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): November 5, 2026 (November 2, 2026)

Alnylam Pharmaceuticals, Inc.

Delaware	001-36407	77-0602661
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(IRS Employer Identification No.)

675 West Kendall Street, Henri A. Termeer Square Cambridge, Massachusetts (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))

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 ☐

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 November 4, 2026, Alnylam Pharmaceuticals, Inc. (the "Company") announced that Tolga Tanguler will depart from his role as the Company's Executive Vice President, Chief Commercialization Officer in December 2026. Mr. Tanguler and the Company intend to enter into a written agreement not later than his separation date, which will contain the terms of his departure from the Company.

Item 8.01. Other Events

On November 2, 2026, the Board of Directors of the Company authorized a program to repurchase up to $1.0 billion of the Company's common stock (the "2026 Repurchase Program").

Repurchases under the 2026 Repurchase Program may be made from time to time in open market transactions, including pursuant to trading plans intended to qualify under Rule 10b5-1 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), in privately negotiated transactions, or by other means, in each case in accordance with applicable securities laws, including Rule 10b-18 under the Exchange Act.

The Company anticipates repurchasing approximately $500 million of its common stock authorized under the 2026 Repurchase Program by the end of 2026 and the balance during 2027, but the timing and amount of any repurchases will depend on a number of factors, including the market price of the Company's common stock, general business and market conditions, the Company's liquidity and capital requirements and other investment opportunities. The 2026 Repurchase Program does not have an expiration date, does not obligate the Company to repurchase any particular dollar amount or number of shares, and may be modified, suspended or discontinued at any time without prior notice.

Forward-looking Statements

Various statements in this Current Report on Form 8-K concerning the Company's future expectations, plans and prospects, including, without limitation, statements regarding: Mr. Tanguler's departure from the Company, any written agreement to be entered into between the Company and Mr. Tanguler, and the 2026 Repurchase Program, including the number or value of shares of the Company's common stock that may be repurchased thereunder and the timing of any such repurchases, constitute forward-looking statements for the purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995. Actual results and future plans may differ materially from those indicated by these forward-looking statements as a result of various important risks, uncertainties and other factors, including, without limitation, risks and uncertainties relating to: the Company's ability to reach agreement with Mr. Tanguler on the terms of his departure; the Company's liquidity, cash flows, capital requirements and alternative uses of capital; general business and market conditions, including the market price of the Company's common stock; and legal, regulatory and contractual restrictions on the Company's ability to repurchase its common stock; as well as those risks more fully discussed in the "Risk Factors" filed with the Company's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2026 filed with the Securities and Exchange Commission ("SEC") on October 29, 2026, and in other filings that the Company makes with the SEC. In addition, any forward-looking statements represent the Company's views only as of the date of this Current Report on Form 8-K and should not be relied upon as representing its views as of any subsequent date. The Company explicitly disclaims any obligation, except to the extent required by law, to update any forward-looking statements.

Item 9.01. Financial Statements and Exhibits

(d) Exhibits

Exhibit Number	Exhibit Description
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

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: November 5, 2026

ALNYLAM PHARMACEUTICALS, INC.

By: /s/ Jeffrey V. Poulton
Jeffrey V. Poulton
Executive Vice President, Chief Financial Officer