

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

OMB APPROVAL	
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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* <u>Musso Alan A</u> (Last) (First) (Middle) C/O TARGACEPT, INC. 200 EAST FIRST STREET, SUITE 300 (Street) WINSTON- SALEM NC 27101 (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 04/11/2006	3. Issuer Name and Ticker or Trading Symbol <u>TARGACEPT INC [TRGT]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>VP, CFO, Treasurer & Secretary</u>	5. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock	2,799	D	

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

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)	4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date				
Employee Stock Option (Right to Buy)	(1)	02/24/2012	Common Stock 19,201	(2)	D	
Employee Stock Option (Right to Buy)	01/14/2003	01/13/2013	Common Stock 5,101	5.1	D	
Employee Stock Option (Right to Buy)	(3)	01/30/2013	Common Stock 16,665	(4)	D	
Employee Stock Option (Right to Buy)	(5)	10/30/2013	Common Stock 46,509	(6)	D	
Employee Stock Option (Right to Buy)	01/26/2004	01/25/2014	Common Stock 2,880	5.625	D	
Employee Stock Option (Right to Buy)	(7)	03/28/2015	Common Stock 48,000	1.75	D	

Explanation of Responses:

- This option vests 25% on March 31, 2003 and then in 12 equal quarterly installments thereafter, or, if earlier, upon completion of the issuer's initial public offering.
- The portion of this option that was not yet exercisable as of March 31, 2005 was repriced on April 7, 2005 to \$1.75 per share. Following the repricing, of the 19,201 shares of common stock underlying this option, the exercise price for 13,701 shares is \$5.10 per share and the exercise price for 5,500 shares is \$1.75 per share.
- This option vests 25% on January 31, 2003, and then in equal installments at the end of the following 16 calendar quarters, or, if earlier, upon completion of the issuer's initial public offering.
- The portion of this option that was not yet exercisable as of March 31, 2005 was repriced on April 7, 2005 to \$1.75 per share. Following the repricing, of the 16,665 shares of common stock underlying this option, the exercise price for 11,197 shares is \$5.10 per share and the exercise price for 5,468 shares is \$1.75 per share.
- This option vests 20% on October 31, 2003, and then in equal installments at the end of the following 16 calendar quarters.
- The portion of this option that was not yet exercisable as of March 31, 2005 was repriced on April 7, 2005 to \$1.75 per share. Following the repricing, of the 46,509 shares of common stock underlying this option, the exercise price for 23,254 shares is \$5.10 per share and the exercise price for 23,255 shares is \$1.75 per share.
- This option vests 20% on March 29, 2005, and then in equal installments at the end of the following 16 calendar quarters.

Remarks:

/s/ Alan A. Musso

04/11/2006

** 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 5 (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.

Securities and Exchange Commission
Judiciary Plaza
450 Fifth Street, N.W.
Washington, DC 20549

Re: Targacept, Inc.

Gentlemen:

Pursuant to General Instruction 7 to Form 3 (Initial Statement of Beneficial Ownership), Form 4 (Statement of Changes in Beneficial Ownership) and Form 5 (Annual Statement of Changes in Beneficial Ownership) promulgated by the Securities and Exchange Commission pursuant to Section 16 of the Securities Exchange Act of 1934, the undersigned director, officer and/or shareholder of Targacept, Inc. (the "Company") hereby authorizes and designates Peter A. Zorn and Mauri Hodges, and each of them, to execute and file with the Commission on his behalf any and all statements on Form 3, Form 4 or Form 5 relating to his beneficial ownership of securities of the Company as required by Section 16(a) of the Securities Exchange Act of 1934 and the rules of the Commission promulgated thereunder. This authorization and designation shall be effective for so long as the undersigned remains subject to the provisions of Section 16 of the Securities Exchange Act of 1934.

Effective as of April 11, 2006.

/s/ Alan A. Musso
Alan A. Musso
