

**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): December 10, 2007

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 8.01 Other Events.

On December 10, 2007, Targacept, Inc. issued a press release announcing its initiation of a Phase I clinical trial of its product candidate TC-6499, which triggers a \$6.0 million milestone payment to Targacept under the terms of its alliance agreement with GlaxoSmithKline. 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

<u>Exhibit Number</u>	<u>Description</u>
99.1	Press release dated December 10, 2007

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: December 10, 2007

/s/ Alan A. Musso

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

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Description</u>
99.1	Press release dated December 10, 2007

Targacept to Receive \$6 Million from GlaxoSmithKline for Initiation of Phase I Trial of Neuropathic Pain Candidate

Winston-Salem, NC —December 10, 2007—Targacept, Inc. (Nasdaq: TRGT), a clinical-stage biopharmaceutical company developing a new class of drugs known as NNR Therapeutics (TM), today announced that it has initiated a Phase I clinical trial of its product candidate TC-6499. The initiation of the trial triggers a \$6.0 million milestone payment to Targacept under the terms of its alliance agreement with GlaxoSmithKline.

TC-6499 is a novel small molecule that Targacept plans to develop initially as a treatment for neuropathic pain. In preclinical studies, TC-6499 demonstrated analgesic activity in multiple models of neuropathic pain. TC-6499 was discovered using Targacept's proprietary drug design technology known as Pentad (TM).

The Phase I study is designed to evaluate the safety, tolerability and pharmacokinetics of TC-6499. The trial is a double-blind, placebo-controlled study with escalating single doses of TC-6499 administered orally to healthy volunteers.

"TC-6499 represents the third Pentad-enabled product candidate that we have advanced into the clinic this year, demonstrating the strength of Pentad, our ability to execute our operating plans successfully and the breadth and pharmacological diversity of our pipeline of NNR Therapeutics," said J. Donald deBethizy, Ph.D., Targacept's President and Chief Executive Officer. "We are pleased to achieve this milestone in our GlaxoSmithKline alliance, which we entered into only a few months ago."

"We are delighted to see TC-6499 enter clinical development," said Hugh Cowley, M.D., Senior Vice President of GlaxoSmithKline and head of the Center of Excellence for External Drug Discovery (CEEDD). "There is a clear need for effective treatments for neuropathic pain and the preclinical profile of TC-6499 is very encouraging. We are pleased to be working with Targacept and excited by the potential of NNR-targeted therapeutics for pain, as well as the other four therapeutic focus areas of the alliance."

Targacept anticipates that its Phase I program for TC-6499 will include, in addition to the ongoing single dose trial, a multiple rising dose trial. Under its agreement with GlaxoSmithKline, Targacept is eligible to receive an additional milestone payment if, following completion of its Phase I program, Targacept determines to advance TC-6499 into Phase II.

TC-6499 is subject to a contingent future option of GlaxoSmithKline for an exclusive license under the terms of the parties' agreement. If licensed, Targacept retains an option to co-promote TC-6499 for pain to specialists and hospital-based physicians in the United States.

About Neuropathic Pain

Unlike nociceptive pain, which generally results from tissue damage, neuropathic pain results from damage to the nerves that transmit pain sensation. When this occurs, central nervous system (CNS) mechanisms that inhibit pain transmission do not function properly and pain signals continue to be sent to the brain. NNR-targeted treatments may have the potential to amplify the inhibitory CNS mechanisms directly, restoring their ability to shut off the pain signals.

Neuropathic pain is characterized as severe, stabbing, burning or tingling and is most often associated with diabetes mellitus, chemotherapy, toxins, herpes, HIV infection or trauma. Neuropathic pain affects more than 15 million people in the United States alone, and the currently available treatments are often inadequate to relieve the pain effectively. Other options are needed to improve the outcomes for patients with neuropathic pain.

About Targacept

Targacept is a clinical-stage biopharmaceutical company that discovers and develops NNR Therapeutics (TM), 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 and cognitive deficits in schizophrenia, pain, and depression and anxiety disorders, multiple preclinical programs, and strategic alliances with AstraZeneca and GlaxoSmithKline. Targacept is located in Winston-Salem, North Carolina. For more information about Targacept, please visit <http://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 TC-6499 or related regulatory filings or clinical trials, any future payments that GlaxoSmithKline may make to us with respect to TC-6499, the benefits that may be derived from NNR Therapeutics, our plans, expectations, future operations, financial position, revenues or costs, 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 risks and uncertainties relating to: the results of clinical trials and non-clinical studies and assessments with respect to TC-6499 or any of our current and future product candidates in development; the conduct of such trials, studies and assessments, including the performance of third parties that we engage to execute them and difficulties or delays in the completion of patient enrollment or data analysis; the timing and success of submission, acceptance and approval of regulatory filings; the competitiveness of TC-6499 as compared to any other product candidates in GlaxoSmithKline's product pipeline in development for the same indication or indications and to products and product candidates of third parties; and our ability to obtain substantial additional funding. These and other risks and uncertainties that may impact actual results are described in greater detail under the heading "Risk Factors" in our most recent Annual Report on Form 10-K, in our subsequent Quarterly Reports on Form 10-Q 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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