

ALNYLAM PHARMACEUTICALS, INC.  
Form SC 13G/A  
February 14, 2005

OMB APPROVAL

OMB Number: 3235-0145  
Expires: December 31, 2005  
Estimated average burden  
hours per response . . . 11

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

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

(AMENDMENT NO. 1) \*

ALNYLAM PHARMACEUTICALS, INC.

-----  
(Name of Issuer)

Common Stock

-----  
(Title of Class of Securities)

02043Q107

-----  
(CUSIP Number)

December 31, 2004

-----  
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

\*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 the disclosures provided in a prior cover page.

The information required in 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).

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1 NAMES OF REPORTING PERSONS

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

ARCH Venture Fund V, L.P.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a) [ ]

(b) [ ]

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

5 SOLE VOTING POWER

0

NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY  
EACH  
REPORTING  
PERSON  
WITH

6 SHARED VOTING POWER

1,956,527

7 SOLE DISPOSITIVE POWER

0

8 SHARED DISPOSITIVE POWER

1,956,527

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,956,527

10 CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  
(SEE INSTRUCTIONS) [ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

9.41%

12 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

PN

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\*SEE INSTRUCTIONS BEFORE FILLING OUT!

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ARCH V Entrepreneurs Fund, L.P.

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Keith Crandell

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Robert Nelsen

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Clinton Bybee

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Schedule 13G

- Item 1(a). Name of Issuer: Alnylam Pharmaceuticals, Inc. (the "Issuer").
- Item 1(b). Address of Issuer's Principal Executive Offices: 300 Third Street, Cambridge, Massachusetts 02142
- Item 2(a). Names of Persons Filing: ARCH Venture Fund V, L.P. ("ARCH Venture Fund V"); ARCH V Entrepreneurs Fund, L.P. ("ARCH V Entrepreneurs Fund"); ARCH Venture Partners V, L.P. ("AVP V LP"); ARCH Venture Partners V, LLC ("AVP V LLC"); (collectively, the "Reporting Entities" and individually, each a "Reporting Entity") and Steven Lazarus ("Lazarus"), Keith Crandell ("Crandell"), Robert Nelsen ("Nelsen") and Clinton Bybee ("Bybee") (collectively, the "Managing Directors" and individually, each a "Managing Director"). The Reporting Entities and the Managing Directors collectively are referred to as the "Reporting Persons".
- Item 2(b). Address of Principal Business Office or, if None, Residence: 8725 W. Higgins Road, Suite 290, Chicago, IL 60631.
- Item 2(c). Citizenship: ARCH Venture Fund V, ARCH V Entrepreneur Fund, and AVP V LP are limited partnerships organized under the laws of the State of Delaware. AVP V LLC is a limited liability company organized under the laws of the State of Delaware. Each Managing Director is a US citizen.
- Item 2(d). Title of Class of Securities: Common Stock, \$.01 par value (the "Common Stock").
- Item 2(e). CUSIP Number: 02043Q107
- Item 3. If this statement is filed pursuant to Sections 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:
- Not Applicable.
- Item 4. Ownership.
- (a) Amount beneficially owned:
- ARCH Venture Fund V is the record owner of 1,944,755 shares of Common Stock (the "ARCH Venture Fund V Shares") as of December 31, 2004. ARCH V Entrepreneur Fund is the record owner of 11,772 shares of Common Stock (the "ARCH V Entrepreneur Fund Shares" and, together with the ARCH Venture Fund V Shares, the "Record Shares") as of December 31, 2004. AVP V LP is the sole general partner of ARCH Venture Fund V and ARCH V

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Entrepreneurs Fund. AVP V LLC is the sole

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general partner of AVP V LP. By virtue of their relationship as affiliated entities who have overlapping general partners and managing directors, each Reporting Entity may be deemed to share the power and direct the disposition and vote of the Record Shares. As individual general partners or managing directors of each of AVP V LLC and AVP V LP, each Managing Director may also be deemed to share the power and direct the disposition and vote of the Record Shares.

(b) Percent of class:

Reporting entities and Reporting Persons: 9.41%, and is calculated based 20,801,208 shares outstanding as of December 31, 2004, which is the sum of (per guidance from the company) the amount reported of 20,085,590 shares of Common Stock reported to be outstanding in the Issuer's Form 10-Q filed with the Securities and Exchange Commission on November 15, 2004 and additional shares (715,618) issued per 8-K filed on December 31, 2004.

(c) Number of shares as to which the person has:

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

0 shares for each Reporting Person

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

Each of the Reporting Persons: 1,956,527

(iii) Sole power to dispose or to direct the disposition of:

0 shares for each Reporting Person

(iv) Shared power to dispose or to direct the disposition of:

Each of the Reporting Persons: 1,956,527

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

Item 5. Ownership of Five Percent or Less of a Class.

Not Applicable.

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

Not Applicable.

Item 7. Identification and Classification of the Subsidiary which Acquired the Security Being Reported on By the Parent Holding Company or Control Person.

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Not Applicable.

Item 8. Identification and Classification of Members of the Group.

Not Applicable. The Reporting Persons expressly disclaim membership in a "group" as used in Rule 13d-1(b) (ii) (J).

Item 9. Notice of Dissolution of Group.

Not Applicable.

Item 10. Certification.

Not Applicable. This statement on Schedule 13G is not filed pursuant to Section 240.13d-1(b) nor Section 240.13d-1(c).

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SIGNATURES

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: February 11, 2005

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: \*

-----  
Steven Lazarus  
Managing Director

ARCH V ENTREPRENEURS FUND, L.P.

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

By: ARCH Venture Partners V, LLC  
its General Partner

By: \*

-----  
Steven Lazarus  
Managing Director

