

ALNYLAM PHARMACEUTICALS, INC.

Form 8-K

January 28, 2008

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**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): January 28, 2008 (January 23, 2008)

ALNYLAM PHARMACEUTICALS, INC.

(Exact Name of Registrant as Specified in Charter)

Delaware

000-50743

77-0602661

(State or Other Jurisdiction
of Incorporation)

(Commission
File Number)

(IRS Employer
Identification No.)

300 Third Street, Cambridge, Massachusetts

02142

(Address of Principal Executive Offices)

(Postal 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 8.01 Other Events.

On January 23, 2008, Alnylam Pharmaceuticals, Inc. announced positive results for its ALN-RSV01 Phase II experimental infection study, referred to as the GEMINI study. The GEMINI study was designed to evaluate the safety and anti-viral activity of ALN-RSV01, an RNAi therapeutic for the treatment of RSV infection. Top-line results show that ALN-RSV01 was safe and well tolerated and demonstrated statistically significant anti-viral activity. The complete results of the study will be presented at the International Symposium on Respiratory Viral Infections meeting, to be held February 28 – March 2, 2008 in Singapore.

The GEMINI study was a double-blind, placebo-controlled, randomized study of ALN-RSV01 or placebo in 88 adult subjects experimentally infected with a wild type clinical strain of RSV. The study was designed to measure the safety and anti-viral activity of ALN-RSV01, with efficacy measures including the incidence of viral infection and the effects of treatment on the degree of viral infection and resulting clinical symptoms. The study was performed using ALN-RSV01 or placebo administered intranasally for five consecutive days – two days prior and three days after viral inoculation.

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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.

Dated: January 28, 2008

ALNYLAM PHARMACEUTICALS, INC.

By: /s/ Barry E. Greene

Name: Barry E. Greene

Title: President and Chief Operating Officer