1. Name and Address of Reporting Person

KELLOGG PETER N
(First) 675 WEST KENDALL STREET
(Middle) HENRI A. TERMEER SQUARE
(Last) CAMBRIDGE MA 02142

2. Issuer Name and Ticker or Trading Symbol

ALNYLAM PHARMACEUTICALS, INC. [ALNY]

3. Date of Earliest Transaction (Month/Day/Year)

05/16/2024

4. If Amendment, Date of Original Filed (Month/Day/Year)

05/16/2024

5. Relationship of Reporting Person(s) to Issuer

X Director 10% Owner
Officer (give title below)
Other (specify below)

6. Individual or Joint/Group Filing (Check Applicable Line)

X Form filed by One Reporting Person
Form filed by More than One Reporting Person

Rule 10b5-1(c) Transaction Indication

☐ This box should be checked if a transaction was made pursuant to a contract, instruction or written plan that is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c).
∗ See Instruction 10.

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

<table>
<thead>
<tr>
<th>1. Title of Security (Instr. 3)</th>
<th>2. Transaction Date (Month/Day/Year)</th>
<th>3A. Deemed Execution Date, if any (Month/Day/Year)</th>
<th>4. Securities Acquired (A) or Disposed Of (D) (Instr. 3 and 4)</th>
<th>5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)</th>
<th>6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)</th>
<th>7. Nature of Indirect Beneficial Ownership (Instr. 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Stock</td>
<td>05/16/2024</td>
<td></td>
<td>A</td>
<td>5,228</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned

<table>
<thead>
<tr>
<th>1. Title of Derivative Security (Instr. 5)</th>
<th>2. Conversion or Exercise Price of Derivative Security</th>
<th>3. Transaction Date (Month/Day/Year)</th>
<th>4. Transaction Code (Instr. 5)</th>
<th>5. Number of Derivative Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)</th>
<th>6. Date Exercisable and Expiration Date (Month/Day/Year)</th>
<th>7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)</th>
<th>8. Price of Derivative Security (Instr. 5)</th>
<th>9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)</th>
<th>10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)</th>
<th>11. Nature of Indirect Beneficial Ownership (Instr. 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock Option (right to buy)</td>
<td>$151.22</td>
<td>05/16/2024</td>
<td>A</td>
<td>5,228</td>
<td>05/16/2025(1)</td>
<td>Common Stock</td>
<td>5,228</td>
<td>$0.0</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>

Explanation of Responses:

1. This award vests in full upon the earlier of the first anniversary of the grant date and the date of any earlier retirement or resignation of the Reporting Person, provided such date of retirement or resignation occurs no more than 90 days prior to the first anniversary of the grant date.

Remarks:

By: Brett Budzinski, Attorney-in-Fact For: Peter N. Kellogg
05/20/2024
** Signature of Reporting Person

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4(b)(v).


Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.
Know all of these presents, that the undersigned hereby revokes and nullifies any prior power of attorney for Section 16 reporting obligations, and makes, constitutes and appoints each of Jeffrey Poulton, Brett Budzinski, Gisele Dion, and Stephen Hall signing singly and each acting individually, as the undersigneds true and lawful attorney-in-fact with full power and authority as hereinafter described to:

(1) execute for and on behalf of the undersigned, in the Undersigneds capacity as an officer and/or director of Alnylam Pharmaceuticals, Inc. (the Company), Forms 3, 4 and 5 (including any amendments thereto) in accordance with Section 16(a) of the Securities and Exchange Act of 1934, as amended, and the rules thereunder (the Exchange Act);

(2) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to prepare, complete and execute any such Form 3, 4, or 5, prepare, complete and execute any amendment or amendments thereto, and timely deliver and file such form with the United States Security and Exchange Commission and any stock exchange or similar authority;

(3) seek or obtain, as the undersigneds representative and on the undersigneds behalf, information regarding transactions in the Companys securities from any third party, including brokers, employee benefit plan administrators and trustees, and the undersigned hereby authorizes any such person to release any such information to such attorney-in-fact and approves and ratifies any such release of information; and

(4) take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney-in-fact, may be of benefit to, in the interest of, or legally required by, the undersigned, it being understood that the documents executed by such attorney-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorney-in-fact may approve in such attorney-in-facts discretion.

The undersigned hereby grants to each such attorney-in-fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary, or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as to the undersigned might or could do of personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorney-in-fact or such attorney-in-facts substitute or substitutes, shall lawfully do or cause to be done by virtue of this power of attorney and the rights and powers herein granted. The undersigned acknowledges that the foregoing attorneys-in-fact, in serving in such capacity at the request of the undersigned, are not assuming nor relieving, nor is the Company assuming nor relieving, any of the undersigneds responsibilities to comply with Section 16 of the Exchange Act. The undersigned Acknowledges that neither the company nor the foregoing attorneys-in-fact assume (i) any liability of the undersigneds responsibility to comply with the requirements of the Exchange Act, (ii) any liability of the undersigned for any failure to comply with such requirements, or (iii) any obligation or liability of the undersigned for profit disgorgement under Section 16(b) of the Exchange Act.

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Forms 3, 4, and 5 with respect to the undersigneds holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorneys-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 16th day of May 2024.

Peter N. Kellogg
Print Name

/s/ Peter N. Kellogg
Signature