Filed by the Registrant ☑
Filed by a Party other than the Registrant ☐

Check the appropriate box:
☐ Preliminary Proxy Statement
☐ Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
☐ Definitive Proxy Statement
☒ Definitive Additional Materials
☐ Soliciting Material Pursuant to §240.14a-12

ALNYLAM PHARMACEUTICALS, INC.

(Name of Registrant as Specified in Its Charter)

(Name of Person(s) Filing Proxy Statement, if Other Than the Registrant)

Payment of Filing Fee (Check the appropriate box):
☐ No fee required.
☐ Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

☐ Fee paid previously with preliminary materials: __________

☐ Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount previously paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:
You invested in ALNYLAM PHARMACEUTICALS, INC. and it's time to vote!
You have the right to vote on proposals being presented at the Annual Meeting. This is an important notice regarding the availability of proxy material for the stockholder meeting to be held on May 18, 2021.

Get informed before you vote
View the Proxy Statement, Annual Report on Form 10-K and Annual Report to Stockholders online OR you can receive a free paper or email copy of the material(s) by requesting prior to May 4, 2021. If you would like to request a copy of the material(s) for this and/or future stockholder meetings, you may (1) visit www.ProxyVote.com, (2) call 1-800-579-1639 or (3) send an email to sendmaterial@proxyvote.com. If sending an email, please include your control number (indicated below) in the subject line. Unless requested, you will not otherwise receive a paper or email copy.

For complete information and to vote, visit www.ProxyVote.com

Control # 

Smartphone users
Point your camera here and vote without entering a control number

Vote Virtually at the Meeting*
May 18, 2021
10:30 a.m., Eastern Time
Virtually at:
www.virtualshareholdermeeting.com/ALNY2021

* Please check the meeting materials for any special requirements for meeting attendance.
Vote at www.ProxyVote.com

THIS IS NOT A VOTABLE BALLOT

This is an overview of the proposals being presented at the upcoming stockholder meeting. Please follow the instructions on the reverse side to vote these important matters.

<table>
<thead>
<tr>
<th>Voting Items</th>
<th>Board Recommends</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To elect the following nominees as Class II directors of Alnylam:</td>
<td>For</td>
</tr>
<tr>
<td>1a. Dennis A. Ausiello, M.D.</td>
<td>For</td>
</tr>
<tr>
<td>1b. Olivier Brandicourt, M.D.</td>
<td>For</td>
</tr>
<tr>
<td>1c. Marsha H. Fanucci</td>
<td>For</td>
</tr>
<tr>
<td>1d. David E.I. Pyott</td>
<td>For</td>
</tr>
<tr>
<td>2. To approve, in a non-binding advisory vote, the compensation of Alnylam’s named executive officers.</td>
<td>For</td>
</tr>
<tr>
<td>3. To ratify the appointment of PricewaterhouseCoopers LLP, an independent registered public accounting firm, as Alnylam’s independent auditors for the fiscal year ending December 31, 2021.</td>
<td>For</td>
</tr>
</tbody>
</table>

In their discretion, the Proxies are authorized to vote upon any other business that may properly come before the annual meeting or at any adjournment(s) thereof.

Prefer to receive an email instead? While voting on www.ProxyVote.com, be sure to click “Sign up for E-delivery”.

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