

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 8-A

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

Xcyte Therapies, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State of incorporation or organization)

91-1077622
(IRS Employer
Identification No.)

1124 Columbia Street, Suite 130
Seattle, WA 98104
(Address of principal executive offices, including 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: 333-109653 (if applicable).

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

Title of each class
to be so registered

None

Name of each exchange on which
each class is to be registered

None

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

Common Stock, par value \$0.001 per share

(Title of Class)

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

Incorporated by reference to the information set forth under the caption "Description of Capital Stock" in the Registrant's Registration Statement on Form S-1, as amended (SEC File No. 333-109653) (the "Form S-1 Registration Statement").

Item 2. Exhibits

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

- 3.1* Amended and Restated Certificate of Incorporation of Xcyte Therapies, Inc.
- 3.2* Form of Amended and Restated Certificate of Incorporation of Xcyte Therapies, Inc. to be filed and effective upon completion of this offering.
- 3.3* Amended and Restated Bylaws of Xcyte Therapies, Inc. to be effective upon completion of this offering.
- 4.1* Form of Xcyte Therapies, Inc. Stock Certificate.
- 10.2* Series E Preferred Stock and Warrant Purchase Agreement dated November 13, 2001.
- 10.3* Series F Preferred Stock and Warrant Purchase Agreement dated February 5, 2002.
- 10.4* Convertible Note and Warrant Purchase Agreement dated October 9, 2003.
- 10.5* Form of Convertible Promissory Note issued in connection with Convertible Note and Warrant Purchase Agreement dated as of October 9, 2003.
- 10.6* Amended and Restated Investor Rights Agreement dated February 5, 2002.
- 10.7* Amendment to Amended and Restated Investor Rights Agreement dated May 22, 2002.
- 10.8* Waiver of Preemptive Rights and Amendment to Amended and Restated Investor Rights Agreement dated as of October 9, 2003.
- 10.9* Form of Warrant to purchase Common Stock issued by Xcyte Therapies, Inc.

- 10.10* Warrant to purchase Series D Preferred Stock dated December 7, 2000 issued by Xcyte Therapies, Inc. in favor of Hibbs/Woodinville Associates, LLC.
- 10.11* Form of Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of General Electric Capital Corporation.
- 10.12* Series E Preferred Stock Purchase Warrant issued by Xcyte Therapies in favor of Chun-Te Liao dated November 30, 2001.
- 10.13* Warrant to purchase Common Stock issued by Xcyte Therapies, Inc. in favor of Inkeun Lee dated April 1, 2003.
- 10.14* Warrant to purchase Common Stock issued by Xcyte Therapies, Inc. in favor of Inkeun Lee dated April 1, 2003.
- 10.15* Master Security Agreement between Xcyte Therapies, Inc. and Oxford Finance Corporation dated July 1, 2003.
- 10.16* Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated July 17, 2003.
- 10.17* Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated September 5, 2003.
- 10.18* Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated November 7, 2003.
- 10.19* Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated December 19, 2003.
- 10.20* Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated February 25, 2004.
- 10.21* Form of Stock Purchase Warrant issued in connection with Convertible Note and Warrant Purchase Agreement dated as of October 9, 2003.

* Incorporated by reference to exhibits of the same number in the Registrant's Form S-1 Registration Statement.

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.

XCYTE THERAPIES, INC.

Date: March 5, 2004

By: /s/ JOANNA S. BLACK

Joanna S. Black
General Counsel