
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

**FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

TARGACEPT, INC.
(Exact Name of Registrant as Specified in its Charter)

DELAWARE
(State or Other Jurisdiction of
Incorporation or Organization)

56-2020050
(I.R.S. Employer
Identification No.)

**100 North Main Street, Suite 1510
Winston-Salem, North Carolina 27101**
(Address of Principal Executive Offices, including Zip Code)

TARGACEPT, INC.
STAND-ALONE STOCK OPTION AGREEMENT FOR DR. STEPHEN A. HILL
(Full Title of the Plan)

Alan A. Musso
Senior Vice President, Finance and Administration, Chief Financial Officer and Treasurer
Targacept, Inc.
100 North Main Street, Suite 1510
Winston-Salem, North Carolina 27101
(336) 480-2100
(Name, Address and Telephone Number, including Area Code, of Agent for Service)

With a copy to:
Peter A. Zorn, Esq.
Senior Vice President, Legal Affairs, General Counsel and Secretary
Targacept, Inc.
100 North Main Street, Suite 1510
Winston-Salem, North Carolina 27101
(336) 480-2100

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated Filer
 Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Securities To Be Registered	Amount To Be Registered (1)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee (2)
Common Stock, par value \$0.001 per share	400,000	\$4.50	\$1,800,000	\$245.52

- (1) This Registration Statement covers 400,000 shares available for issuance under a certain stand-alone Nonqualified Stock Option Agreement between Targacept, Inc. (the “Company”) and Dr. Stephen A. Hill dated December 3, 2012 (the “Option Agreement”), which was entered into pursuant to a previously announced Employment Agreement between the Company and Dr. Stephen A. Hill dated November 14, 2012. This Registration Statement also registers additional securities to be offered or issued upon adjustment or changes made to the registered securities by reason of any stock splits, stock dividends or similar transactions as permitted by Rule 416(a) and Rule 416(b) under the Securities Act of 1933, as amended (the “Securities Act”).
- (2) Pursuant to Rule 457(h)(1), based on the option price per share (\$4.50) of the option granted to Dr. Hill pursuant to the Option Agreement.

EXPLANATORY NOTE

Targacept, Inc. (the "Company") has prepared this Registration Statement (the "Registration Statement") in accordance with the requirements of Form S-8 under the Securities Act of 1933, as amended (the "Securities Act"), to register an aggregate of 400,000 shares of common stock of the Company (the "Common Stock") authorized for issuance pursuant to a certain Nonqualified Stock Option Agreement between the Company and Dr. Stephen A. Hill dated December 3, 2012 (the "Option Agreement"). The Option Agreement was entered into in connection with the Company's employment of Dr. Hill as its new President and Chief Executive Officer and pursuant to the terms of that certain Employment Agreement between the Company and Dr. Hill dated November 14, 2012 (the "Employment Agreement"). The option is an "employment inducement grant" under the rules of the Nasdaq Stock Market and, as such, is not subject to the approval of the Company's stockholders.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information.*

Item 2. Registration Information and Employee Plan Annual Information.*

* The documents containing the information specified in Part I of Form S-8 will be sent or given to employees as specified by Rule 428(b)(1) of the Securities Act. Such documents need not be filed with the Securities and Exchange Commission (the "Commission") either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 of the Securities Act. These documents and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of this Registration Statement, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Company with the Commission are incorporated herein by reference:

(a) The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2011, filed with the Commission on March 6, 2012;

(b) The Company's Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2012, June 30, 2012 and September 30, 2012, filed with the Commission on May 9, 2012, August 9, 2012 and November 8, 2012, respectively;

(c) The Company's Current Reports on Form 8-K filed with the Commission on January 19, 2012, March 20, 2012, March 27, 2012 (2), April 10, 2012, April 25, 2012, April 30, 2012, June 6, 2012, June 15, 2012, August 31, 2012, September 17, 2012, October 9, 2012 (solely with respect to Item 2.05 and the portion of Exhibit 99.1 incorporated by reference therein), November 16, 2012 and December 10, 2012;

(d) The description of the Company's Common Stock, par value \$0.001 per share, contained in the Company's Registration Statement on Form 8-A filed with the Commission on April 6, 2006, with respect to such Common Stock, including any subsequent amendment or report filed for the purposes of updating such description; and

(e) All other reports filed pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), since the end of the fiscal year referred to in (a) above.

All documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities remaining unsold, shall be deemed to be incorporated by reference herein and to be a part hereof from the date of the filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the

purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as to modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Our Fourth Amended and Restated Certificate of Incorporation (as may be amended and in effect from time to time, the "Certificate") provides that our directors shall not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, except for liability for breach of the director's duty of loyalty to us or our stockholders, for acts or omissions not in good faith or involving intentional misconduct or a knowing violation of law, for payment of dividends or approval of stock purchases or redemptions that are prohibited by the General Corporation Law of the State of Delaware, as amended (the "DGCL"), or for any transaction from which the director derived an improper personal benefit. Under the DGCL, our directors have a fiduciary duty to us that is not eliminated by this provision of the Certificate and, in appropriate circumstances, equitable remedies such as injunctive or other forms of non-monetary relief will remain available. This provision also does not affect our directors' responsibilities under any other laws, such as federal securities laws or state or federal environmental laws.

Section 145 of the DGCL empowers a corporation to indemnify its directors and officers against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by them in connection with any action, suit or proceeding brought by third parties by reason of the fact that they were or are directors or officers of the corporation, if they acted in good faith, in a manner they reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe that their conduct was unlawful. The DGCL provides further that the indemnification permitted thereunder shall not be deemed exclusive of any other rights to which the directors and officers may be entitled under the corporation's bylaws, any agreement, a vote of stockholders or otherwise. The Certificate provides that, to the fullest extent permitted by Section 145 of the DGCL, we shall indemnify any person who is or was a director or officer of us, or is or was serving at our request as a director, officer or trustee of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, against the expenses, liabilities or other matters referred to in or covered by Section 145 of the DGCL. Our bylaws provide that we will indemnify any person who was or is a party or threatened to be made a party to any proceeding by reason of the fact that such person is or was a director or officer of us or is or was serving at our request as a director, officer or trustee of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise to the fullest extent permitted by the DGCL. In addition, we have entered into agreements with our directors and executive officers under which, among other things, we have agreed to indemnify the director or officer against expenses incurred in any proceeding, including any action by us, in which any such person was, is or is threatened to be made a party or a participant by reason of such person's status as a present or former director, officer, employee or agent of us or, at our request, any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise. At present, there is no pending litigation or proceeding involving any director or officer as to which indemnification will be required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for such indemnification.

Section 145 of the DGCL also empowers a corporation to purchase insurance for its officers and directors for such liabilities. We maintain liability insurance for our officers and directors.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

The following exhibits are filed as a part of this Registration Statement:

<u>Exhibit No.</u>	<u>Description</u>
4.1	Fourth Amended and Restated Certificate of Incorporation of the Company, which is incorporated herein by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8 (Registration No. 333-133881), filed with the Commission on May 8, 2006.
4.2	Bylaws of the Company, as amended and restated effective January 9, 2009 and further amended effective as of August 6, 2009, which are incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K, filed with the Commission on August 11, 2009.
4.3	Specimen Certificate of Common Stock, which is incorporated herein by reference to Exhibit 4.1 to Amendment No. 3 to the Company's Registration Statement on Form S-1/A (File No. 333-131050), filed with the Commission on March 16, 2006.
4.4(a)	Third Amended and Restated Investor Rights Agreement, dated May 12, 2004, by and among the Company and certain stockholders of the Company, which is incorporated herein by reference to Exhibit 4.2(a) to the Company's Registration Statement on Form S-1 (File No. 333-131050), filed with the Commission on January 17, 2006.
4.4(b)	Amendment No. 1, dated December 6, 2004, to Third Amended and Restated Investor Rights Agreement, dated May 12, 2004, which is incorporated herein by reference to Exhibit 4.2(b) to the Company's Registration Statement on Form S-1 (File No. 333-131050), filed with the Commission on January 17, 2006.
4.4(c)	Amendment No. 2, dated March 16, 2006, to Third Amended and Restated Investor Rights Agreement, dated May 12, 2004, which is incorporated herein by reference to Exhibit 4.2(c) to Amendment No. 4 to the Company's Registration Statement on Form S-1/A (File No. 333-131050), filed with the Commission on March 24, 2006.
5	Opinion of Womble Carlyle Sandridge & Rice, LLP, counsel to the Company, regarding the legality of the securities being registered.
23.1	Consent of Womble Carlyle Sandridge & Rice, LLP, counsel to the Company (included in Exhibit 5).
23.2	Consent of Ernst & Young LLP.
24	Power of Attorney (included on signature page).
99.1	Nonqualified Stock Option Agreement between the Company and Dr. Stephen A. Hill dated December 3, 2012.
99.2	Employment Agreement between the Company and Dr. Stephen A. Hill dated November 14, 2012, which is incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the Commission on November 16, 2012.

Item 9. Undertakings.

(a) The undersigned Company hereby undertakes:

- (1) to file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) to include any prospectus required by Section 10(a)(3) of the Securities Act;
 - (ii) to reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement; and
 - (iii) to include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with, or furnished to, the Commission by the Company pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
 - (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned Company hereby undertakes that, for the purposes of determining any liability under the Securities Act, each filing of the Company's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, the Company has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Company will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

THE REGISTRANT

Pursuant to the requirements of the Securities Act of 1933, Targacept, Inc. certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Winston-Salem, State of North Carolina, on this 4th day of January, 2013.

TARGACEPT, INC.

By: /s/ Alan A. Musso

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

Each of the undersigned, being a director and/or officer of Targacept, Inc. (the "Company"), hereby nominates, constitutes and appoints Mark Skaletsky, Alan A. Musso and Peter A. Zorn, or any one of them severally, to be his or her true and lawful attorney-in-fact and to sign in his or her name and on his or her behalf in any and all capacities stated below, and to file with the Securities and Exchange Commission (the "Commission"), a Registration Statement on Form S-8 (the "Registration Statement") relating to the issuance of certain shares of the common stock, \$0.001 par value, of the Company (the "Common Stock") in connection with that certain Nonqualified Stock Option Agreement between the Company and Dr. Stephen A. Hill dated December 3, 2012, and to file any and all amendments, including post-effective amendments, exhibits and other documents and instruments in connection therewith, to the Registration Statement, making such changes in the Registration Statement as such attorney-in-fact and agent deems appropriate, and generally to do all such things on his or her behalf in any and all capacities stated below to enable the Company to comply with the provisions of the Securities Act of 1933, as amended (the "Securities Act"), and all requirements of the Commission.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities indicated on January 4, 2013.

/s/ Stephen A. Hill

Name: Stephen A. Hill
Title: Chief Executive Officer, President and
Director (principal executive officer)

/s/ Alan A. Musso

Name: Alan A. Musso
Title: Senior Vice President, Finance and Administration,
Chief Financial Officer and Treasurer (principal financial officer
and principal accounting officer)

/s/ Mark Skaletsky

Name: Mark Skaletsky
Title: Chairman of the Board of Directors

/s/ M. James Barrett

Name: M. James Barrett
Title: Director

/s/ Charles A. Blixt

Name: Charles A. Blixt
Title: Director

/s/ Julia R. Brown

Name: Julia R. Brown
Title: Director

/s/ G. Steven Burrill

Name: G. Steven Burrill
Title: Director

/s/ Errol B. De Souza

Name: Errol B. De Souza
Title: Director

/s/ Alan W. Dunton

Name: Alan W. Dunton
Title: Director

/s/ John P. Richard

Name: John P. Richard
Title: Director

/s/ Ralph Snyderman

Name: Ralph Snyderman
Title: Director

EXHIBIT INDEX
to
Registration Statement on Form S-8 of
Targacept, Inc.

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4.4(c)	Amendment No. 2, dated March 16, 2006, to Third Amended and Restated Investor Rights Agreement, dated May 12, 2004, which is incorporated herein by reference to Exhibit 4.2(c) to Amendment No. 4 to the Company's Registration Statement on Form S-1/A (File No. 333-131050), filed with the Commission on March 24, 2006.
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23.1	Consent of Womble Carlyle Sandridge & Rice, LLP, counsel to the Company (included in Exhibit 5).
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24	Power of Attorney (included on signature page).
99.1	Nonqualified Stock Option Agreement between the Company and Dr. Stephen A. Hill dated December 3, 2012.
99.2	Employment Agreement between the Company and Dr. Stephen A. Hill dated November 14, 2012, which is incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the Commission on November 16, 2012.

[Letterhead of Womble Carlyle Sandridge & Rice, LLP]

January 4, 2013

Targacept, Inc.
200 East First Street, Suite 300
Winston-Salem, North Carolina 27101

Re: Registration Statement on Form S-8 Relating to that certain Nonqualified Stock Option Agreement between Targacept, Inc. and Dr. Stephen A. Hill dated December 3, 2012

Ladies and Gentlemen:

We have acted as counsel to Targacept, Inc., a Delaware corporation (the "Company"), in connection with the preparation of the Company's above-referenced registration statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended (the "1933 Act"), filed by the Company with the Securities and Exchange Commission (the "Commission"). The Registration Statement relates to the 400,000 shares of the Company's common stock, \$0.001 par value (the "Shares"), which are proposed to be offered and sold pursuant to that certain Nonqualified Stock Option Agreement between the Company and Dr. Stephen A. Hill dated December 3, 2012 (the "Option Agreement"). This opinion is provided pursuant to the requirements of Item 8(a) of Form S-8 and Item 601(b)(5) of Regulation S-K.

As the Company's counsel, we have examined originals or copies, certified or otherwise identified to our satisfaction, of the Company's certificate of incorporation and bylaws, each as amended to date, and minutes and records of the corporate proceedings of the Company relating to the filing of the Registration Statement and the issuance of the Shares, as provided to us by the Company, certificates of public officials and representatives of the Company, and statutes and other instruments and document, as a basis for the opinions hereinafter expressed. In rendering this opinion, we have relied upon certificates of public officials and representatives of the Company with respect to the accuracy of the factual matters contained in such certificates.

In connection with such examination, we have assumed (a) the genuineness of all signatures and the legal capacity of all signatories; (b) the authenticity of all documents submitted to us as originals and the conformity to original documents of all documents submitted to us as certified or photostatic copies; and (c) the proper issuance and accuracy of certificates of public officials and representatives of the Company. In rendering opinions as to future events, we have assumed the facts and law existing on the date hereof.

Based on and subject to the foregoing, and having regard for such legal considerations as we deem relevant, it is our opinion that the Shares have been duly authorized by all necessary corporate action on the part of the Company, and, upon issuance, delivery and payment therefor in the manner contemplated by the Option Agreement and the Registration Statement, the Shares will be validly issued, fully paid and non-assessable.

This opinion is limited to the laws of the State of Delaware, and we are expressing no opinion as to the effect of the laws of any other jurisdiction.

This opinion is rendered as of the date hereof, and we undertake no obligation to advise you of any changes in applicable law or any other matters that may come to our attention after the date hereof.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to any reference to the name of our firm in the Registration Statement. In giving this consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the 1933 Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Womble Carlyle Sandridge & Rice, LLP

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Nonqualified Stock Option Agreement between Targacept, Inc. and Dr. Stephen A. Hill dated December 3, 2012, of our reports dated March 6, 2012, with respect to the financial statements of Targacept, Inc. and the effectiveness of internal control over financial reporting of Targacept, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2011, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP
Raleigh, North Carolina
January 4, 2013

TARGACEPT, INC.

NONQUALIFIED STOCK OPTION AGREEMENT

THIS NONQUALIFIED STOCK OPTION AGREEMENT (together with Schedule A, attached hereto, the “Agreement”), effective as of the date specified as the “Grant Date” on Schedule A attached hereto, between TARGACEPT, INC., a Delaware corporation (the “Corporation”), and the individual identified on Schedule A attached hereto, an Employee of the Corporation or an Affiliate (the “Executive”). This Agreement shall be administered by the Compensation Committee (the “Administrator”) of the Board of Directors (the “Board”) of the Corporation or, to the extent permitted by applicable laws, rules and regulations (“Applicable Law”), a designee of the Compensation Committee.

R E C I T A L S :

In consideration of the services of the Executive and such other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Corporation and the Executive, intending to be legally bound, hereby agree as follows:

1. Nature of Award. In connection with the Corporation’s hiring of the Executive as the President and Chief Executive Officer of the Corporation as provided in the Employment Agreement between Executive and the Corporation dated on or about the date hereof (the “Employment Agreement”), the Administrator has agreed to grant the Executive a nonqualified stock option (as defined below, the “Option”) pursuant to the terms of the Agreement. The Option is intended to serve as an inducement grant as described under Rule 5635(c)(4) of the NASDAQ Listing Rules. For purposes of clarity, the Executive has not previously been an employee or director of the Corporation, and the Option is intended to serve as an inducement material to the Executive’s entering into employment with the Corporation.

2. Grant of Option; Term of Option. The Corporation hereby grants to the Executive, as a matter of separate inducement and agreement in connection with his employment or service to the Corporation, and not in lieu of any salary or other compensation for his services, the right and Option (the “Option”) to purchase all or any part of such aggregate number of shares (the “Shares”) of common stock of the Corporation (the “Common Stock”) at a purchase price (the “Option Price”) as specified on Schedule A, attached hereto, and subject to such other terms and conditions as may be stated herein or on Schedule A. The Executive expressly acknowledges that the terms of Schedule A shall be incorporated herein by reference and shall constitute part of this Agreement. The Corporation and the Executive further acknowledge and agree that the signatures of the Corporation and the Executive on the Grant Notice contained in Schedule A shall constitute their acceptance of all of the terms of this Agreement and their agreement to be bound by the terms of this Agreement. The Option (or any portion thereof) shall be designated as a nonqualified stock option, as stated on Schedule A, and shall not be intended to qualify as an incentive stock option under Section 422 of the Internal Revenue Code of 1986, as amended (the “Code”). The Option is a stand-alone option and is not granted under the Corporation’s 2006 Stock Incentive Plan (as amended and restated through March 9, 2011) or any other stock incentive plan of the Corporation. Except as otherwise provided in the Agreement, this Option will expire if not exercised in full by the Expiration Date specified on Schedule A.

3. Exercise of Option. Subject to the terms of the Agreement, the Option shall become exercisable on the date or dates, and subject to such conditions, as are set forth on Schedule A attached hereto. To the extent that the Option is exercisable but is not exercised, the Option shall accumulate and be exercisable by the Executive in whole or in part at any time prior to expiration of the Option, subject to the terms of the Agreement. The Executive expressly acknowledges that the Option may vest and be exercisable only upon such terms and conditions as are provided in the Agreement. Upon the exercise of an Option in whole or in part and payment of the Option Price in accordance with the provisions of this Agreement, the Corporation shall, as soon thereafter as practicable, deliver to the Executive a certificate or certificates for the Shares purchased. Payment of the Option Price may be made (a) in cash or by cash equivalent; and, unless prohibited by Applicable Law or the Administrator, payment may also be made (b) by delivery (by either actual delivery or attestation) of shares of Common Stock owned by the Executive (subject to such terms and conditions, if any, as may be determined by the Administrator); (c) by shares of Common Stock withheld upon exercise but only if and to the extent that payment by such method does not result in variable accounting or other accounting consequences deemed unacceptable to the Corporation; (d) as long as a Public Market for the Common Stock exists, by delivery of written notice of exercise to the Corporation and delivery to a broker of written notice of exercise and irrevocable instructions to promptly deliver to the Corporation the amount of sale or loan proceeds to pay the Option Price; (e) by such other payment methods as may be approved by the Administrator and which are acceptable under Applicable Law; or (f) by any combination of the foregoing methods. Shares delivered or withheld in payment of the Option Price shall be valued at their Fair Market Value on the date of exercise, as determined in accordance with the terms of the Agreement.

4. No Right of Employment or Service; Forfeiture of Option. Neither the Agreement nor any other action related to the grant of the Option shall confer upon the Executive any right to continue in the employment or service of the Corporation or an Affiliate or interfere with the right of the Corporation or an Affiliate to terminate the Executive's employment or service at any time. Except as otherwise expressly provided in the Agreement or as determined by the Administrator, all rights of the Executive with respect to the Option shall terminate upon termination of the employment of the Executive with the Corporation or an Affiliate. The grant of the Option does not create any obligation of the Corporation to grant further awards.

5. Termination of Employment. Unless the Administrator, in its sole discretion, determines otherwise, the Option shall not be exercised unless the Executive is, at the time of exercise, an Employee and has been an Employee continuously since the date the Option was granted, subject to the following:

- (a) The employment relationship of the Executive shall be treated as continuing intact for any period that the Executive is on military or sick leave or other bona fide leave of absence, provided that the period of such leave does not exceed ninety (90) days, or, if longer, as long as the Executive's right to reemployment is guaranteed either by statute or by contract. The employment relationship of the Executive shall also be treated as continuing intact while the Executive is not in active service because of Disability (as defined in Section 5(b)). The Administrator shall have sole authority to determine whether the Executive has terminated employment or service, the basis for such termination and the date of the Executive's termination of employment or service for any reason (the "Termination Date").

- (b) If the employment of the Executive is terminated because of Disability or death, the Option may be exercised only to the extent vested and exercisable on the Executive's Termination Date, and any portion of the Option that is not vested and exercisable as of the Executive's Termination Date shall terminate as of such date. The Option, to the extent vested and exercisable, must be exercised, if at all, prior to the first to occur of the following, whichever shall be applicable (after which time the Option shall terminate): (i) the close of the period of one year next succeeding the Termination Date; or (ii) the close of the Option Period. In the event of the Executive's death, the Option shall be exercisable by such person or persons as shall have acquired the right to exercise the Option by will or by the laws of intestate succession. For purposes herein, "Disability" shall have the meaning given in the Employment Agreement or, if the Employment Agreement ceases to be in effect, "Disability" shall mean the inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death, or which has lasted or can be expected to last for a continuous period of not less than twelve (12) months. The determination of "Disability" shall be made by the Administrator and its determination shall be final and conclusive.
- (c) If the employment of the Executive is terminated for any reason other than Disability, death or for Cause, the Option may be exercised to the extent vested and exercisable on his Termination Date, and any portion of the Option that is not vested and exercisable as of the Executive's Termination Date shall terminate as of such date. The Option, to the extent vested and exercisable, must be exercised, if at all, prior to the first to occur of the following, whichever shall be applicable (after which time the Option shall terminate): (i) the close of the period of three (3) months next succeeding the Termination Date; or (ii) the close of the Option period. If the Executive dies following such termination of employment and prior to the date specified in clause (i) of this Section 5(c), the Executive shall be treated as having died while employed under Section 5(b) immediately preceding (treating for this purpose the Executive's date of termination of employment as the Termination Date). In the event of the Executive's death, the Option shall be exercisable by such person or persons as shall have acquired the right to exercise the Option by will or by the laws of intestate succession.
- (d) If the employment of the Executive is terminated for Cause, the Option shall lapse and no longer be exercisable as of 5:00 p.m. Eastern Standard Time on his Termination Date, as determined by the Administrator. For the purposes herein, "Cause" shall mean the Executive's termination of employment or service resulting from the Executive's termination for "Just Cause" as defined in the Employment Agreement or, if the Employment Agreement ceases to be in effect, then the Executive's termination shall be for "Cause" if termination results due to the Executive's: (i) dishonesty; (ii) refusal to perform his duties for the Corporation; (iii) engaging in fraudulent conduct; or (iv) engaging in any conduct that could be materially damaging to the Corporation without a reasonable good faith belief that such conduct was in the best interest of the Corporation. The determination of "Cause" shall be made by the Administrator and its determination shall be final and conclusive.

6. Effect of Change in Control. Subject to the terms of Section 7(d) of the Employment Agreement, the Administrator shall (taking into account any Code Section 409A considerations) have sole discretion to determine the effect, if any, on the Option, including but not limited to the vesting, earning or exercisability of the Option, in the event of a Change in Control (as defined in Section 22(b)). Without limiting the generality of the foregoing, in the event of a Change in Control, the Administrator's discretion shall include, but shall not be limited to, the discretion to determine that the Option shall vest, be earned or become exercisable in whole or in part, shall be assumed or substituted for another award, shall be cancelled without the payment of consideration or that other actions (or no action) shall be taken with respect to the Option. The Administrator also has discretion to determine that acceleration or any other effect of a Change in Control on the Option shall be subject to both the occurrence of a Change in Control event and termination of employment or service of the Participant.

7. Nontransferability of Option. The Option shall not be transferable (including by sale, assignment, pledge or hypothecation) other than by will or the laws of intestate succession, except as may be permitted by the Administrator in its sole discretion in a manner consistent with the registration provisions of the Securities Act of 1933, as amended (the "Securities Act"). Except as may be permitted by the preceding, the Option shall be exercisable during the Executive's lifetime only by him or by his guardian or legal representative. The designation of a beneficiary in accordance with procedures implemented by the Administrator or its designee does not constitute a transfer.

8. Superseding Agreement; Successors and Assigns. This Agreement supersedes any statements, representations or agreements of the Corporation with respect to the grant of the Option or any related rights, and the Executive hereby waives any rights or claims related to any such statements, representations or agreements. This Agreement does not supersede or amend the Employment Agreement or any existing (or future) confidentiality agreement, nonsolicitation agreement, noncompetition agreement or other similar agreement between the Executive and the Corporation, including, but not limited to, any restrictive covenants contained in such agreements. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective executors, administrators, heirs, successors and assigns.

9. Governing Law. The Agreement shall be construed and enforced according to the laws of the State of North Carolina, without regard to the conflict of laws provisions of any state, and in accordance with applicable federal laws of the United States.

10. Amendment and Termination; Waiver. The Agreement may be modified or amended only by the written agreement of the parties hereto. Notwithstanding the foregoing, the Administrator shall have unilateral authority to amend the Agreement (without Executive consent) to the extent necessary to comply with Applicable Law or changes to Applicable Law (including but in no way limited to Code Section 409A and federal securities laws). The waiver by the Corporation of a breach of any provision of the Agreement by the Executive shall not operate or be construed as a waiver of any subsequent breach by the Executive.

11. No Rights as Stockholder. The Executive and his or her legal representatives, legatees and distributees shall not be deemed to be the holder of any Shares subject to the Option and shall not have any rights of a stockholder unless and until (and then only to the extent that) certificates for such Shares have been issued and delivered to him or them (or, in the case of uncertified shares, other written evidence of ownership in accordance with Applicable Law shall have been provided).

12. Withholding; Tax Matters.

- (a) The Executive acknowledges that the Corporation shall require the Executive to pay the Corporation in cash the amount of any tax or other amount required by any governmental authority to be withheld and paid over by the Corporation to such authority for the account of the Executive, and the Executive agrees, as a condition to the grant of the Option and delivery of the Shares or any other benefit, to satisfy such obligations. Notwithstanding the foregoing, the Administrator may establish procedures to permit the Executive to satisfy such obligations in whole or in part, and any other local, state, federal, foreign or other income tax obligations relating to the Option, by electing (the "election") to have the Corporation withhold shares of Common Stock from the Shares to which the Executive is entitled. The number of Shares to be withheld shall have a Fair Market Value as of the date that the amount of tax to be withheld is determined as nearly equal as possible to (but not exceeding) the amount of such obligations being satisfied. Each election must be made in writing to the Administrator in accordance with election procedures established by the Administrator.
- (b) The Executive acknowledges that the Corporation has made no warranties or representations to the Executive with respect to the tax consequences (including, but not limited to, income tax consequences) related to the transactions contemplated by this Agreement, and the Executive is in no manner relying on the Corporation or its representatives for an assessment of such tax consequences. The Executive acknowledges that there may be adverse tax consequences upon acquisition or disposition of the Shares subject to the Option and that the Executive should consult a tax advisor prior to such exercise or disposition. The Executive acknowledges that he has been advised that he should consult with his own attorney, accountant or tax advisor regarding the decision to enter into this Agreement and the consequences thereof. The Executive also acknowledges that the Corporation has no responsibility to take or refrain from taking any actions in order to achieve a certain tax result for the Executive.

13. Administration. The authority to construe and interpret this Agreement shall be vested in the Administrator. Any interpretation of the Agreement by the Administrator and any decision made by it with respect to the Agreement is final and binding.

14. Notices. Any written notices provided for in this Agreement shall be in writing and shall be deemed sufficiently given if either hand delivered or if sent by fax or overnight courier, or by postage paid first class mail. Notices sent by mail shall be deemed received three (3) business days after mailed but in no event later than the date of actual receipt. Notices shall be directed, if to the Executive, at the Executive's address indicated on Schedule A (or such other address as may be designated by the Executive in a manner acceptable to the Administrator), or, if to the Corporation, at the Corporation's principal office, attention Chief Financial Officer, Targacept, Inc. Notice may also be provided by electronic submission, if and to the extent permitted by the Administrator.

15. Severability. The provisions of this Agreement are severable and if any one or more provisions may be determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

16. Restrictions on Option and Shares. The Corporation may impose such restrictions on the Option, the Shares and any other benefits underlying the Option as it may deem advisable, including without limitation restrictions under the federal securities laws, the requirements of any stock exchange or similar organization and any blue sky, state or foreign securities laws applicable to such Option or Shares. Notwithstanding any other provision in the Agreement to the contrary, the Corporation shall not be obligated to issue, deliver or transfer shares of Common Stock, make any other distribution of benefits, or to take any other action, unless such delivery, distribution or action is in compliance with all Applicable Law (including but not limited to the requirements of the Securities Act). The Corporation will be under no obligation to register the Shares with the Securities and Exchange Commission (the “SEC”) or to effect compliance with the exemption, registration, qualification or listing requirements of any state securities laws, stock exchange or similar organization, and the Corporation will have no liability for any inability or failure to do so. As a condition to the exercise of the Option, the Corporation may require the Executive or other person exercising the Option to represent and warrant at the time of any such exercise that the Shares are being purchased only for investment and without any present intention to sell or distribution such Shares, if, in the opinion of legal counsel for the Corporation, such a representation is required. The Corporation may cause a restrictive legend to be placed on any certificate for Shares issued pursuant to the exercise of the Option in such form as may be prescribed from time to time by Applicable Law or as may be advised by legal counsel.

17. Effect of Changes in Status. Unless the Administrator, in its sole discretion, determines otherwise, the Option shall not be affected by any change in the terms, conditions or status of the Executive’s employment, provided that the Executive continues to be in the employ of the Corporation or an Affiliate. Without limiting the foregoing, the Administrator has sole discretion to determine, at the time of grant of the Option or at any time thereafter, the effect, if any, on the Option if the Executive’s status as an Employee changes, including but not limited to a change from full-time to part-time, or vice versa, or if other similar changes in the nature or scope of the Executive’s employment occur.

18. Right of Offset. Notwithstanding any other provision of the Agreement, the Corporation may (subject to any Code Section 409A considerations) at any time reduce the amount of any payment otherwise payable to or on behalf of the Executive by the amount of any obligation of the Executive to the Corporation that is or becomes due and payable and, by entering into this Agreement, the Executive shall be deemed to have consented to such reduction.

19. Counterparts; Further Instruments. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. The parties hereto agree to execute such further instruments and to take such further action as may be reasonably necessary to carry out the purposes and intent of this Agreement.

20. Compliance with Recoupment, Ownership and Other Policies or Agreements. As a condition to receiving the Option, the Executive agrees that he shall abide by all provisions of any equity retention policy, compensation recovery policy, stock ownership guidelines and other similar policies maintained by the Corporation, each as in effect from time to time and to the extent applicable to Executive from time to time. In addition, the Executive agrees that he shall be subject to such compensation recovery, recoupment, forfeiture or other similar provisions as may apply at any time to the Executive under Applicable Law.

21. Adjustments. If there is any change in the outstanding shares of Common Stock because of a merger, consolidation or reorganization involving the Corporation or an Affiliate, or if the Board declares a stock dividend, stock split distributable in shares of Common Stock, reverse stock split, combination or reclassification of the Common Stock, or if there is a similar change in the capital stock structure of the Corporation or an Affiliate affecting the Common Stock, the number of Shares of Common Stock subject to the Option (to the extent unexercised) shall be correspondingly adjusted, and the Administrator shall make such adjustments to the Option, the Option Price and to any provisions of the Agreement as the Administrator deems equitable to prevent dilution or enlargement of the Option or as may be otherwise advisable.

22. Certain Definitions. In addition to other terms defined herein, the following terms shall have the meanings given below:

- (a) "Affiliate" means any business entity which is controlled by, under common control with or controls the Corporation, including but not limited to any "parent" or "subsidiary" corporation as defined under Code Section 424.
- (b) "Change in Control" shall be deemed to have occurred if and as provided in the Employment Agreement (and as defined therein) or, if the Employment Agreement ceases to be in effect, "Change in Control" shall be deemed to have occurred on the earliest of the following dates:
 - (i) The date any entity or person shall have become the beneficial owner of, or shall have obtained voting control over, more than thirty percent (30%) of the outstanding Common Stock of the Corporation;
 - (ii) The date of the consummation of: (A) a merger, consolidation, reorganization or similar business transaction of the Corporation with or into another corporation or other business entity (each, a "corporation"), in which the Corporation is not the continuing or surviving entity or pursuant to which any shares of Common Stock of the Corporation would be converted into cash, securities or other property of another entity, other than a transaction of the Corporation in which holders of Common Stock immediately prior to the transaction continue to own at least 50% of the outstanding Common Stock, or if the Corporation is not the surviving entity, the common stock (or other voting securities) of the surviving entity immediately after the transaction as immediately before; or (B) the sale or other disposition of all or substantially all of the assets of the Corporation; or
 - (iii) The date on which the Continuing Directors (as defined below) do not constitute a majority of the Board (or, if applicable, the Board of Directors of a successor corporation to the Corporation), where the term "Continuing Director" means at any date a member of the Board (A) who was a member of the Board on the date of this Agreement, or (B) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such

nomination or election; provided, however, that there shall be excluded from this clause (B) any individual whose initial assumption of office occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board.

(For the purposes herein, the term “person” shall mean any individual, corporation, partnership, group, association or other person, as such term is defined in Section 13(d)(3) or Section 14(d)(2) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), other than the Corporation, a subsidiary of the Corporation or any employee benefit plan(s) sponsored or maintained by the Corporation or any subsidiary thereof, and the term “beneficial owner” shall have the meaning given the term in Rule 13d-3 under the Exchange Act.)

The Administrator shall have full and final authority, in its discretion, to determine whether a Change in Control of the Corporation has occurred pursuant to the above definition, the date of the occurrence of such Change in Control and any incidental matters relating thereto.

- (c) “Employee” means any person who is an employee of the Corporation or any Affiliate. For this purpose, an individual shall be considered to be an Employee only if there exists between the individual and the Corporation or an Affiliate the legal and bona fide relationship of employer and employee.
- (d) “Fair Market Value” per share of the Common Stock shall be established in good faith by the Administrator and, unless otherwise determined by the Administrator, the Fair Market Value shall be determined in accordance with the following provisions: (i) if the shares of Common Stock are listed for trading on the New York Stock Exchange, the American Stock Exchange or the NASDAQ Stock Market, the Fair Market Value shall be the closing sales price per share of the shares on the New York Stock Exchange, the American Stock Exchange or the NASDAQ Stock Market (as applicable) on the date the Option is granted or other determination is made (such date of determination being referred to herein as a “valuation date”), or, if there is no transaction on such date, then on the trading date nearest preceding the valuation date for which closing price information is available, and, provided further, if the shares are not listed for trading on the New York Stock Exchange, the American Stock Exchange or the NASDAQ Stock Market, the Fair Market Value shall be the average between the highest bid and lowest asked prices for such stock on the date of grant or other valuation date as reported on the NASDAQ OTC Bulletin Board Service or by the National Quotation Bureau, Incorporated or a comparable service; or (ii) if the shares of Common Stock are not listed or reported in any of the foregoing, then the Fair Market Value shall be determined by the Administrator based on such valuation measures or other factors as it deems appropriate. Notwithstanding the foregoing, Fair Market Value shall be determined in accordance with Code Section 409A if and to the extent required.

- (e) A “Public Market” for the Common Stock shall be deemed to exist (i) upon consummation of a firm commitment underwritten public offering of the Common Stock pursuant to an effective registration statement under the Securities Act, or (ii) if the Administrator otherwise determines that there is an established public market for the Common Stock.

[Signatures of the Corporation and the Executive follow on Schedule A/Grant Notice.]

TARGACEPT, INC.

NONQUALIFIED STOCK OPTION AGREEMENT

Schedule A/Grant Notice

1. Pursuant to the terms and conditions of that certain Nonqualified Stock Option Agreement (the "Agreement") dated December 3, 2012 by and between Targacept, Inc. (the "Corporation") and Dr. Stephen A. Hill (the "Executive"), you, the Executive, have been granted a stock option (the "Option") to purchase 400,000 shares (the "Shares") of the Common Stock as outlined below.

Name of Executive: Dr. Stephen A. Hill
Address: 114 Townsend Pass
Alpharetta, Georgia 30004
Grant Date: December 3, 2012
Number of Shares Subject to Option: 400,000
Option Price: \$4.50
Type of Option: Nonqualified Stock Option
Expiration Date (Last day of Option Period): December 2, 2022
Vesting Schedule/Conditions: 25% on December 31, 2013 and ratably thereafter on the last day of twelve (12) consecutive calendar quarters beginning with March 31, 2014

2. By my signature below, I, the Executive, hereby acknowledge receipt of this Grant Notice and the Agreement which is attached to this Grant Notice. I understand that the Grant Notice and other provisions of Schedule A herein are incorporated by reference into the Agreement and constitute a part of the Agreement. By my signature below, I further agree to be bound by the terms of the Agreement, including but not limited to the terms of this Grant Notice and the other provisions of Schedule A contained herein. The Corporation reserves the right to treat the Option and the Agreement as cancelled, void and of no effect if the Executive fails to return a signed copy of the Grant Notice within thirty (30) days of grant date stated above.

Signature: /s/ Dr. Stephen A. Hill

Date: 12/4/12

Agreed to by:

TARGACEPT, INC.

By: /s/ Alan A. Musso

Name: Alan A. Musso

Title: SVP & CFO

Attest:

/s/ Peter A. Zorn

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

Note: If there are any discrepancies in the name or address shown above, please make the appropriate corrections on this form. Please retain a copy of the Agreement, including this Grant Notice, for your files.