

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
March 22, 2010**

**ORDER GRANTING CONFIDENTIAL TREATMENT
UNDER THE SECURITIES EXCHANGE ACT OF 1934**

Alnylam Pharmaceuticals, Inc.

File No. 000-50743 - CF#24801

Alnylam Pharmaceuticals, Inc. submitted an application under Rule 24b-2 requesting confidential treatment for information it excluded from the Exhibits to a Form 10-K filed on February 26, 2010.

Based on representations by Alnylam Pharmaceuticals, Inc. that this information qualifies as confidential commercial or financial information under the Freedom of Information Act, 5 U.S.C. 552(b)(4), the Division of Corporation Finance has determined not to publicly disclose it. Accordingly, excluded information from the following exhibits will not be released to the public for the time periods specified:

Exhibit 10.39	through October 29, 2019
Exhibit 10.40	through January 9, 2019

For the Commission, by the Division of Corporation Finance, pursuant to delegated authority:

Pamela Howell
Special Counsel