

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| OMB APPROVAL | |
|----------------------------------------------|-----------|
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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Name and Address of Reporting Person * BURRILL STEVEN (Last) (First) (Middle) C/O TARGACEPT, INC. 200 EAST FIRST STREET, SUITE 300 (Street) WINSTON- SALEM NC 27101 (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol TARGACEPT INC [TRGT] | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below) |
| | 3. Date of Earliest Transaction (Month/Day/Year) 05/10/2011 | |
| | 4. If Amendment, Date of Original Filed (Month/Day/Year) 05/12/2011 | 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person |

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) | | | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|----------------------------------------------------|--------------------------------|---|-------------------------------------------------------------------|------------|--------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|
| | | | Code | V | Amount | (A) or (D) | Price | | | |
| Common Stock | 05/10/2011 | | M | | 16,948 | A | \$9.37 | 16,948 | D | |
| Common Stock | 05/10/2011 | | S | | 16,948 | D | \$24.0424 ⁽¹⁾ | 0 | D | |
| Common Stock | 05/10/2011 | | S | | 2,000 | D | \$24.1266 ⁽²⁾ | 0 | I | By Burrill & Company LLC ⁽³⁾ |
| Common Stock | 05/12/2011 | | M | | 10,552 | A | \$9.37 | 10,552 | D | |
| Common Stock | 05/12/2011 | | M | | 7,500 | A | \$9.27 | 18,052 | D | |
| Common Stock | 05/12/2011 | | M | | 7,500 | A | \$7.1 | 25,552 | D | |
| Common Stock | 05/12/2011 | | M | | 7,500 | A | \$2.71 | 33,052 | D | |
| Common Stock | 05/12/2011 | | S | | 33,052 | D | \$23.8819 ⁽⁴⁾ | 0 | D | |
| Common Stock | | | | | | | | 0 ⁽⁵⁾ | I | By Burrill Biotechnology Capital Fund L.P. |

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) | |
|--------------------------------------------|--------------------------------------------------------|--------------------------------------|----------------------------------------------------|--------------------------------|---|----------------------------------------------------------------------------------------|--------|----------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------|-------|
| | | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | | | | | | Title |
| Stock Option (Right to Buy) | \$9.37 | 05/10/2011 | | M | | | 16,948 | 05/14/2007 | 05/13/2017 | Common Stock | 16,948 | \$0 | 3,052 | D | |
| Stock Option (Right to Buy) | \$9.37 | 05/12/2011 | | M | | | 3,052 | 05/14/2007 | 05/13/2017 | Common Stock | 3,052 | \$0 | 0 | D | |
| Stock Option (Right to Buy) | \$9.37 | 05/12/2011 | | M | | | 7,500 | 06/12/2007 | 05/13/2017 | Common Stock | 7,500 | \$0 | 0 | D | |
| Stock Option (Right to Buy) | \$9.27 | 05/12/2011 | | M | | | 7,500 | 06/20/2008 | 06/19/2017 | Common Stock | 7,500 | \$0 | 0 | D | |

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)**

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--------------------------------------------|--------------------------------------------------------|--------------------------------------|----------------------------------------------------|--------------------------------|---|----------------------------------------------------------------------------------------|-------|----------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|----------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------|
| | | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares | | | | |
| Stock Option (Right to Buy) | \$7.1 | 05/12/2011 | | M | | | 7,500 | 06/09/2009 | 07/01/2018 | Common Stock | 7,500 | \$0 | 0 | D | |
| Stock Option (Right to Buy) | \$2.71 | 05/12/2011 | | M | | | 7,500 | 06/09/2010 | 06/16/2019 | Common Stock | 7,500 | \$0 | 0 | D | |

Explanation of Responses:

- The price reported is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$24.00 to \$24.19, inclusive. The reporting person undertakes to provide to the issuer, any security holder of the issuer, or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the range set forth in this footnote.
- The price reported is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$23.99 to \$24.23, inclusive. The reporting person undertakes to provide to the issuer, any security holder of the issuer, or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the range set forth in this footnote.
- The reporting person is the chief executive officer of Burrill & Company LLC. The reporting person disclaims beneficial ownership of securities owned by Burrill & Company LLC except to the extent of his pecuniary interest therein.
- The price reported is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$23.50 to \$24.04, inclusive. The reporting person undertakes to provide to the issuer, any security holder of the issuer, or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the range set forth in this footnote.
- Reflects a prior pro rata distribution by Burrill Biotechnology Capital Fund L.P. of all shares of the issuer previously reported as indirectly held by the reporting person as the managing member of Burrill & Company (Biotechnology GP), LLC, the general partner of Burrill Biotechnology Capital Fund L.P. The reporting person disclaims beneficial ownership of securities owned by Burrill Biotechnology Capital Fund L.P. except to the extent of his pecuniary interest therein.

Remarks:

This amendment is filed solely to correct the transaction dates inadvertently entered as May 11 on the original Form 4 filed by the reporting person.

/s/ Peter A. Zorn, Attorney-in-Fact for G. Steven Burrill 05/13/2011

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.