

ALNYLAM PHARMACEUTICALS, INC.  
Form SC 13G/A  
February 14, 2011

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

**SCHEDULE 13G**

**Under the Securities Exchange Act of 1934  
(Amendment No. 4)**

**ALNYLAM PHARMACEUTICALS, INC.**

(Name of Issuer)

**Common Stock, \$.01 par value per share**

(Title and Class of Securities)

**02043Q107**

(CUSIP Number)

**December 31, 2010**

(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)
-

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1 NAME OF REPORTING PERSONS

ALETHEIA RESEARCH AND MANAGEMENT, INC., IRS number 95-4647814, as general partner of various limited partnerships and on behalf of various managed accounts.

SS OR IRS IDENTIFICATION NOS. OF ABOVE PERSONS

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

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

California

5 NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

SOLE VOTING POWER

6

SHARED VOTING POWER 0

7 Less than 5% of the number of outstanding shares of any class of capital stock of the Issuer

8

SHARED DISPOSITIVE POWER

0

9

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

Less than 5% of the number of outstanding shares of any class of capital stock of the Issuer

10

CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES

[ ]

**11**

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

Less than 5% of the number of outstanding shares of any class of capital stock of the Issuer

**12**

TYPE OF REPORTING PERSON

Aletheia Research and Management, Inc. - IA

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**Item 1(a). Name of Issuer:**

Alnylam Pharmaceuticals, Inc.

**Item 1(b). Address of Issuer's Principal Executive Offices:**

300 Third Street, Cambridge, MA 02142

**Item 2(a). Name of Person Filing:**

Aletheia Research and Management, Inc.

**Item 2(b). Address of Principal Business Office or, if None, Residence:**

100 Wilshire Boulevard, Suite 1960, Santa Monica, CA 90401

**Item 2(c). Citizenship:**

Not Applicable.

**Item 2(d). Title of Class of Securities:**

Common Stock, \$.01 par value.

**Item 2(e). CUSIP Number:**

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**Item 3. If this statement is filed pursuant to Rule 13d-1(b), or 13d-2(b) or (c), check whether the person filing is a:**

- (a)  Broker or Dealer registered under Section 15 of the Act.
- (b)  Bank as defined in Section 3(a)(6) of the Act.
- (c)  Insurance Company as defined in Section 3(a)(19) of the Act.
- (d)  Investment Company registered under Section 8 of the Investment Company Act.
- (e)  Investment Adviser registered in accordance with Rule 13d-1(b)(1)(ii)(E).

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- (f)  Employee Benefit Plan or Endowment Fund in accordance with Rule 13d-1(b)(1)(ii)(F).
- (g)  Parent Holding Company or control person in accordance with Rule 13d-1(b)(1)(ii)(G).
- (h)  A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act.
- (i)  A church plan that is excluded from the definition of an investment company under Section 3(c) (14) of the Investment Company Act of 1940.
- (j)  Group, in accordance with Rule 13d-1(b)(1)(ii)(J).

If this Statement is filed pursuant to Rule 13d-1(c), check this box .

**Item 4. Ownership.**

- (a) Amount beneficially owned: Less than 5% of the number of outstanding shares of any class of capital stock of the Issuer
- (b) Percent of Class: Less than 5% of the number of outstanding shares of any class of capital stock of the Issuer
- (c) Number of Shares as to which the person has:
  - (i) Sole power to vote or to direct the vote: N/A
  - (ii) Shared power to vote or to direct the vote: N/A
  - (iii) Sole power to dispose or to direct the disposition of: N/A
  - (iv) Shared Power to dispose or to direct the disposition of: N/A

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

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following. .

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

Various accounts and funds managed by the reporting person have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the securities held in their respective accounts. To the knowledge of the reporting person, the interest of any one such account does not exceed 5% of the class of securities.

**Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company.**

Not Applicable.



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

Not Applicable

**Item 9. Notice of Dissolution of Group.**

Not Applicable.

**Item 10. Certification.**

By signing below, I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

**SIGNATURE**

Date: February 13, 2011

ALETHEIA RESEARCH AND MANAGEMENT, INC.

By: /s/ Peter J. Eichler, Jr.

Name: Peter J. Eichler, Jr.

Title: Chief Executive Officer

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