

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

| OMB APPROVAL             |           |
|--------------------------|-----------|
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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

|   |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
| 1. Name and Address of Reporting Person*<br><b>BARRETT M JAMES</b><br><hr/> (Last) (First) (Middle)<br><b>1119 ST. PAUL STREET</b><br><hr/> (Street)<br><b>BALTIMORE MD 21202</b><br><hr/> (City) (State) (Zip) |  |  | 2. Issuer Name and Ticker or Trading Symbol<br><b>TARGACEPT INC [ TRGT ]</b> |  | 5. Relationship of Reporting Person(s) to Issuer<br>(Check all applicable)<br><input checked="" type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner<br>Officer (give title below) Other (specify below) |  |
|   |  |  | 3. Date of Earliest Transaction (Month/Day/Year)<br><b>04/18/2006</b>        |  |  |  |
|   |  |  | 4. If Amendment, Date of Original Filed (Month/Day/Year)                     |  | 6. Individual or Joint/Group Filing (Check Applicable Line)<br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br>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                    | 04/18/2006                           |  | C                              |   | 2,913,512   | A          | (1)   | 3,263,512   | I  | See Note 2(2)   |

**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 |  |  |   |  |
| Series C Preferred Stock                   | (1)  | 04/18/2006                           |  | C                              |   |  | 20,226,034 | (1)  | (1)             | Common Stock  | 2,913,512                  | \$1.21                                     | 0  | I   | See Note 2(2)  |

**Explanation of Responses:**

- Each share of the Series C Preferred Stock converted into approximately .144 shares of Common Stock of the Issuer upon the closing of the Issuer's initial public offering.
- The Reporting Person is a general partner of NEA Partners 10, Limited Partnership, which is the sole general partner of New Enterprise Associates 10, Limited Partnership, the beneficial owner of the securities. The Reporting Person disclaims beneficial ownership within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended, of such portion of the shares in which the Reporting Person has no actual pecuniary interest therein.

**Remarks:**

In addition to the shares reported herein, NEA Ventures 2002, L.P. owns 3,154 shares of Common Stock of the Issuer as a result of the conversion of the Series C Preferred Stock. The Reporting Person does not have voting nor dispositive powers over such shares. The Reporting Person disclaims beneficial ownership, within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended, of such portion of those shares in which the Reporting Person has no actual pecuniary interest therein.

/s/ Louis S. Citron, attorney-in-fact 04/20/2006

\*\* 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.