

Item 1.01 Entry into a Material Definitive Agreement

On April 29, 2016, Alnylam Pharmaceuticals, Inc. (the “Company”) entered into (i) a Credit Agreement (the “BOA Credit Agreement”) by and among Alnylam U.S., Inc. (the “Borrower”), as the borrower, the Company, as a guarantor, and Bank of America N.A., as the lender and (ii) a Credit Agreement (the “Wells Credit Agreement” and, together with the BOA Credit Agreement, the “Credit Agreements”) by and among the Borrower, as the borrower, the Company, as a guarantor, and Wells Fargo Bank, National Association, as the lender. The Credit Agreements were entered into in connection with the planned build out of the Company’s new drug substance manufacturing facility.

The BOA Credit Agreement provides for a \$120 million term loan facility, and matures on April 29, 2021. The Wells Credit Agreement provides for a \$30 million term loan facility, and matures on April 29, 2021. The proceeds of the borrowing under each of the BOA Credit Agreement and the Wells Credit Agreement are to be used for working capital and general corporate purposes. At the Borrower’s election, loans under the BOA Credit Agreement and the Wells Credit Agreement may be made as either Base Rate Loans or Eurodollar Loans. Interest on borrowings under the Credit Agreements will be calculated based on LIBOR plus 0.45 percent. The Borrower may prepay loans under each of the BOA Credit Agreement and the Wells Credit Agreement at any time, without premium or penalty, subject to certain notice requirements and LIBOR breakage costs.

The obligations of the Borrower under each Credit Agreement are guaranteed by the Company. The obligations of the Borrower and the Company under each Credit Agreement are secured by cash collateral in an amount equal to, at any given time, at least 100% of the principal amount of all term loans outstanding under such Credit Agreement at such time. Each of the lenders and the Borrower have agreed to consider the appropriateness of a change in the type of approved collateral on a periodic basis throughout the term of the Credit Agreements; provided that any such change to the type of such approved collateral shall be made only upon each of the lender’s and the Borrower’s consent.

Each Credit Agreement contains limited representations and warranties and limited affirmative and negative covenants. Each Credit Agreement also contains certain customary events of default, including nonpayment of principal or interest, material inaccuracy of representations and failure to comply with covenants. If an event of default occurs and is continuing under either Credit Agreement, the entire outstanding balance under such Credit Agreement may become immediately due and payable.

Several of the lenders under each of the Credit Agreements, as well as their affiliates, have various relationships with the Company and its subsidiaries involving the provision of financial services, such as investment banking, commercial banking, advisory, cash management, custody and corporate credit card services for which they receive customary fees and may do so in the future.

The above summary of certain terms and conditions of the Credit Agreements does not purport to be a complete discussion of those agreements or related documents and is qualified in its entirety by reference to the Credit Agreements, copies of which will be filed as exhibits to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016.

Item 2.02. Results of Operations and Financial Condition

On May 2, 2016, Alnylam Pharmaceuticals, Inc. announced its financial results for the quarter ended March 31, 2016. The full text of the press release issued in connection with the announcement is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information in Item 2.02 of this Form 8-K (including Exhibit 99.1) shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 2.03 Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant

The disclosure contained in Item 1.01 of this Current Report on Form 8-K is incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits

(d) Exhibits

The following exhibit relating to Item 2.02 shall be deemed to be furnished, and not filed:

99.1 Press Release dated May 2, 2016.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: **ALNYLAM PHARMACEUTICALS,**
May **INC.**
2,
2016

By: /s/ Michael P. Mason
Michael P. Mason
Vice President, Finance and Treasurer

EXHIBIT INDEX

Exhibit No. Description

99.1 Press Release dated May 2, 2016