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): March 20, 2012

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 8.01 Other Events.

On March 20, 2012, Targacept, Inc. issued a press release in which Targacept and its collaborator AstraZeneca reported top-line results from RENAISSANCE studies 4, 5 and 7, Phase 3 clinical trials of TC-5214 as an adjunct therapy to an antidepressant for patients with major depressive disorder (MDD) who do not respond adequately to initial antidepressant treatment, and announced that the two companies will not pursue a regulatory filing for TC-5214 as an adjunct treatment for patients with MDD. The full text of the press release is attached as Exhibit 99.1 to this Current Report on Form 8-K.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit Number	Description
99.1	Press release dated March 20, 2012

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: March 20, 2012

/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 March 20, 2012

Exhibit 99.1

AstraZeneca and Targacept Announce Remaining TC-5214 Phase 3 Efficacy Studies Do Not Meet Primary Endpoint, Regulatory Filing Will Not Be Pursued

London, UK and Winston-Salem, NC – March 20, 2012 – AstraZeneca and Targacept, Inc. today announced top-line results from the remaining Phase 3 studies investigating efficacy, tolerability and safety of TC-5214 as an adjunct therapy to an antidepressant in patients with major depressive disorder (MDD) who did not respond adequately to initial antidepressant treatment. RENAISSANCE 4 and RENAISSANCE 5, both efficacy and tolerability studies, did not meet the primary endpoint of change on the Montgomery-Asberg Depression Rating Scale (MADRS) total score after eight weeks of adjunct treatment with TC-5214 as compared to placebo.

In both RENAISSANCE 4 and RENAISSANCE 5, as well as in the previously completed RENAISSANCE 2 and RENAISSANCE 3 studies, every dose group (TC-5214 and placebo) showed at least a 40 percent improvement in MADRS total score after eight weeks of adjunct treatment. TC-5214 was overall well tolerated in RENAISSANCE 4 and RENAISSANCE 5 with an adverse event profile generally consistent with prior clinical trials.

In RENAISSANCE 7, a long-term study designed primarily to evaluate the safety of TC-5214, together with an antidepressant treatment, for one year, TC-5214 was overall well tolerated, with an adverse event profile generally consistent with prior clinical trials.

These studies conclude the RENAISSANCE Program for TC-5214. Based on the totality of the results, AstraZeneca and Targacept will not pursue a regulatory filing for TC-5214 as an adjunct treatment for patients with MDD.

“Since the readout from the first RENAISSANCE Program outcomes, we have been carefully scrutinizing all aspects of our business to prepare for this contingency, and we will announce our plans by the end of April,” said J. Donald deBethizy, Ph.D., Targacept’s President and Chief Executive Officer. “Targacept has built a deep and mechanistically diverse clinical pipeline, and, with multiple NNR Therapeutics in Phase 2 development in areas of large medical need and commercial opportunity and over $225 million in cash, we are well positioned for future success.”

About the Targacept and AstraZeneca Collaboration

In December 2009, AstraZeneca and Targacept signed a collaboration and license agreement for the global development and commercialization of TC-5214. The initial goal for the collaboration was to develop TC-5214 as an adjunct treatment for MDD in patients with an inadequate response to a selective serotonin reuptake inhibitor (SSRI) or serotonin/norepinephrine reuptake inhibitor (SNRI).

About MDD

MDD is characterized by one or more major depressive episodes without a history of manic, mixed or hypomanic episodes. The essential feature of a major depressive episode is a period of at least two weeks during which there is depressed mood or the loss of interest or pleasure in nearly all activities. In the large-scale STAR*D study sponsored by the US National Institute of Mental Health between 2001 and 2006, approximately 63 percent of patients with MDD did not achieve study-defined remission with first-line treatment with the SSRI citalopram hydrobromide.

About the RENAISSANCE Program (TC-5214)

The RENAISSANCE Program consisted of five randomized, double blind, placebo controlled Phase 3 studies.

In RENAISSANCE study 4, a total of 2,407 patients with MDD were screened at 126 sites in the United States and India. Of the patients screened, 1,335 initially received one of seven SSRIs or SNRIs on an open label basis for eight weeks to determine the extent of therapeutic response. At the end of the eight weeks, 641 patients who did not respond adequately, based on predefined criteria, were randomized into the double blind phase of the study and received either a fixed dose of TC-5214 or placebo while continuing the SSRI or SNRI therapy for an additional eight weeks. The dosages of TC-5214 tested in the study were 0.5 mg, 2 mg and 4 mg BID (twice daily).

In RENAISSANCE study 5, a total of 1,566 patients with MDD were screened at 155 sites in Argentina, Brazil, Bulgaria, Chile, Colombia, France, Germany, Poland, Romania, Russia, Serbia, Slovakia, South Africa, Spain, and Ukraine. Of the patients screened, 1,285 initially received one of seven SSRIs or SNRIs on an open label basis for eight weeks to determine the extent of therapeutic response. At the end of the eight weeks, 696 patients who did not respond adequately, based on predefined criteria, were randomized into the double blind phase of the study and received either a fixed dose of TC-5214 or placebo while continuing the SSRI or SNRI therapy for an additional eight weeks. The dosages of TC-5214 tested in the study were 0.1 mg, 1 mg and 4 mg BID.

In RENAISSANCE study 7, a total of 1,934 patients with MDD were screened at 121 sites in the United States. Of the patients screened, 808 patients in this flexible dose trial received TC-5214 (range of 1-4 mg BID) or placebo, plus one of seven SSRIs or SNRIs, for up to one year.

About the Montgomery-Asberg Depression Rating Scale

The Montgomery-Asberg Depression Rating Scale (MADRS) is a commonly used 10-item questionnaire that psychiatrists employ to measure the severity of depressive episodes in patients with mood disorders.

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 clinical pipeline includes multiple mid- to late-stage product candidates, all representing first-in-class opportunities. 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®

About AstraZeneca

AstraZeneca is a global, innovation-driven biopharmaceutical business with a primary focus on the discovery, development and commercialization of prescription medicines for gastrointestinal, cardiovascular, neuroscience, respiratory and inflammation, oncology and infectious disease. AstraZeneca operates in over 100 countries and its innovative medicines are used by millions of patients worldwide. For more information please visit: www.astrazeneca.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, 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 the risks and uncertainties described 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.

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