UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

> May 1, 2019 (Date of Report – date of earliest event reported)

Aptose Biosciences Inc.

(Exact Name of Registrant as Specified in Its Charter)

Canada (State or Other Jurisdiction of Incorporation or Organization) 001-32001 (Commission File Number)

251 Consumers Road, Suite 1105 Toronto, Ontario M2J 4R3 Canada (Address of Principal Executive Offices) 98-1136802 (I.R.S. Employer Identification No.)

> M2J 4R3 (Zip Code)

(647) 479-9828

(Registrant's Telephone Number, Including Area Code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

□ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

□ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

D Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company \boxtimes

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. \Box

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Shares, no par value	АРТО	The Nasdaq Stock Market

Explanatory Note

On May 30, 2018, Aptose Biosciences, Inc. entered into a common shares purchase agreement (the "Purchase Agreement") with Aspire Capital Fund, LLC ("Aspire"), pursuant to which Aspire committed to purchase up to an aggregate of \$20,000,000 of our common shares up and until April 7, 2020. As of May 1, 2019, \$12,073,999 remained available for sale under the Purchase Agreement. On May 1, 2019, the registration statement from which sales may be made pursuant to the Purchase Agreement was changed to File No. 333-230218, as the previous registration statement on File No. 333-222909 is no longer effective because we became a "domestic issuer" effective January 1, 2019 under the rules of the Securities and Exchange Commission.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit 5.1. Opinion of McCarthy Tétrault LLP

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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 hereunto duly authorized.

Date: May 3, 2019

APTOSE BIOSCIENCES INC.

 By:
 /s/ Gregory K. Chow

 Name:
 Gregory K. Chow

 Title:
 Senior Vice President & Chief Financial Officer

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McCarthy Tétrault LLP Suite 5300, TD Bank Tower Box 48, 66 Wellington Street West Toronto (Ontario) M5K 1E6 Canada Tel:416-362-1812 Fax:416-868-0673

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May 3, 2019

Aptose Biosciences Inc.

251 Consumers Road, Suite 1105 Toronto, Ontario M2J 4R3

Dear Sir/Mesdames:

We have acted as Canadian counsel to Aptose Biosciences Inc. (the "**Company**") in connection with the offering and sale of common shares of the Company (the "**Common Shares**"), with an aggregate offering price of up to US\$12,073,999 (the "**Placement Shares**") that will be sold to Aspire Capital Fund LLC ("**Aspire**") from time to time pursuant to a common shares purchase agreement between the Company and Aspire dated as of May 30, 2018 (the "**Common Share Purchase Agreement**"), and as described in the Company's Registration Statement on FormS-3 (File No. 333-230218) (as amended and supplemented through and including the date hereof, the "**Registration Statement**") filed by the Company with the Securities and Exchange Commission (the "**Commission**") under the *United States Securities Act of 1933*, as amended (the "**Securities Act**").

Scope of Review, Assumptions and Qualifications

As counsel, we have made such investigations and examined the originals, or duplicate, certified, conformed, facsimiled or photostatic copies of such corporate records, agreements, documents and other instruments and have made such other investigations as we have considered necessary or relevant for the purposes of this opinion, including:

- (a) the Registration Statement, including the base prospectus contained therein;
- (b) the prospectus supplement prepared by the Company relating to the issuance of the Placement Shares;
- (c) the Common Share Purchase Agreement;
- (d) the registration rights agreement dated as of May 30, 2018 between the Company and Aspire (the 'Registration Rights Agreement');
- (e) the articles and by-laws of Aptose;
- (f) a certificate of compliance dated May 3, 2019 issued in respect of Aptose pursuant to the *Canada Business Corporations Act* (the "Certificate of Compliance"); and

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(g) a certificate of Gregory K. Chow, the Senior Vice President, Chief Financial Officer and Secretary of the Company, as to certain factual matters dated the date hereof.

The Common Share Purchase Agreement and the Registration Rights Agreement are collectively referred to herein as the "Transaction Documents".

We have also examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Company and such agreements, certificates of public officials, certificates of officers, or other representatives of the Company, and such other documents as we have deemed necessary or appropriate as a basis for the opinion set forth herein.

In our examination, we have assumed the legal capacity of all natural persons, the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, conformed, photostatic, electronic, or facsimile copies and the authenticity of the originals of such documents. In making our examination of executed documents or documents which may be executed, we have assumed that the parties thereto, other than the Company, had or will have the power, corporate or other, to enter into and perform all obligations thereunder and have also assumed the due authorization by all requisite action, corporate or other, and execution and delivery by such parties, of such documents and that such documents constitute or will constitute valid and binding obligations of the parties thereto. We have also assumed that the Certificate of Compliance will continue to be accurate as at the date of issuance of any Placement Shares.

In connection with our opinions expressed below, we have assumed that, at or prior to the time of the delivery of any such Placement Shares, the authorization to issue the Placement Shares pursuant to the Common Share Purchase Agreement will not have been modified or rescinded by the Board of Directors of Aptose and there will not have occurred any change in law affecting the validity or enforceability of such issuance of Placement Shares. We have also assumed that neither the issuance and delivery of the Placement Shares, nor the compliance by Aptose with the terms of the Common Share Purchase Agreement, will violate any applicable federal, provincial or state law or will result in a violation of any provision of any instrument or agreement then binding upon Aptose or any restriction imposed by any court or governmental body having jurisdiction over Aptose.

The opinions expressed herein are limited to the federal laws of Canada applicable therein (the 'Applicable Law').

<u>Opinion</u>

Based upon and subject to the foregoing, we are of the opinion that the Placement Shares, when issued, sold and delivered in the manner and for the consideration stated in the Common Share Purchase Agreement, and upon payment of the consideration provided therein to the Company, will be validly issued as fully paid and non-assessable common shares of the Company.

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We hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement. In giving this consent, we do not thereby admit that we are in the category of persons whose consent is required under the Securities Act or the rules and regulations promulgated thereunder. This opinion is expressed as of the date hereof unless otherwise expressly stated, and we disclaim any undertaking to advise you of any subsequent changes of the facts stated or assumed herein or any subsequent changes in Applicable Law.

Yours truly,

(s) McCarthy Tétrault LLP