



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

DIVISION OF  
CORPORATION FINANCE

February 18, 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:

We have concluded our assessment of your redacted exhibit for compliance with applicable form requirements and will process your supplemental response and related materials in accordance with your request.

Sincerely,

Division of Corporation Finance