
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): June 20, 2005

Alynlam Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in Charter)

Delaware (State or Other Jurisdiction of Incorporation)	000-50743 (Commission File Number)	77-0602661 (IRS Employer Identification No.)
300 Third Street, Cambridge, MA (Address of Principal Executive Offices)		02142 (Zip Code)
Registrant's telephone number, including area code: (617) 551-8200		
Not applicable		

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 1.01. Entry into a Material Definitive Agreement.

On June 20, 2005, Alnylam Pharmaceuticals, Inc. (“Alnylam”) entered into an agreement (the “Amendment”) with Lighthouse Capital Partners V, L.P. (“Lighthouse”) amending certain provisions of that certain Loan and Security Agreement dated as of March 26, 2004, as amended (the “Loan Agreement”).

Under the original terms of the Loan Agreement, Alnylam had the ability to draw down amounts under its line of credit with Lighthouse through June 30, 2005, upon adherence to certain conditions. Under the terms of the Loan Agreement, as amended by the Amendment, Alnylam has the ability to draw down amounts under its line of credit with Lighthouse through January 1, 2006, upon adherence to certain conditions.

In consideration of the agreements of Lighthouse contained in the Amendment, Alnylam has agreed to pay to Lighthouse a fee equal to (1) three-quarters of one percent (0.75%) multiplied by (2) the dollar amount of the Commitment (as defined in the Loan Agreement) remaining as of October 1, 2005, as described in the Amendment.

Item 9.01. Financial Statements and Exhibits.

(c) Exhibits

See Exhibit Index attached hereto.

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SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ALNYLAM PHARMACEUTICALS, INC.

Date: June 24, 2005

By: /s/ John M. Maraganore, Ph.D.
John M. Maraganore, Ph.D.
President and Chief Executive Officer

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
10.1	Amendment No. 02 dated June 20, 2005 to Loan and Security Agreement dated as of March 26, 2004, as amended, by and between Alnylam and Lighthouse Capital Partners V, L.P.

AMENDMENT NO. 02

Dated June 20, 2005

TO

that certain Loan and Security Agreement No. 3861 dated as of March 26, 2004, as amended ("Agreement") by and between LIGHTHOUSE CAPITAL PARTNERS V, L.P. ("Lender") and ALNYLAM PHARMACEUTICALS, INC., ("Borrower").

(All capitalized terms not otherwise defined herein shall have the meanings given to such terms in the Agreement.)

Without limiting or amending any other provisions of the Agreement, Lender and Borrower agree to the following:

a. Section 1.1 of the Agreement, the following definitions shall be deleted in its entirety and replaced with the following:

"Commitment Termination Date" means January 1, 2006.

"Loan Commencement Date" means (i) July 1, 2005 for Loans made on or prior to July 1, 2005 or (ii) for Loans made subsequent to July 1, 2005, the first business day of the calendar month following the Funding Date.

"Maturity Date" means, with respect to each Loan, the last day of the Repayment Period for such Loan or, if earlier, the date of prepayment under Section 2.5.

b. Section 1.1 of the Agreement, the definition Commitment Extension Fee shall be added in its entirety:

"Commitment Extension Fee" means an amount equal to (i) three quarters of one percent (0.75%) times (ii) the dollar amount of the Commitment remaining as of October 1, 2005. The Commitment Extension Fee shall be due and payable on October 1, 2005, subject to the provisions of Section 2.6. By way of example, if the remaining Commitment as of October 1, 2005, is \$1,000,000, then the Commitment Extension Fee shall be \$7,500.

c. Section 11 – The addresses for notices to the Borrower shall be deleted and replaced with the following:

If to Borrower: Alnylam Pharmaceuticals, Inc.
300 Third Street
Cambridge, MA 02142
Attention: Vice President – Finance
FAX: (617) 551-8101

With a copy to: Faber Daeufer & Rosenberg PC
1050 Winter Street, Suite 1000
Waltham, MA 02451
Attention: Joseph L. Faber
FAX: (781) 795-4747

Except as amended hereby, the Agreement remains unmodified and unchanged.

BORROWER:
ALNYLAM PHARMACEUTICALS, INC.
By: /s/ Patricia L. Allen

Name: Patricia L. Allen
Title: VP, Finance

LENDER:
LIGHTHOUSE CAPITAL PARTNERS V, L.P.
By: LIGHTHOUSE MANAGEMENT
PARTNERS V, L.L.C., its general partner

By: /s/ Thomas Conneely
Name: Thomas Conneely
Title: Vice President