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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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**FORM 8-K**

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**CURRENT REPORT**

**Pursuant to Section 13 or 15(d) of the  
Securities Exchange Act of 1934**

**Date of Report (Date of earliest event reported): February 28, 2011**

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**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 1.02 Termination of a Material Definitive Agreement.**

On February 28, 2011, Targacept, Inc. received notice of termination of its Product Development and Commercialization Agreement, dated July 27, 2007, with SmithKline Beecham Corporation, doing business as GlaxoSmithKline, and Glaxo Group Limited (referred to together in this Current Report as GlaxoSmithKline).

The Product Development and Commercialization Agreement set forth the terms of an alliance that was designed to discover, develop and market product candidates that selectively target specified neuronal nicotinic receptor subtypes in five therapeutic focus areas. In February 2010, GlaxoSmithKline announced significant strategic changes in the neurosciences area, which ultimately led to the decision to end the alliance. By the terms of the Product Development and Commercialization Agreement, the termination becomes effective on May 29, 2011. Targacept will incur no financial penalties as a result of GlaxoSmithKline's early termination of the agreement.

The alliance was structured as a risk sharing arrangement whereby: (1) Targacept would conduct research programs in the therapeutic focus areas through a Phase 2 clinical proof of concept trial and be eligible to receive contingent milestone payments from GlaxoSmithKline as Targacept advanced product candidates through successive stages of preclinical and Phase 1 clinical development; and (2) for each therapeutic focus area, if Targacept achieved clinical proof of concept with a lead product candidate, GlaxoSmithKline would have an option to in-license that lead product candidate and up to two other product candidates in development in the alliance for the same therapeutic focus area on a worldwide basis. The alliance also generally required Targacept to work in the therapeutic focus areas exclusively with GlaxoSmithKline with respect to product candidates with activity derived from binding to neuronal nicotinic receptors.

Errol B. De Souza, a member of Targacept's board of directors, is the chairman of the Steering Board for GlaxoSmithKline's Immunology Inflammation Center of Excellence for Drug Discovery.

**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 3, 2011

/s/ Alan A. Musso

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