

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

FORM S-8
REGISTRATION STATEMENT UNDER THE
SECURITIES ACT OF 1933

APTOSE BIOSCIENCES INC.
(Exact name of registrant as specified in its charter)

Canada
(State or Other Jurisdiction of
Incorporation or Organization)

98-1136802
(I.R.S. Employer
Identification No.)

251 Consumers Road, Suite 1105, Toronto,
Ontario, Canada M2J 4R3 (Address of
Principal Executive Offices)

Aptose Biosciences Inc. Share Option Plan ("Option Plan")
Aptose Biosciences Inc. 2015 Stock Incentive Plan ("RSU Plan")
(Full title of the plan)

Aptose Biosciences U.S. Inc.
12270 High Bluff Drive, Suite 120
San Diego, California 92130
(Name, address and telephone number, including area code, of agent for service)

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Securities To Be Registered	Amount To Be Registered (1)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Shares				
To be issued pursuant to stock options outstanding under the Option Plan and restricted stock units under the RSU Plan	2,705,000	\$2.17	\$5,869,850	\$712

(1) Consists of common shares of the registrant (without par value) issuable upon the exercise of options granted pursuant to the Option Plan and the vesting of restricted stock units under the RSU Plan. Also includes such indeterminate number of common shares of the registrant as may be issued to prevent dilution resulting from stock dividends, stock splits or similar transactions in accordance with Rule 416 under the Securities Act of 1933.

(2) The proposed maximum offering price per share and the registration fee were calculated in accordance with Rule 457(c) and (h) based on the average high and low prices for the registrant's common shares on December 11, 2018, as quoted on the NASDAQ Capital Market.

**INFORMATION REQUIRED PURSUANT
TO GENERAL INSTRUCTION E TO FORM S-8**

This registration statement is being filed by Aptose Biosciences Inc. in order to register 2,705,000 of its common shares issuable under Aptose's Share Option Plan and 2015 Stock Incentive Plan. The common shares being registered are in addition to the 2,080,050 common shares previously registered on Aptose's Registration Statement on Form S-8, filed on June 23, 2015 (File No. 333-205158) (the "Prior Registration Statement").

This registration statement relates to securities of the same class as to which the Prior Registration Statement relates, and is submitted in accordance with General Instruction E to Form S-8 regarding the registration of additional securities. Accordingly, the contents of the Prior Registration Statement are incorporated herein by reference and made part of this registration statement, except as amended hereby.

PART I

INFORMATION REQUIRED IN THE SECTION 10(A) PROSPECTUS

The documents containing the information specified in Part I of Form S-8 are not required to be filed with the Securities and Exchange Commission either as part of this registration statement or as prospectuses or prospectus supplements, pursuant to the Note to Part I of Form S-8 and Rule 424 under the Securities Act of 1933. The information required in the Section 10(a) prospectus is included in documents being maintained and delivered by Aptose Biosciences Inc. as required by Part I of Form S-8 and by Rule 428 under the Securities Act of 1933.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation Of Documents By Reference.

The following documents that have been filed by us with the SEC are incorporated in this registration statement by reference:

- (a) Our Annual Report on Form 40-F for the fiscal year ended December 31, 2017, filed with the SEC on March 27, 2018.
- (b) Exhibits 99.1 and 99.2 to our Report of Foreign Issuer on Form 6-K containing interim financial statements and management's discussion and analysis, furnished to the SEC on May 10, 2018.
- (c) Exhibits 99.1 and 99.2 to our Report of Foreign Issuer on Form 6-K containing interim financial statements and management's discussion and analysis, furnished to the SEC on August 7, 2018.
- (d) Exhibits 99.1 and 99.2 to our Report of Foreign Issuer on Form 6-K containing interim financial statements and management's discussion and analysis, furnished to the SEC on November 6, 2018.

- (e) Our Report of Foreign Issuer on Form 6-K furnished to the SEC on July 2, 2018.
- (f) Exhibit 99.1 to our Report of Foreign Issuer on Form 6-K furnished to the SEC on June 22, 2018.
- (g) Our Report of Foreign Issuer on Form 6-K containing a material change report, furnished to the SEC on June 11, 2018.
- (h) Our Report of Foreign Issuer on Form 6-K furnished to the SEC on May 9, 2018.
- (i) Exhibit 99.1 to our Report of Foreign Issuer on Form 6-K containing a material change report furnished to the SEC on March 8, 2018.
- (j) Our Report of Foreign Issuer on Form 6-K furnished to the SEC on February 1, 2018.
- (k) All other reports filed by our company under Section 13(a) or 15(d) of the Securities Exchange Act of 1934 since December 31, 2017.
- (l) The description of our common shares set forth under the heading “Additional Information – Common Shares” contained in our Annual Report on Form 20-F for the fiscal year end May 31, 2014, filed with the SEC on July 30, 2014, and incorporated by reference into our Registration Statement on Form 8-A, as filed with the SEC on October 21, 2014, including any amendment or report to such Registration Statement on Form 8-A filed for the purpose of amending such description.

In addition, all reports and documents filed by us under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 after the date of this registration statement and prior to the filing of a post-effective amendment which indicates that all securities being offered have been sold or which deregisters all securities then remaining unsold, and any Form 6-K or Form 8-K furnished by us during such period or portions thereof that are identified in such Form 6-K or Form 8-K as being incorporated by reference into this registration statement, shall be deemed to be incorporated by reference in and to be part of this registration statement from the date of filing of each such document.

Item 8. Exhibits.

Exhibit	Description of Exhibit
<u>4.1</u>	<u>Aptose Biosciences Inc. Share Option Plan. (incorporated by reference to Exhibit 99.2 to the Report of Foreign Issuer on Form 6-K of Aptose Biosciences Inc., furnished to the Securities and Exchange Commission on June 12, 2015)</u>
<u>4.2</u>	<u>Aptose Biosciences Inc. 2015 Stock Incentive Plan (incorporated by reference to Exhibit 99.1 to the Report of Foreign Issuer on Form 6-K of Aptose Biosciences Inc., furnished to the Securities and Exchange Commission on June 12, 2015)</u>

Exhibit	Description of Exhibit
5.1	Opinion of McCarthy Tétrault LLP.
23.1	Consent of KPMG LLP.
23.2	Consent of McCarthy Tétrault LLP (included in Exhibit 5.1).
24.1	Powers of Attorney (included on the signature pages to this registration statement).

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, Aptose Biosciences Inc. certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of San Francisco, on this 13th day of December, 2018.

APTOSE BIOSCIENCES INC.

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

POWERS OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints William G. Rice and Gregory K. Chow, and each of them, his true and lawful attorneys-in-fact and agents, each acting alone, with the powers of substitution and revocation, for him and in his name, place and stead, in any and all capacities, to sign this Registration Statement on Form S-8, and any and all amendments (including post-effective amendments) thereto, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto such attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming that all such attorneys-in-fact and agents or any of them, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated below on December 13, 2018.

<u>Signature</u>	<u>Title</u>
<u>/s/ William G. Rice</u> William G. Rice	President, Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)
<u>/s/ Gregory K. Chow</u> Gregory K. Chow	Senior Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
<u>/s/ Dennis Burger</u> Dr. Dennis Burger	Director
<u>/s/ Carol Ashe</u> Carol Ashe	Director
<u>/s/ Caroline Loewy</u> Caroline Loewy	Director

Signature

Title

/s/ Erich M. Platzer

Dr. Erich M. Platzer

Director

/s/ Mark Vincent

Dr. Mark Vincent

Director

/s/ Warren Whitehead

Warren Whitehead

Director

AUTHORIZED REPRESENTATIVE

Pursuant to the requirements of Section 6(a) of the Securities Act of 1933, the undersigned has signed this registration statement, solely in the capacity of the duly authorized representative of Aptose Biosciences Inc. in the United States, on December 13, 2018.

APTOSE BIOSCIENCES INC.

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

EXHIBIT INDEX

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McCarthy Tétrault LLP
500 Grande-Allée Est, 9^e étage
Québec, QC G1R 2J7
Tel: 418-521-3000
Fax: 418-521-3099



December 13, 2018

Aptose Biosciences Inc.

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

Dear Sir/Mesdames:

This opinion is furnished to Aptose Biosciences Inc. (“**Aptose**” or the “**Company**”), a corporation incorporated under the laws of Canada, in connection with the preparation and filing with the United States Securities and Exchange Commission (the “**Commission**”) under the United States Securities Act of 1933, as amended (the “**Securities Act**”), of the Company’s Registration Statement on Form S-8 to be filed on the date hereof (the “**Registration Statement**”) relating to 2,705,000 common shares of the Company (the “**Shares**”) issuable upon the due exercise of options granted pursuant to the share option plan of the Company, as amended (the “**Option Plan**”) and the vesting of restricted stock units granted pursuant to the 2015 stock incentive plan of the Company (the “**RSU Plan**” and, together with the Option Plan, the “**Plans**”).

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. 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.

In connection with our opinions expressed below, we have assumed that, at or prior to the time of the issuance of any such Shares, the authorization to issue the Shares pursuant to the Plans

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 Shares. We have also assumed that neither the issuance of the Shares, nor the compliance by Aptose with the terms of the Plans, 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 (the "**Applicable Law**").

Based upon and subject to the foregoing, we are of the opinion that the Shares, when issued (i) upon the exercise of options in accordance with the terms of the Option Plan and any relevant agreements thereunder and upon payment of the consideration provided therein to the Company; and (ii) upon the lapse or waiver of restrictions and the restriction period relating to the restricted stock units in accordance with the terms of the RSU Plan and any relevant agreements thereunder; will be validly issued as fully paid and non-assessable common shares of the Company.

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



KPMG LLP
100 New Park Place, Suite 1400
Vaughan, ON L4K 0J3
Tel 905-265 5900
Fax 905-265 6390
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Consent of Independent Registered Public Accounting Firm

The Board of Directors
Aptose Biosciences Inc.

We consent to the use of our report dated March 27, 2018, on the consolidated financial statements of Aptose Biosciences Inc., which comprise the consolidated statements of financial position as of December 31, 2017 and December 31, 2016, the related consolidated statements of loss and comprehensive loss, changes in shareholders' equity and cash flows for each of the years in the two-year period ended December 31, 2017, and the related notes (collectively the "consolidated financial statements") which are incorporated by reference in this Registration Statement on Form S-8 related to the Aptose Biosciences Inc. Share Option Plan and the Aptose Biosciences Inc. 2015 Stock Incentive Plan.

Our report refers to a change in accounting policy as outlined in note 2b of consolidated financial statements, relating to the change in functional currency and presentation currency from Canadian dollar to US dollar.

A handwritten signature in blue ink that reads 'KPMG LLP' with a horizontal line underneath.

Chartered Professional Accountants, Licensed Public Accountants
December 13, 2018
Toronto, Canada

