
Securities and Exchange Commission

Washington, D.C. 20549

FORM 8-A

For registration of certain classes of securities
pursuant to Section 12(b) or 12(g) of the
Securities Exchange Act of 1934

TARGACEPT, INC.

(Exact name of the Registrant as specified in its charter)

Delaware

(State of incorporation or organization)

56-2020050

(I.R.S. Employer Identification No.)

200 East First Street, Suite 300

Winston-Salem, North Carolina 27101

(Address of Principal Executive Offices) (Zip Code)

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A.(c), check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A.(d), check the following box.

Securities Act registration statement file number to which this Form relates (if applicable): File No. 333-115538

Securities to be registered pursuant to Section 12(b) of the Exchange Act: None

Securities to be registered pursuant to Section 12(g) of the Act:

Common Stock, \$0.001 par value

(Title of class)

Item 1. Description of The Registrant's Securities to be Registered

The description of the Common Stock of the Registrant set forth under the caption "Description of Capital Stock" in the Registrant's Registration Statement on Form S-1 (File No. 333-115538) as filed with the Securities and Exchange Commission on May 14, 2004, as amended (the "Registration Statement"), and in the prospectus included in the Registration Statement, is hereby incorporated by reference in response to this item.

Item 2. Exhibits

The following exhibits are filed herewith or are incorporated by reference as indicated below.

<u>Exhibit Number</u>	<u>Description</u>
3.1(b)*	Form of the Registrant's Fourth Amended and Restated Certificate of Incorporation, to be effective upon the completion of the offering made under the Registration Statement on Form S-1 (File No. 333-115538)
3.2(b)*	Form of the Registrant's Bylaws, to be effective upon the completion of the offering made under the Registration Statement on Form S-1 (File No. 333-115538)
4.1*	Specimen common stock certificate

* Incorporated by reference to the identically numbered exhibit to the Registrant's Registration Statement on Form S-1 filed May 14, 2004, as amended (File No. 333-115538).

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

TARGACEPT, INC.

By: /s/ J. Donald deBethizy

J. Donald deBethizy
President and Chief Executive Officer

Date: February 22, 2005