



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

January 28, 2021

Mary Beth Delena
Deputy General Counsel
675 West Kendall Street
Henri A. Termeer Square
Cambridge, MA

Re: ALNYLAM PHARMACEUTICALS, INC.
Form 10-Q for the quarterly period ended September 30, 2020
Exhibit No. 10.1
Filed November 5, 2020
File No. 001-36407

Dear Ms. Delena:

You have redacted information from the exhibit identified above asserting that the redacted information is not material and would cause competitive harm if publicly disclosed. For us to assess your compliance with the form requirements, please supplementally provide us, within five business days, with an unredacted paper copy (marked to show where you have redacted information in your public filing) of the exhibit identified above.

Please contact the staff member associated with the review of this filing to discuss how to submit the unredacted copy of your exhibit. Given your conclusion that public disclosure of this information would cause you competitive harm, do not respond by submitting correspondence on EDGAR or sending a response by email. Unless you tell us otherwise, we will assume that you want us to treat the requested supplemental materials, including unredacted documents and any related correspondence, as confidential while in our possession. We will destroy the supplemental materials at the end of our assessment unless doing so would be inconsistent with Rules 418 or 12b-4.

We will notify you of any comments we may have or that we have concluded our assessment of your compliance with the form.

Sincerely,

Division of Corporation Finance