ 0.23
Weighted average common shares outstanding - basic	28,996,060	28,311,452
Weighted average common shares outstanding - diluted	30,399,750	29,172,218

TARGACEPT, INC

Unaudited Condensed Balance Sheets
(in thousands)

	March 31, 2011	December 31, 2010
Cash, cash equivalents and investments	$230,330	$ 252,509
Collaboration receivables and other current assets	3,006	4,057
Property and equipment, net	6,074	6,072
Other assets, net	145	149
Total assets	$239,555	$ 262,787
Current portion of deferred revenue	$ 75,931	$ 81,710
Other Current liabilities	17,421	16,947
Deferred revenue, net of current portion	37,719	70,934
Long-term debt, net of current portion	921	1,349
Total stockholders' equity	107,563	91,847
Total liabilities and stockholders' equity	$239,555	$ 262,787