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

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of March 2018

Commission File Number: 001-32001

Aptose Biosciences Inc. (Translation of registrant's name into English)

5955 Airport Road, Suite 228 Mississauga, ON L4V 1R9 (Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F. Form 20-F [] Form 40-F [X]

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

On March 28, 2018, the Registrant issued a press release, a copy of which is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

(c) Exhibit 99.1. Press release dated March 28, 2018

SIGNATURES

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, thereunto duly authorized.

Aptose Biosciences Inc. (Registrant)

Date: March 28, 2018

/s/ Gregory K. Chow Gregory K. Chow Senior Vice President and Chief Financial Officer

Aptose Biosciences Establishes New At-the-Market Facility

SAN DIEGO and TORONTO, March 28, 2018 (GLOBE NEWSWIRE) -- Aptose Biosciences Inc. ("Aptose" or the "Company") (NASDAQ:APTO) (TSX:APS), a clinical-stage company developing highly differentiated therapeutics that target the underlying mechanisms of cancer, today announced that it has entered into an "at-the-market" ("ATM") sales agreement (the "Sales Agreement") with Cantor Fitzgerald & Co. ("Cantor"). Under the terms of the Sales Agreement, the Company may, from time to time, issue and sell through Cantor, acting as sole agent, common shares of the Company (the "Common Shares") through ATM distributions (the "Offering") on the NASDAQ Capital Market ("NASDAQ"). Aptose will determine, at its sole discretion, the time, price and number of Common Shares to be sold under the Offering. This ATM replaces the previous ATM that expired in December 2017.

In conjunction with the Offering, Aptose intends to file a prospectus supplement (the "Prospectus Supplement") to the Company's short form base shelf prospectus dated March 7, 2018 with the Ontario Securities Commission and with the U.S. Securities and Exchange Commission (the "SEC"), qualifying the offer and sale of Common Shares having an aggregate offering price of up to US\$30 million.

Under the ATM, no Common Shares will be sold on the Toronto Stock Exchange ("TSX") or on other trading markets in Canada. The TSX and NASDAQ have conditionally approved the Offering. For the purposes of TSX approval, the Company relied on the exemption set forth in Section 602.1 of the TSX Company Manual, which provides that the TSX will not apply its standards to certain transactions involving eligible interlisted issuers on a recognized exchange, such as NASDAQ.

A copy of the Prospectus Supplement will be available on SEDAR at <u>www.sedar.com</u> and on EDGAR at <u>www.sec.gov</u> or may be obtained upon request to Aptose's Investor Relations Department using the contact information set out below. Before you invest, you should read the Prospectus Supplement and the accompanying base shelf prospectus and other documents the issuer has filed with the SEC for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC Web site at www.sec.gov or from Cantor Fitzgerald & Co. Attention: Capital Markets, 499 Park Ave., 6th Floor, New York, New York 10022, or by email at prospectus@cantor.com.This press release does not constitute an offer to sell or the solicitation of offers to buy any securities of Aptose, and shall not constitute an offer, solicitation or sale of any security in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

About Aptose

Aptose Biosciences is a clinical-stage biotechnology company committed to developing personalized therapies addressing unmet medical needs in oncology. Aptose is advancing new therapeutics focused on novel cellular targets on the leading edge of cancer. The Company's small molecule cancer therapeutics pipeline includes products designed to provide single agent efficacy and to enhance the efficacy of other anticancer therapies and regimens without overlapping toxicities. The Common Shares are listed on NASDAQ under the symbol APTO and on the TSX under the symbol APS. For further information, please visit <u>www.aptose.com</u>.

Forward Looking Statements

This press release contains forward-looking statements within the meaning of Canadian and U.S. securities laws. Such statements include, but are not limited to, statements relating to the Company's plans, objectives, expectations and intentions and other statements including words such as "continue", "expect", "intend", "will", "should", "may", and other similar expressions. Such statements reflect our current views with respect to future events and are subject to risks and uncertainties and are necessarily based upon a number of estimates and assumptions that, while considered reasonable by us, are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause our actual results, performance or achievements to be materially different from any future results, performance or achievements described in this press release. Such factors could include, among others: our successful utilization of the Offering; our ability to obtain the capital required for research and operations; the inherent risks in early stage drug development including demonstrating efficacy; development time/cost and the regulatory approval process; the progress of our clinical trials; our ability to find and enter into agreements with potential partners; our ability to attract and retain key personnel; changing market conditions; uncertainty in the length of the clinical hold and the conditions the FDA may impose to lift it; potential loss of API; inability of new manufacturers to produce acceptable batches of cGMP clinical supplies in sufficient quantities; unexpected manufacturing defects; the risks detailed in the Prospectus Supplement and other risks detailed from time-to-time in our ongoing quarterly filings, annual information forms, annual reports and annual filings with Canadian securities regulators and the SEC.

Should one or more of these risks or uncertainties materialize, or should the assumptions set out in the section entitled "Risk Factors" in our filings with Canadian securities regulators and the SEC underlying those forward-looking statements prove incorrect, actual results may vary materially from those described herein. These forward-looking statements are made as of the date of this press release and we do not intend, and do not assume any obligation, to update these forward-looking statements, except as required by law. We cannot assure you that such statements will prove to be accurate as actual results and future events could differ materially from those anticipated in such statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and accordingly investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

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