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): September 8, 2021 (September 6, 2021)

Alnylam Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in Charter)

001-36407

(Commission

File Number)

Delaware (State or Other Jurisdiction of Incorporation)

> 675 West Kendall Street, Henri A. Termeer Square Cambridge, Massachusetts (Address of Principal Executive Offices)

77-0602661 (IRS Employer Identification No.)

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))

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common Stock, \$0.01 par value per share	ALNY	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company \Box

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 5.02. Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

(b) On September 6, 2021, Laurie B. Keating, a named executive officer of Alnylam Pharmaceuticals, Inc. (the "Company"), retired from the Company and resigned from her position as Executive Vice President, Chief Legal Officer and Secretary of the Company, effective September 10, 2021, following 7 years of service.

In connection with her resignation, Ms. Keating and the Company entered into a Letter Agreement on September 6, 2021 ("Letter Agreement"), under which she has agreed to provide consulting services to the Company for up to 10 hours per month, or for such additional hours as may be mutually agreed, for an 18-month period. In consideration for all the terms and conditions of the Letter Agreement, including her performance of such consulting services, Ms. Keating will receive the following payments: (i) cash compensation equal to her current base rate of pay for 12 months; (ii) a pro-rata cash bonus for 2021 based on actual performance and paid at the time 2021 bonuses are paid under the Company's Annual Incentive Program to other executive officers of the Company; and (iii) a lump sum equal to the amount the Company would have contributed toward the cost of Ms. Keating's health coverage premium for 12 months as if she were actively employed. The Letter Agreement also provides that Ms. Keating's equity awards will continue to vest and remain exercisable while she serves as a consultant, as provided in the terms of the respective Company stock incentive plan and award agreement pursuant to which such equity awards were granted. The Letter Agreement includes a release of claims and certain other standard terms and conditions.

The foregoing summary of the Letter Agreement is not complete and is qualified in its entirety by reference to the full text of the Letter Agreement which the Company intends to file as an exhibit to its Quarterly Report on Form 10-Q for the quarter ending September 30, 2021.

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.

Date: September 8, 2021

ALNYLAM PHARMACEUTICALS, INC.

By: /s/ Jeffrey V. Poulton

Jeffrey V. Poulton Executive Vice President, Chief Financial Officer