

OMB APPROVAL

OMB Number: 3235-0145
Expires: December 31, 2005
Estimated average burden
hours per response. . . . 15

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

SCHEDULE 13D

UNDER THE SECURITIES EXCHANGE ACT OF 1934
(AMENDMENT NO. ____)*

XCYTE THERAPIES, INC.
(Name of Issuer)

COMMON STOCK
(Title of Class of Securities)

98389F309
(CUSIP Number)

MARK MCDONNELL
ARCH VENTURE FUND V, L.P.
8725 W. HIGGINS ROAD SUITE 290
CHICAGO, IL 60631

(Name, Address and Telephone Number of Person Authorized to Receive Notices and
Communications)

NOVEMBER 3, 2004
(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report
the acquisition that is the subject of this Schedule 13D, and is filing this
schedule because of Sections 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check
the following box. []

NOTE: Schedules filed in paper format shall include a signed original and five
copies of the schedule, including all exhibits. See Section 240.13d-7 for other
parties to whom copies are to be sent.

*The remainder of this cover page shall be filled out for a reporting person's
initial filing on this form with respect to the subject class of securities, and
for any subsequent amendment containing information which would alter
disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed
to be "filed" for the purpose of Section 18 of the Securities Exchange Act of
1934 ("Act") or otherwise subject to the liabilities of that section of the Act
but shall be subject to all other provisions of the Act (however, see the
Notes).

1 NAMES OF REPORTING PERSONS.
ARCH Venture Fund V, L.P.

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).
[-----]

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP
(a) []
(b) []

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e) []

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES []

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)
18.5%

14 TYPE OF REPORTING PERSON
PN

1 NAMES OF REPORTING PERSONS.

ARCH Venture Fund III, L.P.

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

PN

1 NAMES OF REPORTING PERSONS.

ARCH Venture Fund II, L.P.

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

PN

1 NAMES OF REPORTING PERSONS.

ARCH V Entrepreneurs Fund, L.P.

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

PN

1 NAMES OF REPORTING PERSONS.

Healthcare Focus Fund, L.P.

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

PN

1 NAMES OF REPORTING PERSONS.

ARCH Venture Partners V, L.P.

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

PN

1 NAMES OF REPORTING PERSONS.

ARCH Venture Partners V, LLC

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

00 Limited Liability Company

1 NAMES OF REPORTING PERSONS.

ARCH Venture Partners, LLC

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

	7	SOLE VOTING POWER	0
NUMBER OF SHARES			
BENEFICIALLY	8	SHARED VOTING POWER	2,905,331
OWNED BY			
EACH REPORTING	9	SOLE DISPOSITIVE POWER	0
PERSON			
WITH			
	10	SHARED DISPOSITIVE POWER	2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

00 Limited Liability Company

1 NAMES OF REPORTING PERSONS.

ARCH Management Partners II, L.P.

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)
(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

PN

1 NAMES OF REPORTING PERSONS.

ARCH Venture Partners, L.P.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS

2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

7 SOLE VOTING POWER

0

NUMBER OF
SHARES
BENEFICIALLY
OWNED BY
EACH REPORTING
PERSON
WITH

8 SHARED VOTING POWER

2,905,331

9 SOLE DISPOSITIVE POWER

0

10 SHARED DISPOSITIVE POWER

2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

PN

1 NAMES OF REPORTING PERSONS.

ARCH Venture Corporation

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Illinois

	7	SOLE VOTING POWER
NUMBER OF SHARES		0
BENEFICIALLY	8	SHARED VOTING POWER
OWNED BY		2,905,331
EACH REPORTING	9	SOLE DISPOSITIVE POWER
PERSON		0
WITH	10	SHARED DISPOSITIVE POWER
		2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

CO

1 NAMES OF REPORTING PERSONS.

Steven Lazarus

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

IN

1 NAMES OF REPORTING PERSONS.

Keith Crandell

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

IN

1 NAMES OF REPORTING PERSONS.

Robert Nelsen

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

IN

1 NAMES OF REPORTING PERSONS.

Clinton Bybee

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS
2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 2,905,331
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 2,905,331

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,905,331

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.5%

14 TYPE OF REPORTING PERSON

IN

Item 1. Security and Issuer

This Statement on Schedule 13D relates to the Common Stock, par value \$0.001 per share ("Common Stock"), of Xcyte Therapeutics, Inc., a corporation incorporated under the laws of the State of Delaware ("Xcyte" or the "Issuer"). The principal executive offices of the Issuer are located at 1124 Columbia Street, Suite 130, Seattle, Washington 98104.

Item 2. Identity and Background

(a) This Statement is being filed by (1) ARCH Venture Fund V, L.P. ("ARCH Venture Fund V"); (2) ARCH Venture Fund III, L.P. ("ARCH Venture Fund III"), (3) ARCH Venture Fund II, L.P. ("ARCH Venture Fund II"), (4) ARCH V Entrepreneurs Fund, L.P. ("ARCH V Entrepreneurs Fund"), (5) Healthcare Focus Fund, L.P. ("Healthcare Focus Fund"), (6) ARCH Venture Partners V, L.P. ("AVP V LP"), which is the sole general partner of ARCH Venture Fund V, ARCH V Entrepreneurs Fund and Healthcare Focus Fund, (7) ARCH Venture Partners V, LLC ("AVP V LLC"), which is the sole general partner of AVP V LP, (8) ARCH Venture Partners, LLC ("AVP LLC"), which is the sole general partner of ARCH Venture Fund III, (9) ARCH Management Partners II, L.P. ("ARCH Management II LP"), which is the sole general partner of ARCH Venture Fund II, (10) ARCH Venture Partners, L.P. ("AVP LP"), which is the sole general partner of ARCH Management II LP, (11) ARCH Venture Corporation ("AVC"), which is the sole general partner of AVP LP, (12) Steven Lazarus ("Lazarus"), (13) Keith Crandell ("Crandell"), (14) Robert Nelsen ("Nelsen"), and (15) Clinton Bybee ("Bybee" together with Crandell, Nelsen and Bybee, the "Managing Directors," and each individually, a "Managing Director"). Each of the Managing Directors are individual general partners, managing directors, directors or officers of AVP V LP, AVP V LLC, AVP LLC, ARCH Management II LP, AVP LP and AVC, as the case may be. Each of the individuals and entities above shall be referred to as a "Reporting Person" and collectively, the "Reporting Persons".

(b) The residence or business address of each of the Reporting Persons is 8725 W. Higgins Road Suite 290 Chicago, IL 60631.

(c) The principal business of each of ARCH Venture Fund V, ARCH Venture Fund III, ARCH Venture Fund II, ARCH V Entrepreneurs Fund and Healthcare Focus Fund is to make investments. The principal business of each of AVP V LP, AVP V LLC, AVP LLC, ARCH Management II LP, AVP LP and AVC is to act as general partner of ARCH Venture Fund V, ARCH Venture Fund III, ARCH Venture Fund II, ARCH V Entrepreneurs Fund and Healthcare Focus Fund, as set forth in Item 2(a). The principal business of each of Lazarus, Crandell, Bybee and Nelsen is his activities on behalf of the above-listed and related entities.

(d)(e) During the last five years, none of the Reporting Persons have been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) Each of ARCH Venture Fund V, ARCH Venture Fund III, ARCH Venture Fund II, ARCH V Entrepreneurs Fund, Healthcare Focus Fund, AVP V LP, ARCH Management II LP and AVP LP are Delaware limited partnerships. AVP V LLC and AVP LLC are each Delaware limited liability companies. AVC is an Illinois Corporation. Each of Lazarus, Crandell, Bybee and Nelsen are United States citizens.

Item 3. Source and Amount of Funds or Other Consideration

ARCH Venture Fund II purchased 631,579 shares of the Issuer's Series A Preferred Stock, \$0.001 par value per share (the "Series A Preferred Stock"), for an aggregate purchase price of \$600,000, in a private transaction on or about August 28, 1996. ARCH Venture Fund III purchased 157,890 shares of Series A Preferred Stock for a purchase

price of \$150,000 in a private transaction on or about August 27, 1997. On the same date as the foregoing purchase, ARCH Venture Fund III also acquired a warrant to purchase 276,307 shares of Series A Preferred Stock with an exercise price of \$0.95 per share (the "ARCH III Series A Warrant"). On August 29, 1997, ARCH Venture Fund II and ARCH Venture Fund III purchased 363,636 shares and 1,681,818 shares of the Issuer's Series B Preferred Stock, \$0.001 par value per share (the "Series B Preferred Stock"), respectively, in a private transaction for an aggregate purchase price of \$2,250,000. On July 21, 1998, ARCH Venture Fund III purchased 1,119,265 shares of the Issuer's Series C Preferred Stock, \$0.001 par value per share (the "Series C Preferred Stock"), in a private transaction for a purchase price of \$1,869,173. On May 25, 2000, ARCH Venture Fund III purchased 962,230 shares of the Issuer's Series D Preferred Stock, \$0.001 par value per share (the "Series D Preferred Stock"), in a private transaction for a purchase price of \$2,674,999. On August 8, 2000, ARCH Venture Fund III purchased 359,712 shares of the Issuer's Series D Preferred Stock in a private transaction for a purchase price of \$999,999. On the same date as the foregoing transaction, ARCH Venture Fund III acquired a warrant to purchase 40,287 shares of Common Stock for a purchase price of \$40 (the "First ARCH III Common Warrant") and, on the same date, acquired an additional warrant to purchase 107,769 shares of Common Stock for a purchase price of \$108 (the "Second ARCH III Common Warrant"). The exercise price for each of the First ARCH III Common Warrant and Second ARCH III Common Warrant was \$0.30 per share. On November 13, 2001, ARCH Venture Fund III purchased 935,251 shares of the Issuer's Series E Preferred Stock, \$0.001 par value per share (the "Series E Preferred Stock") in a private transaction for a purchase price of \$2,599,998. On the same date as the foregoing transaction, ARCH Venture Fund III acquired a warrant to purchase 509,192 shares of Common Stock for \$0.01 per share (the "Third ARCH III Common Warrant"). On February 5, 2002, the Healthcare Focus Fund purchased 899,104 shares of the Issuer's Series F Preferred Stock, \$0.001 par value per share ("the Series F Preferred Stock", collectively with the Series A Preferred Stock, the Series B Preferred Stock, the Series C Preferred Stock, the Series D Preferred Stock and the Series E Preferred Stock, the "Series Preferred Stock"), for \$2,499,509. On the same date as the foregoing transaction, Healthcare Focus Fund acquired a warrant to purchase 489,512 shares of Common Stock for \$0.01 per share (the "Healthcare Focus Fund Warrant").

On October 8, 2003, ARCH Venture Fund III, ARCH Venture Fund V, ARCH V Entrepreneurs Fund and Healthcare Focus Fund were issued promissory notes by the Issuer in the principal amounts of \$575,000, \$1,986,614, \$13,386 and \$750,000, respectively. Pursuant to the terms of each note, the principal and interest would convert to shares of Common Stock at a price per share of \$9.625 at the time of the Issuer's initial public offering (the "IPO").

Pursuant to their respective terms, each share of Series Preferred Stock automatically converts into shares of Common Stock upon the effective date of the Issuer's IPO. On March 19, 2004, the Issuer effected a one-for-five-and-one-half reverse stock split of its Common Stock and, as a result, each of the shares of Series Preferred Stock was convertible into approximately one-sixth of a share of Common Stock.

Each of the ARCH III Series A Warrant, the First ARCH III Common Warrant, the Second ARCH III Common Warrant, the Third ARCH III Common Warrant and the Healthcare Focus Fund Warrant converted upon the Issuer's IPO into 17,425 shares, 5,813 shares, 15,552 shares, 91,943 shares, and 88,390 shares, respectively, of Common Stock pursuant to the cashless exercise provisions of each such warrant.

On March 19, 2004, ARCH Venture Fund II, ARCH Venture Fund V and Healthcare Focus Fund purchased an additional 12,500 shares (for a purchase price of \$100,000), 137,500 shares (for a purchase price of \$1,100,000) and 37,500 shares (for a purchase price of \$300,000), respectively, of Common Stock in connection with the Issuer's IPO.

On November 3, 2004, ARCH Venture Fund V and ARCH V Entrepreneurs Fund purchased 198,661 shares and 1,339 shares, respectively, of the Issuer's 6% Convertible Exchangeable Preferred Stock (the "Convertible Exchangeable Preferred Stock") in conjunction with a offering by the Issuer for a purchase price of \$10 per share. The shares of Convertible Exchangeable Preferred Stock are convertible into shares of Common Stock at initial conversion price of \$2.35, subject to certain adjustments.

The working capital of each of the above-listed purchasing entities was the source of the funds for each purchase. No part of the purchase price paid by these entities was represented by funds or other consideration

borrowed or otherwise obtained for the purpose of acquiring, holding, trading or voting the shares of Common Stock, Series Preferred Stock and Convertible Exchangeable Preferred Stock described above.

Item 4. Purpose of Transaction

Each of ARCH Venture Fund V, ARCH Venture Fund III, ARCH Venture Fund II, ARCH V Entrepreneurs Fund and Healthcare Focus Fund acquired the Common Stock for investment purposes. Depending on market conditions, the continuing evaluation of the business and prospects of the Issuer and other factors, each of ARCH Venture Fund V, ARCH Venture Fund III, ARCH Venture Fund II, ARCH V Entrepreneurs Fund and Healthcare Focus Fund and other Reporting Persons may dispose of or acquire additional shares of Common Stock of the Issuer. Nelsen is a member of the Board of Directors. Except as set forth above, none of the Reporting Persons has any present plans which relate to or would result in:

- (a) The acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer;
- (b) An extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries;
- (c) A sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries;
- (d) Any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- (e) Any material change in the present capitalization or dividend policy of the Issuer;
- (f) Any other material change in the Issuer's business or corporate structure;
- (g) Changes in the Issuer's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person;
- (h) Causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;
- (i) A class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Securities Exchange Act of 1934; or
- (j) Any action similar to any of those enumerated above.

Item 5. Interest in Securities of the Issuer.

(a) As of the date of this Schedule and assuming conversion of the Convertible Exchangeable Preferred Stock at the initial conversion price of \$2.35 as reported by the Issuer in Issuer's 424B3 Prospectus filed on November 1, 2004, ARCH Venture Fund V is the record holder of 1,194,870 shares of Common Stock, ARCH Venture Fund III is the record holder of 1,140,487 shares of Common Stock, ARCH Venture Fund II is the record holder of 193,447 shares of Common Stock, ARCH V Entrepreneurs Fund is the record holder of 7,126 shares of Common Stock and Healthcare Focus Fund is the record holder of 369,401 shares of Common Stock (the aggregate of such shares of Common Stock shall be referred to as the "ARCH Shares"). By virtue of their relationship as affiliated entities, whose general partners have overlapping individual general partners, managing members, directors and officers, as the case may be, each Reporting Person may be deemed to own beneficially all of the ARCH Shares. The Reporting Persons expressly disclaim membership in a "group" as used in Rule 13d-1(b)(ii)(H). Each Reporting Person also expressly

disclaims beneficial ownership of any shares of Common Stock of the Issuer, except for the shares, if any, such Reporting Person holds of record.

The shares of Common Stock held by the Reporting Persons represent approximately 18.5% of the Common Stock outstanding, based upon 14,826,573 shares of Common Stock reported by the Issuer to be outstanding in the Issuer's 424B3 Prospectus filed on November 1, 2004 and assuming conversion of the shares of Convertible Exchangeable Preferred Stock held of record by ARCH Venture Fund V and ARCH V Entrepreneurs Fund into 845,362 and 5,698 shares of Common Stock, respectively, based on the initial conversion price of \$2.35 as reported by the Issuer in Issuer's 424B3 Prospectus filed on November 1, 2004.

(b) Number of shares of Common Stock as to which each such Reporting Person has:

(i) sole power to vote or to direct the vote:

0 shares

(ii) shared power to vote or to direct the vote:

2,905,331 shares for each Reporting Person.

(iii) sole power to dispose or to direct the disposition:

0 shares

(iv) shared power to dispose or to direct the disposition:

2,905,331 shares for each Reporting Person.

(c) On November 3, 2004, the Issuer completed a sale of shares of its Convertible Exchangeable Preferred Stock to ARCH Venture Fund V, ARCH V Entrepreneurs Fund and other investors. The shares of Convertible Exchangeable Preferred Stock purchased by ARCH Venture Fund V and ARCH V Entrepreneurs Fund are convertible into 845,362 and 5,698 shares of Common Stock, respectively, based on the initial conversion price of \$2.35 as reported by the Issuer in Issuer's 424B3 Prospectus filed on November 1, 2004.

(d) Not applicable.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

Except for the transactions described in this Schedule, none of the Reporting Persons have any contract, arrangement, understanding or relationship (legal or otherwise) with any other person with respect to any securities of the Issuer, including but not limited to transfer or voting of any such securities, finder's fees, joint ventures, loan or option arrangements, puts or calls, guarantees of profits, division of profits or loss or the giving or withholding of proxies.

Item 7. Material to be filed as Exhibits

Exhibit 1. Agreement of Joint Filing

Exhibit 2. Power of Attorney

SIGNATURE

After reasonable inquiry and to the best of its knowledge and belief, each of the undersigned certifies that the information set forth in this Statement is true, complete and correct. We also hereby agree to file this statement jointly pursuant to the Agreement listed on Exhibit 1 hereto.

Date: November 12, 2004

ARCH VENTURE FUND V, L.P.

By: ARCH Venture Partners V, L.P.
its General Partner

By: ARCH Venture Partners V, LLC
Its General Partner

By: *

Managing Director

ARCH VENTURE FUND III, L.P.

By: ARCH Venture Partners, LLC
its General Partner

By: *

Managing Director

ARCH VENTURE FUND II, L.P.

By: ARCH Management Partners II, L.P.
Its General Partner

By: ARCH Venture Partners, L.P.
Its General Partner

By: ARCH Venture Corporation
Its General Partner

By: *

Managing Director

ARCH V ENTREPRENEURS FUND V, L.P.

By: ARCH Venture Partners V, L.P.
its General Partner

By: ARCH Venture Partners V, LLC
Its General Partner

By: *

Managing Director

HEALTHCARE FOCUS FUND, L.P.

By: ARCH Venture Partners V, L.P.
its General Partner

By: ARCH Venture Partners V, LLC
Its General Partner

By: *

Managing Director

ARCH VENTURE PARTNERS V, L.P.

By: ARCH Venture Partners V, LLC
Its General Partner

By: *

Managing Director

ARCH VENTURE PARTNERS V, LLC

By: *

Managing Director

ARCH VENTURE PARTNERS, LLC

By: *

Managing Director

ARCH MANAGEMENT PARTNERS II, L.P.

By: ARCH Venture Partners, L.P.
its General Partner

By: ARCH Venture Corporation
its General Partner

By: *

Managing Director

ARCH VENTURE PARTNERS, L.P.

By: ARCH Venture Corporation
its General Partner

By: *

Managing Director

ARCH VENTURE CORPORATION

By: *

Managing Director

*

Steven Lazarus

*

Keith Crandell

*

Robert Nelsen

*

Clinton Bybee

* By: /s/ Mark McDonnell

Mark McDonnell as
Attorney-in-Fact

Exhibit 1

AGREEMENT OF JOINT FILING

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, the undersigned hereby agree that only one statement containing the information required by Schedule 13D need be filed with respect to the ownership by each of the undersigned of shares of Common Stock of Xcyte Therapies, Inc.

EXECUTED this 12th day of November, 2004.

ARCH VENTURE FUND V, L.P.

By: ARCH Venture Partners V, L.P.
its General Partner

By: ARCH Venture Partners V, LLC
Its General Partner

By: *

Managing Director

ARCH VENTURE FUND III, L.P.

By: ARCH Venture Partners, LLC
its General Partner

By: *

Managing Director

ARCH VENTURE FUND II, L.P.

By: ARCH Management Partners II, L.P.
Its General Partner

By: ARCH Venture Partners, L.P.
Its General Partner

By: ARCH Venture Corporation
Its General Partner

By: *

Managing Director

ARCH V ENTREPRENEURS FUND V, L.P.

By: ARCH Venture Partners V, L.P.
its General Partner

By: ARCH Venture Partners V, LLC
Its General Partner

By: *

Managing Director

HEALTHCARE FOCUS FUND, L.P.

By: ARCH Venture Partners V, L.P.
its General Partner

By: ARCH Venture Partners V, LLC
Its General Partner

By: *

Managing Director

ARCH VENTURE PARTNERS V, L.P.

By: ARCH Venture Partners V, LLC
Its General Partner

By: *

Managing Director

ARCH VENTURE PARTNERS V, LLC

By: *

Managing Director

ARCH VENTURE PARTNERS, LLC

By: *

Managing Director

ARCH MANAGEMENT PARTNERS II, L.P.

By: ARCH Venture Partners, L.P.
its General Partner

By: ARCH Venture Corporation
its General Partner

By: *

Managing Director

ARCH VENTURE PARTNERS, L.P.

By: ARCH Venture Corporation
its General Partner

By: *

Managing Director

ARCH VENTURE CORPORATION

By: *

Managing Director

*

Steven Lazarus

*

Keith Crandell

*

Robert Nelsen

*

Clinton Bybee

* By: /s/ Mark McDonnell

Mark McDonnell as
Attorney-in-Fact

Exhibit 2

POWERS OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Mark McDonnell his true and lawful attorney-in-fact, with full power of substitution, to sign any and all instruments, certificates and documents that may be necessary, desirable or appropriate to be executed on behalf of himself as an individual or in his capacity as a general partner of any partnership, pursuant to Sections 13 and 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and any and all regulations promulgated thereunder, and to file the same, with all exhibits thereto, and any other documents in connection therewith, with the Securities and Exchange Commission, and with any other entity when and if such is mandated by the Exchange Act or by the By-laws of the National Association of Securities Dealers, Inc., granting unto said attorney-in-fact full power and authority to do and perform each and every act and thing necessary, desirable or appropriate, fully to all intents and purposes as he might or could do in person, thereby ratifying and confirming all that said attorney-in-fact, or his substitutes, may lawfully do or cause to be done by virtue hereof.

ARCH VENTURE FUND V, L.P.

By: ARCH VENTURE PARTNERS V, L.P.
its General Partner

By: ARCH Venture Partners V, LLC
Its General Partner

By: /s/ Keith Crandell

Managing Director

ARCH VENTURE FUND iii, L.P.

By: ARCH Venture Partners, LLC
its General Partner

By: /s/ Keith Crandell

Managing Director

ARCH VENTURE FUND II, L.P.

By: ARCH Management Partners II, L.P.
Its General Partner

By: ARCH Venture Partners, L.P.
Its General Partner

By: ARCH Venture Corporation
Its General Partner

By: /s/ Keith Crandell

Managing Director

ARCH v ENTREPRENEURS FUND V, L.P.

By: ARCH Venture Partners V, L.P.
its General Partner

By: ARCH Venture Partners V, LLC
Its General Partner

By: /s/ Keith Crandell

Managing Director

HEALTHCARE FOCUS FUND, L.P.

By: ARCH Venture Partners V, L.P.
its General Partner

By: ARCH Venture Partners V, LLC
Its General Partner

By: /s/ Keith Crandell

Managing Director

ARCH VENTURE PARTNERS V, L.P.

By: ARCH Venture Partners V, LLC
Its General Partner

By: /s/ Keith Crandell

Managing Director

ARCH VENTURE PARTNERS V, LLC

By: /s/ Keith Crandell

Managing Director

ARCH VENTURE PARTNERS, LLC

By: /s/ Keith Crandell

Managing Director

ARCH MANAGEMENT PARTNERS II, L.P.

By: ARCH Venture Partners, L.P.
its General Partner

By: ARCH Venture Corporation
its General Partner

By: /s/ Keith Crandell

Managing Director

ARCH VENTURE PARTNERS, L.P.

By: ARCH Venture Corporation
its General Partner

By: /s/ Keith Crandell

Managing Director

ARCH VENTURE CORPORATION

By: /s/ Keith Crandell

Managing Director

/s/ Steven Lazarus

Steven Lazarus

/s/ Keith Crandell

Keith Crandell

/s/ Robert Nelsen

Robert Nelsen

/s/ Clinton Bybee

Clinton Bybee