

**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: 333-119585 (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:

% Convertible Exchangeable Preferred 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 Convertible Preferred Stock" in the Registrant's Registration Statement on Form S-1, as amended (SEC File No. 333-119585) (the "Form S-1 Registration Statement").

Item 2. Exhibits

The following exhibits are filed or incorporated by reference as a part of this Registration Statement:

- 3.1* Amended and Restated Certificate of Incorporation of Xcyte Therapies, Inc.
- 3.2** Form of Preferred Stock Certificate of Designations to be filed and effective upon completion of this offering.
- 3.3* Amended and Restated Bylaws of Xcyte Therapies, Inc.
- 4.1** Specimen Convertible Exchangeable Preferred Stock Certificate.
- 4.2** Form of Preferred Stock Certificate of Designations to be filed and effective upon completion of this offering (filed as Exhibit 3.2).
- 4.3** Form of Indenture.

* Incorporated by reference to exhibits in the Registrant's Form S-1 Registration Statement, File No. 333-109653, originally filed on October 10, 2003, as subsequently amended.

** Incorporated by reference to exhibits of the same number in the 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.

Date: October 27, 2004

XCYTE THERAPIES, INC.

By: /s/ Joanna S. Black

Joanna S. Black
General Counsel