

PROSPECTUS SUPPLEMENT
To Prospectus dated April 25, 2019



\$12,073,999
APTOSE BIOSCIENCES INC.
Common Shares

We previously entered into a common shares purchase agreement (the **"Purchase Agreement"**) with Aspire Capital Fund, LLC (**"Aspire Capital"**), pursuant to which Aspire Capital committed to purchase up to an aggregate of \$20,000,000 of our common shares up and until April 7, 2020. As of April 30, 2019, we have \$12,073,999 remaining for sale pursuant to the Purchase Agreement, which is the amount that we are offering pursuant to this prospectus supplement and the accompanying prospectus, as our previous registration statement on Form F-10 (No. 333-222909) from which sales of common shares may be made pursuant to the Purchase Agreement is no longer effective because we became a "domestic issuer" effective on January 1, 2019 under the rules of the Securities and Exchange Commission.

Our common shares are listed on the Nasdaq Capital Market under the symbol "APTO" and on the Toronto Stock Exchange under the symbol "APS". On May 1, 2019, the closing price of our common shares on the Nasdaq Capital Market was \$1.95 per share and on the Toronto Stock Exchange was C\$2.66 per share.

Our business and an investment in our common shares involve significant risks. See "Risk Factors" beginning on pageS-5 of this prospectus supplement and page 2 of the accompanying prospectus to read about factors that you should consider before making an investment decision.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is May 1, 2019

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of the offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus dated April 25, 2019, including the documents incorporated by reference, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or in any document incorporated by reference that was filed with the Securities and Exchange Commission, or SEC, before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date – for example, a document incorporated by reference in the accompanying prospectus – the statement in the document having the later date modifies or supersedes the earlier statement. You should read this prospectus supplement and the accompanying prospectus, including the information incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus, along with the information contained in any free writing prospectus that we have authorized for use in connection with this offering. If the description of the offering varies between this prospectus supplement and the accompanying prospectus, you should rely on the information in this prospectus supplement. We have not authorized anyone to provide you with different or additional information. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering is accurate only as of the respective dates of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in this prospectus supplement or the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties and covenants were accurate only as of the date when made; therefore, such representations, warranties and covenants should not be relied on as accurate representations of the current state of our affairs.

Unless we have otherwise indicated or unless the context otherwise requires, all references in this prospectus supplement and the accompanying prospectus to “the Company,” “Aptose,” “we,” “us,” “our,” or similar references mean Aptose Biosciences Inc.

This prospectus supplement, the accompanying prospectus and the information incorporated by reference includes trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into this prospectus supplement or the accompanying prospectus are the property of their respective owners.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, including the documents incorporated by reference herein, contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and “forward-looking information” within the meaning of applicable Canadian securities law. We refer to such forward-looking statements and forward-looking information collectively as “forward-looking statements”. These statements relate to future events or future performance and reflect our expectations and assumptions regarding our growth, results of operations, performance and business prospects and opportunities. Such forward-looking statements reflect our current beliefs and are based on information currently available to us. In some cases, forward-looking statements can be identified by terminology such as “may”, “would”, “could”, “will”, “should”, “expect”, “plan”, “intend”, “anticipate”, “believe”, “estimate”, “predict”, “potential”, “continue” or the negative of these terms or other similar expressions concerning matters that are not historical facts. The forward-looking statements in this prospectus supplement and, including any documents incorporated by reference herein, include, among others, statements regarding our future operating results, economic performance and product development efforts and statements in respect of:

- our ability to obtain the substantial capital we require to fund research and operations;
- our business strategy;
- our clinical development plans;
- our plans to conduct clinical trials and preclinical programs;
- our ability to accrue appropriate numbers and types of patients;
- our reliance on external contract research/manufacturing organizations for certain activities;
- our plans to secure and maintain strategic partnerships to assist in the further development of our product candidates and to build our pipeline;
- our ability to file and maintain intellectual property to protect our pharmaceutical assets;
- potential exposure to legal actions and potential need to take action against other entities;
- our expectations regarding the progress and the successful and timely completion of the various stages of our drug discovery, drug synthesis and formulation, preclinical and clinical studies and the regulatory approval process;
- our plans, objectives, expectations and intentions; and
- other statements including words such as “anticipate”, “contemplate”, “continue”, “believe”, “plan”, “estimate”, “expect”, “intend”, “will”, “should”, “may”, and other similar expressions.

The forward-looking statements contained in this prospectus supplement and in the documents incorporated by reference reflect our current views with respect to future events, are subject to significant risks and uncertainties, and are 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 that may be expressed or implied by such forward-looking statements, including, among others:

- our lack of product revenues and net losses and a history of operating losses;

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- our early stage of development, particularly the inherent risks and uncertainties associated with (i) developing new drug candidates generally, (ii) demonstrating the safety and efficacy of these drug candidates in clinical studies in humans, and (iii) obtaining regulatory approval to commercialize these drug candidates;
- our need to raise substantial additional capital in the future and that we may be unable to raise such funds when needed and on acceptable terms;
- further equity financing, which may substantially dilute the interests of our existing shareholders;
- clinical studies and regulatory approvals of our drug candidates are subject to delays, and may not be completed or granted on expected timetables, if at all, and such delays may increase our costs and could substantially harm our business;
- our reliance on external contract research/manufacturing organizations for certain activities and if we are subject to quality, cost, or delivery issues with the preclinical and clinical grade materials supplied by contract manufacturers, our business operations could suffer significant harm;
- clinical studies are long, expensive and uncertain processes and the United States Food and Drug Administration, or “FDA”, or other similar foreign regulatory agency that we are required to report to, may ultimately not approve any of our product candidates;
- our ability to comply with applicable governmental regulations and standards;
- our inability to achieve our projected development goals in the time frames we announce and expect;
- difficulties in enrolling patients for clinical trials may lead to delays or cancellations of our clinical trials;
- our reliance on third-parties to conduct and monitor our preclinical studies;
- our ability to attract and retain key personnel, including key executives and scientists;
- any misconduct or improper activities by our employees;
- our exposure to exchange rate risk;
- our ability to commercialize our business attributed to negative results from clinical trials;
- the marketplace may not accept our products or product candidates due to the intense competition and technological change in the biotechnical and pharmaceuticals, and we may not be able to compete successfully against other companies in our industries and achieve profitability;
- our ability to obtain and maintain patent protection;
- our ability to afford substantial costs incurred with defending our intellectual property;
- our ability to protect our intellectual property rights and not infringe on the intellectual property rights of others;
- our business is subject to potential product liability and other claims;

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- potential exposure to legal actions and potential need to take action against other entities;
- commercialization limitations imposed by intellectual property rights owned or controlled by third parties;
- our ability to maintain adequate insurance at acceptable costs;
- our ability to find and enter into agreements with potential partners;
- extensive government regulation;
- data security incidents and privacy breaches could result in increased costs and reputational harm;
- our share price has been and is likely to continue to be volatile;
- future sales of our common shares by us or by our existing shareholders could cause our share price to drop;
- changing global market and financial conditions;
- changes in an active trading market in our common shares;
- difficulties by non-Canadian investors to obtain and enforce judgments against us because of our Canadian incorporation and presence;
- potential adverse U.S. federal tax consequences for U.S. shareholders because we are a “passive foreign investment company”;
- our “emerging growth company” and “smaller reporting company” status;
- any failures to maintain an effective system of internal controls may result in material misstatements of our financial statements, or cause us to fail to meet our reporting obligations or fail to prevent fraud;
- our broad discretion in how we use the proceeds of the sale of the common shares to Aspire Capital pursuant to the purchase agreement between us and Aspire;
- any failure of Aspire to purchase common shares from us when required to do so;
- our ability to expand our business through the acquisition of companies or businesses; and
- other risks detailed from time-to-time in our on-going filings with the SEC and Canadian securities regulators, and those which are discussed under the heading “Risk Factors” in this prospectus supplement and in the documents incorporated by reference.

Should one or more of these risks or uncertainties materialize, or should the assumptions described in the sections entitled “Risk Factors” in this prospectus supplement and in the documents incorporated by reference underlying those forward-looking statements prove incorrect, actual results may vary materially from those described in the forward-looking statements.

More detailed information about these and other factors is included in this prospectus supplement under the section entitled “Risk Factors” and in the documents incorporated by reference into this prospectus supplement. Although we have attempted to identify factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results

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not to be as anticipated, estimated or intended. Forward-looking statements are based upon our beliefs, estimates and opinions at the time they are made and we undertake no obligation to update forward-looking statements if these beliefs, estimates and opinions or circumstances should change, except as required by applicable law. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

Forward-looking statements contained in this prospectus supplement are made as of the date of this prospectus supplement. Forward-looking statements made in a document incorporated by reference into this prospectus are made as of the date of the original document and have not been updated by us except as expressly provided for in this prospectus supplement.

Except as required under applicable securities legislation, we undertake no obligation to publicly update or revise forward-looking statements, whether as a result of new information, future events or otherwise. **We qualify all the forward-looking statements contained in this prospectus supplement and the documents incorporated by reference in this prospectus supplement by the foregoing cautionary statements.**

THE OFFERING

Common shares offered by us	Up to \$12,073,999 of shares of common shares, without par value
Common shares to be outstanding after this offering	Up to 47,713,825 shares, assuming sales of 6,191,794 common shares at a price of \$1.95 per share, which was the closing price on the Nasdaq Capital Market on May 1, 2019. Actual shares issued will vary depending on the sales prices under this offering.
Manner of Offering	The sale of common shares to Aspire Capital from time to time, subject to certain minimum stock price requirements and daily caps for an aggregate offering price of up to \$12,073,999. See “The Aspire Transaction” and “Plan of Distribution.”
Use of proceeds	We intend to use the net proceeds from this Offering as described under the heading “ <i>Use of Proceeds</i> ” in this prospectus supplement. We may use all or a portion of the net proceeds to (i) initiate, accelerate and expand clinical trials for CG-806; (ii) initiate, accelerate and expand our clinical trials for APTO-253; (iii) acquire and fund (including through partnerships and in-licensing) additional clinical assets; and (iv) for working capital and general corporate purposes relating to (i), (ii) or (iii) above.
Nasdaq Capital Market symbol	“APTO”
Toronto Stock Exchange symbol	“APS”
Risk factors	This investment involves a high degree of risk. See “Risk Factors” beginning on page S-5 of this prospectus supplement.

Except as otherwise indicated, the information contained in this prospectus supplement assumes the sale of 6,191,794 common shares at a price of \$1.95 per share, which was the closing price on the Nasdaq Capital Market on May 1, 2019.

The number of shares of common shares shown above to be outstanding after this offering is based on the 41,522,031 shares outstanding as of May 1, 2019 and excludes the following:

- 5,778,488 shares of our common shares subject to options outstanding having a weighted average exercise price of \$2.85 per common share; and
- 1,487,867 shares of our common shares that have been reserved for issuance in connection with future grants under our stock option plans.

RISK FACTORS

An investment in our common shares is highly speculative and subject to a number of known and unknown risks. Before making an investment decision, you should carefully consider the risks described in the sections entitled “Risk Factors” in our most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q as filed with the SEC, which are incorporated herein by reference in their entirety, as well any amendment or updates to our risk factors reflected in subsequent filings with the SEC and the risks described below. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our securities could decline due to any of these risks, and you may lose all or part of your investment. This prospectus and the incorporated documents also contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks mentioned elsewhere in this prospectus.

Sales of our common shares to Aspire Capital may cause substantial dilution to our existing stockholders and the sale of the shares of our common shares acquired by Aspire Capital could cause the price of our common shares to decline.

This prospectus supplement relates to \$12,073,999 of our common shares that we may issue and sell to Aspire Capital from time to time over the term of the Purchase Agreement, which expires on April 7, 2020. The number of shares ultimately offered for sale to Aspire Capital under this prospectus supplement is dependent upon the number of shares we elect to sell to Aspire Capital under the Purchase Agreement. Depending upon market liquidity at the time, sales of shares of our common shares under the Purchase Agreement may cause the trading price of our common shares to decline.

Aspire Capital may ultimately purchase all or some of the \$12,073,999 of our common shares that is the subject of this prospectus supplement. After Aspire Capital has acquired shares under the Purchase Agreement, it may sell all, some or none of those shares. Sales to Aspire Capital by us pursuant to the Purchase Agreement under this prospectus supplement may result in substantial dilution to the interests of other holders of our common shares. The sale of a substantial number of shares of our common shares to Aspire Capital in this offering, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales. However, we have the right to control the timing and amount of any sales of our shares to Aspire Capital and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

Management will have broad discretion as to the use of the proceeds from this offering, and we may not use the proceeds effectively.

Our management will have broad discretion in the application of the proceeds from sales of our common shares to Aspire Capital offered by this prospectus supplement, and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common shares. Our failure to apply these funds effectively could have a material adverse effect on our business and cause the price of our common shares to decline.

In addition to potential dilution associated with future fundraising transactions, we currently have significant numbers of securities outstanding that are exercisable for our common shares, which could result in significant additional dilution and downward pressure on our stock price.

As of May 1, 2019, there were 41,522,031 shares of our common shares outstanding. In addition, as of May 1, 2019, there were outstanding stock options representing the potential issuance of an additional 5,778,488 shares of our common shares. The issuance of these shares in the future would result in significant dilution to our current stockholders and could adversely affect the price of our common shares and the terms on which we could raise additional capital. In addition, the issuance and subsequent trading of shares could cause the supply of our common shares available for purchase in the market to exceed the purchase demand for our common shares. Such supply in excess of demand could cause the market price of our common shares to decline.

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Future sales of a significant number of our shares of common shares in the public markets, or the perception that such sales could occur, could depress the market price of our shares of common shares.

Sales of a substantial number of our shares of common shares in the public markets, or the perception that such sales could occur, could depress the market price of our shares of common shares and impair our ability to raise capital through the sale of additional equity securities. A substantial number of shares of common shares are being offered by this prospectus supplement, and we cannot predict if and when Aspire Capital may sell such shares in the public markets. In addition, we cannot predict the number of these shares that might be sold nor the effect that future sales of our shares of common shares would have on the market price of our shares of common shares.

We do not intend to pay dividends in the foreseeable future.

We have never declared or paid any dividends on our common shares. We intend, for the foreseeable future, to retain our future earnings, if any, to finance our commercial activities and further research and the expansion of our business. As a result, the return on an investment in common shares will likely depend upon any future appreciation in value, if any, and on a shareholder's ability to sell common shares. The payment of future dividends, if any, will be reviewed periodically by our board of directors and will depend upon, among other things, conditions then existing including earnings, financial conditions, cash on hand, financial requirements to fund our commercial activities, development and growth, and other factors that our board of directors may consider appropriate in the circumstances.

USE OF PROCEEDS

We intend to use the net proceeds of the Offering to (i) initiate, accelerate and expand clinical trials for CG-806; (ii) initiate, accelerate and expand our clinical trials for APTO-253; (iii) acquire and fund (including through partnerships and in-licensing) additional clinical assets; and (iv) for working capital and general corporate purposes relating to (i), (ii) or (iii) above. Accordingly, our management will have broad discretion in the application of net proceeds.

DILUTION

Our net tangible book value as of December 31, 2018 was approximately \$14.08 million, or \$0.37 per common share. Net tangible book value per common share is calculated by subtracting our total liabilities from our total tangible assets, which is total assets less intangible assets, and dividing this amount by the number of common shares outstanding.

After giving effect to the assumed sale of 6,191,794 common shares in the aggregate amount of \$12,073,999 at an assumed offering price of \$1.95 per common share, which was the closing price of our common shares on the Nasdaq Capital Market on May 1, 2019, and after deducting the estimated offering expenses payable by us, our as adjusted net tangible book value as of December 31, 2018 would have been approximately \$26.15 million, or \$ 0.59 per common share. This represents an immediate increase in net tangible book value of \$0.22 per share to existing stockholders and immediate dilution in net tangible book value of \$ 1.36 per share to investors participating in this offering. The following table illustrates this dilution on a per common share basis:

Assumed average offering price per common share	\$1.95
Net tangible book value per share as of December 31, 2018	\$0.37
Increase per common share attributable to the offering	\$0.22
As-adjusted net tangible book value per share after this offering	\$0.59
Dilution per common share to new investors	\$1.36

The foregoing dilution information assumes an offering price equal to the closing price for our common shares on May 1, 2019 and is based on 38,161,808 common shares outstanding as of December 31, 2018. The actual price at which we sell shares in this offering may be higher or lower than this assumed price and our total common shares may continue to change, and is expected to continue to change, since December 31, 2018. This information is supplied for illustrative purposes only.

The above discussion and table are based on the 38,161,808 common shares outstanding as of December 31, 2018 and exclude the following:

- 5,778,488 common shares subject to options outstanding having a weighted average exercise price of \$2.85 per common share;
- 1,487,867 common shares that have been reserved for issuance in connection with future grants under our stock option plans;
- 3,360,223 shares of our Common Stock that have been issued since December 31, 2018.

THE ASPIRE TRANSACTION

General

On May 30, 2018, we entered into the Purchase Agreement with Aspire Capital, which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of \$20,000,000 of our common shares up and until April 7, 2020. We expect the conditions necessary for purchases under the Purchase Agreement to commence on the date hereof after filing of this prospectus supplement. Concurrently with commencement, we issued 170,261 common shares as a commitment fee (the “Commitment Shares”) to Aspire Capital in consideration for entering into the Purchase Agreement. As of May 1, 2019, we have \$12,073,999 remaining that we must sell to Aspire Capital pursuant to the Purchase Agreement, which is the amount that we are offering pursuant to this prospectus supplement and accompanying prospectus.

Purchase of Shares under the Purchase Agreement

The Purchase Agreement provides that on any trading day on which the closing sale price of our common shares is not less than \$0.25 per share, we have the right, in our sole discretion, to present Aspire Capital with a purchase notice (each, a “Purchase Notice”), directing Aspire Capital (as principal) to purchase up to 200,000 common shares per trading day, up to \$20,000,000 of our common shares in the aggregate at a per share price, or the “Purchase Price”, that is equal to the lesser of:

- a) the lowest sale price of our common shares on the purchase date, as reported by the Nasdaq Capital Market; or
- b) the arithmetic average of the three lowest closing sale prices for our common shares on the Nasdaq Capital Market (or successor principal market) during the ten consecutive trading days ending on the trading day immediately preceding the purchase date, as reported by the Nasdaq Capital Market.

However, no sale pursuant to a Purchase Notice may exceed \$500,000 per day without mutual agreement of the parties. However, upon mutual agreement, the Company can direct Aspire Capital to purchase up to an additional 2,000,000 shares.

The Purchase Price will be known at the time of notice and before any shares are sold to Aspire Capital.

The Purchase Agreement provides that we and Aspire Capital shall not effect any sales under the Purchase Agreement on any purchase date where the closing sale price of our common shares is less than \$0.25 per share, which we refer to as the “Floor Price”. This Floor Price and the respective prices and share numbers in the preceding paragraphs shall be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction. There are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common shares to Aspire Capital. Aspire Capital has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the Purchase Agreement. There are no limitations on use of proceeds, financial or business covenants, restrictions on future fundings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement. Aspire Capital may not assign its rights or obligations under the Purchase Agreement.

The Purchase Agreement limits our sales of common shares to Aspire Capital to 6,580,241 common shares, or 19.99% of our total outstanding common shares as of the date that the Purchase Agreement, unless and until we have obtained shareholder approval of the transactions contemplated by the Purchase Agreement under applicable Nasdaq rules, provided that such limitations shall not apply to the extent that the average price of all sales of common shares to Aspire Capital under the Purchase Agreement exceed \$3.65, such that the sales to Aspire Capital are considered to be at least “at market” under applicable Nasdaq rules. None of our common shares issued pursuant to the Purchase Agreement will be offered for sale or sold by us or Aspire Capital on the TSX or to purchasers resident in Canada.

The Purchase Agreement also prohibits us from directing Aspire Capital to purchase any common shares if those common shares, when aggregated with all of our other common shares then beneficially owned by Aspire Capital

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and its affiliates, would result in Aspire Capital and its affiliates having beneficial ownership, at any single point in time, of more than 9.99% of our then total outstanding common shares (as calculated pursuant to Section 13(d) of the Exchange Act and Rule 13d-3 thereunder) unless Aspire Capital complies with the TSX rules regarding new insiders.

VWAP Purchases

In addition, on any date on which we submit a Purchase Notice to Aspire Capital for 200,000 shares, we also have the right, in our sole discretion, to direct Aspire Capital to purchase a number of common shares equal to up to 30% of the aggregate common shares of the Company traded on the Nasdaq Capital Market on the next trading day (the “VWAP Purchase Date”), subject to a maximum number of common shares determined by us (the “VWAP Purchase Share Volume Maximum”), and a minimum trading price, or the “VWAP Minimum Price Threshold”, which is equal to the greater of (a) 80% of the closing price of our common shares on the business day immediately preceding the VWAP Purchase Date or (b) such higher price as set forth by us in the VWAP Purchase Notice. The VWAP Purchase Price of such shares is the lower of:

- a) the Closing Sale Price on the VWAP Purchase Date; or
- b) 97% of the volume-weighted average price for our common shares traded on the Nasdaq Capital Market:
 - i. on the VWAP Purchase Date, if the aggregate shares to be purchased on that date have not exceeded the VWAP Purchase Share Volume Maximum or
 - ii. during that portion of the VWAP Purchase Date until such time as the sooner to occur of (i) the time at which the aggregate shares traded on the Nasdaq Capital Market exceed the VWAP Purchase Share Volume Maximum or (ii) the time at which the sale price of our common shares falls below the VWAP Minimum Price Threshold.

The Nasdaq Capital Market has completed its review of the listing of the common shares issuable in connection with the Offering. The TSX has accepted notice of the Offering and has conditionally approved the listing of up to a maximum of 6,580,241 common shares pursuant thereto. We are relying on the exemption included in section 602.1 of the TSX Company Manual, which provides that the TSX will not apply its standards to certain transaction involving eligible interlisted issuers on a recognized exchange, such as the Nasdaq Capital Market, provided that the transaction is being completed in compliance with the requirements of such other recognized exchange.

Events of Default

Generally, Aspire Capital may terminate the Purchase Agreement upon the occurrence of any of the following, among other, events of default:

- a) the effectiveness of any registration statement that is required to be maintained effective pursuant to the terms of the Registration Rights Agreement between us and Aspire Capital lapses for any reason (including, without limitation, the issuance of a stop order) or is unavailable to Aspire Capital for sale of common shares, and such lapse or unavailability continues for a period of ten consecutive business days or for more than an aggregate of thirty business days in any 365-day period, which is not in connection with a post-effective amendment to any such registration statement; in connection with any post-effective amendment to such registration statement that is required to be declared effective by the SEC such lapse or unavailability may continue for a period of no more than 40 consecutive business days;
- b) the suspension from trading or failure of our common shares to be listed on our principal market for a period of three consecutive business days;
- c) the delisting of our common shares from our principal market (currently the Nasdaq Capital Market), provided our common shares are not immediately thereafter trading on the New York Stock Exchange, the NYSE MKT, the Nasdaq Capital Market, the Nasdaq Global Select Market, the Nasdaq Global Market, the OTB Bulletin Board or the OTCQB marketplace or OTCQX marketplace of the OTC Markets Group;
- d) our transfer agent’s failure to issue to Aspire Capital common shares which Aspire Capital is entitled to receive under the Purchase Agreement within five business days after an applicable purchase date;

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- e) any breach by us of the representations or warranties or covenants contained in the Purchase Agreement or any related agreements which could have a material adverse effect on us, subject to a cure period of five business days;
- f) if we become insolvent or are generally unable to pay our debts as they become due; or
- g) any participation or threatened participation in insolvency or bankruptcy proceedings by or against us.

Our Termination Rights

We may terminate the Purchase Agreement with notice at any time, in our discretion, without any cost or penalty.

No Short-Selling or Hedging by Aspire Capital

Aspire Capital has agreed that neither it nor any of its agents, representatives and affiliates shall engage in any direct or indirect short-selling or hedging of our common shares during any time prior to the termination of the Purchase Agreement.

Effect of Performance of the Purchase Agreement on Our Stockholders

The Purchase Agreement does not limit the ability of Aspire Capital to sell any or all of the common shares registered in this offering. It is anticipated that common shares registered in this offering will be sold to arm's length parties over the term of the Purchase Agreement. The sale by Aspire Capital of a significant amount of shares registered in this offering at any given time could cause the market price of our common shares to decline and/or to be highly volatile. Aspire Capital may ultimately purchase all, some or none of the common shares not yet issued but registered in this Offering. After it has acquired such common shares, it may sell all, some or none of such common shares. Therefore, sales to Aspire Capital by us pursuant to the Purchase Agreement also may result in substantial dilution to the interests of other holders of our common shares. However, we have the right to control the timing and amount of any sales of our common shares to Aspire Capital and the Purchase Agreement may be terminated by us at any time at our discretion without any penalty or cost to us.

Amount of Potential Proceeds to be Received under the Purchase Agreement

Under the Purchase Agreement, we may sell additional common shares having an aggregate offering price of up to \$12,073,999 to Aspire from time to time. The number of shares ultimately offered for sale to Aspire Capital in this offering is dependent upon the number of shares we elect to sell to Aspire Capital under the Purchase Agreement.

Information With Respect to Aspire Capital

Aspire Capital Partners LLC ("**Aspire Partners**") is the Managing Member of Aspire Capital Fund, LLC ("**Aspire Fund**"). SGM Holdings Corp ("**SGM**") is the Managing Member of Aspire Partners. Mr. Steven G. Martin ("**Mr. Martin**") is the president and sole shareholder of SGM, as well as a principal of Aspire Partners. Mr. Erik J. Brown ("**Mr. Brown**") is the president and sole shareholder of Red Cedar Capital Corp ("**Red Cedar**"), which is a principal of Aspire Partners. Mr. Christos Komissopoulos ("**Mr. Komissopoulos**") is president and sole shareholder of Chrisko Investors Inc. ("**Chrisko**"), which is a principal of Aspire Partners. Mr. William F. Blank, III ("**Mr. Blank**") is president and sole shareholder of WML Ventures Corp. ("**WML Ventures**"), which is a principal of Aspire Partners. Each of Aspire Partners, SGM, Red Cedar, Chrisko, WML Ventures, Mr. Martin, Mr. Brown, Mr. Komissopoulos and Mr. Blank may be deemed to be a beneficial owner of common stock held by Aspire Fund. Each of Aspire Partners, SGM, Red Cedar, Chrisko, WML Ventures, Mr. Martin, Mr. Brown, Mr. Komissopoulos and Mr. Blank disclaims beneficial ownership of the common stock held by Aspire Fund.

PLAN OF DISTRIBUTION

We entered into the Purchase Agreement with Aspire Capital on May 30, 2018. In consideration for entering into the Purchase Agreement, we issued the Commitment Shares to Aspire Capital. The Purchase Agreement provides that, upon the terms and subject to the conditions set forth therein, Aspire Capital is irrevocably committed to purchase up to an aggregate of \$20,000,000 of shares of our common shares up and until April 17, 2020. As of May 1, 2019, we have \$12,073,999 remaining for sale pursuant to the Purchase Agreement, which is the amount that we are offering pursuant to this prospectus supplement and the accompanying prospectus.

Aspire Capital is an “underwriter” within the meaning of the Securities Act.

Neither we nor Aspire Capital can presently estimate the amount of compensation that any agent will receive. We know of no existing arrangements between Aspire Capital, any other shareholder, broker, dealer, underwriter, or agent relating to the sale or distribution of the shares offered by this prospectus supplement. At the time a particular offer of shares is made, a prospectus supplement, if required, will be distributed that will set forth the names of any agents, underwriters, or dealers and any other required information.

We will pay all of the expenses incident to the registration, offering, and sale of the shares to Aspire Capital. We have agreed to indemnify Aspire Capital and certain other persons against certain liabilities in connection with the offering of shares of common shares offered hereby, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Aspire Capital has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Aspire Capital specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities.

Aspire Capital and its affiliates have agreed not to engage in any direct or indirect short selling or hedging of our common shares during the term of the Purchase Agreement.

We have advised Aspire Capital that it is required to comply with Regulation M promulgated under the Securities Exchange Act of 1934, as amended. With certain exceptions, Regulation M precludes the selling shareholder, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the shares offered hereby this prospectus.

We may suspend the sale of shares to Aspire Capital pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information.

This offering will terminate on the date that all shares offered by this prospectus have been sold to Aspire Capital.

LEGAL MATTERS

Certain legal matters relating to the Offering under this prospectus supplement will be passed upon on behalf of the Company by McCarthy Tétrault LLP, with respect to matters of Canadian law, and Dorsey & Whitney LLP, Vancouver, British Columbia and Seattle, Washington, with respect to matters of United States law. In addition, certain legal matters in connection with the Offering under this prospectus supplement will be passed upon on behalf of Aspire Capital & Co. by Morrison & Foerster LLP.

EXPERTS

Our consolidated financial statements as of December 31, 2018 and December 31, 2017 and for each of the years in the two-year period ended December 31, 2018, have been audited by KPMG LLP as set forth in their reports thereon and incorporated herein by reference.

Such consolidated financial statements have been incorporated by reference herein in reliance upon the report of KPMG LLP, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus supplement is part of a registration statement on Form S-3 that we filed with the SEC. The registration statement that contains this prospectus supplement, including the exhibits to the registration statement, contains additional information about us and the common shares offered by this prospectus supplement.

We file annual, quarterly and current reports and proxy statements and other information with the SEC. You may read and copy any document that we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. Our SEC filings are also available on the SEC's web site at <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available on our web site at <http://www.apose.com>. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this document.

INFORMATION INCORPORATED BY REFERENCE

The Securities and Exchange Commission allows us to "incorporate by reference" information in documents we file with them, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is considered to be part of this prospectus and information that we file later with the Securities and Exchange Commission automatically will update and supersede such information. We hereby incorporate by reference the documents listed below and any future filings we make with the Securities and Exchange Commission under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, following the date of this prospectus and prior to the termination of the offering of the securities covered by this prospectus, as amended:

- (1) our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on March 12, 2019 and as amended on March 25, 2019, April 12, 2019 and April 22, 2019;
- (2) all other reports filed by us pursuant to Section 13(a) or 15(d) of the Exchange Act since December 31, 2018; and
- (3) 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.

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In addition, all documents filed by us under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of this prospectus but before the termination of the offering of the securities covered by this prospectus, are hereby incorporated by reference into this prospectus.

We have not authorized anyone to provide you with any different or additional information other than that contained in or incorporated by reference into this prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any information that others may provide.

Any statement contained in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

The documents incorporated by reference into this prospectus are available from us upon request. We will provide a copy of any and all of the information that is incorporated by reference into this prospectus to any person, including a beneficial owner, to whom a prospectus is delivered, without charge, upon written or oral request. If exhibits to the documents incorporated by reference into this prospectus are not themselves specifically incorporated by reference in this prospectus, then the exhibits will not be provided.

Requests for any of these documents should be directed to:

Investor Relations
Aptose Biosciences Inc.
251 Consumers Road, Suite 1105
Toronto, Ontario, Canada M2J 4R3
(647) 479-9828



**\$100,000,000
Common Shares
Warrants
Units**

We may offer and issue from time to time common shares or warrants or any combination of those securities, either individually or in units, up to an aggregate initial offering price of \$100,000,000, in one or more transactions under this prospectus. The securities may be offered in amounts, at prices and on terms to be determined based on market conditions at the time of sale and set forth in an accompanying prospectus supplement.

This prospectus provides you with a general description of the securities that we may offer. Each time we offer securities, we will provide you with a prospectus supplement that describes specific information about the particular securities being offered and may add, update or change information contained or incorporated by reference in this prospectus. You should read both this prospectus and the applicable prospectus supplement, together with the additional information that is incorporated by reference into this prospectus and the applicable prospectus supplement.

Our common shares are listed on the NASDAQ Capital Market under the symbol “APTO” and on the Toronto Stock Exchange under the symbol “APS”. On April 25, 2019, the closing price of our common shares on NASDAQ was \$2.00 per share and on the Toronto Stock Exchange was C\$2.67 per share.

Investing in our securities involves a high degree of risk. You should carefully read the “Risk Factors” section of this prospectus beginning on page 2.

These securities have not been approved or disapproved by the Securities and Exchange Commission or any state securities regulatory authority, nor has the SEC or any state securities regulatory authority passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is April 25, 2019.

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ABOUT THIS PROSPECTUS

This prospectus is a part of a registration statement that we have filed with the SEC utilizing a “shelf” registration process. Under this shelf registration process, we may sell any combination of the securities described in this prospectus, either individually or in units, in one or more offerings up to an aggregate initial offering price of \$100,000,000.

This prospectus provides you with a general description of the securities that we may sell under this prospectus. Each time we sell securities, we may also provide a prospectus supplement that may include, where applicable, specific information about the terms of that offering. If there is any inconsistency between the information in this prospectus and any applicable prospectus supplement, you should rely on the information in the prospectus supplement. Where required by statute, regulation or policy, and where securities are offered in currencies other than U. S. dollars, appropriate disclosure of foreign exchange rates applicable to those securities will be included in the prospectus supplement describing those securities.

We may also prepare free writing prospectuses to describe the terms of particular sales of securities, which terms may vary from those described in any prospectus supplement. You therefore should carefully review any free writing prospectus in connection with your review of this prospectus and any applicable prospectus supplement.

Please carefully read both this prospectus and any prospectus supplement, together with the documents incorporated by reference into this prospectus and any prospectus supplement, and the additional information described below under “Where You Can Find Additional Information”. This prospectus contains summaries of certain provisions contained in some of the documents described in this prospectus, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to in this prospectus have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under “Where You Can Find Additional Information”.

You should rely only on the information contained in or incorporated by reference into this prospectus and any prospectus supplement. We have not authorized anyone to provide you with different information. The distribution or possession of this prospectus in or from certain jurisdictions may be restricted by law. This prospectus is not an offer to sell any securities and is not soliciting an offer to buy securities in any jurisdiction where the offer or sale is not permitted or where the person making the offer or sale is not qualified to do so or to any person to whom it is not permitted to make such offer or sale. The information contained in this prospectus is accurate only as of the date of this prospectus and any information incorporated by reference into this prospectus is accurate only as of the date of the applicable document incorporated by reference, regardless of the time of delivery of this prospectus or of any sale of the securities. Our business, financial condition, results of operations and prospects may have changed since that date.

As used in this prospectus and in any prospectus supplement, unless the context otherwise requires, the terms “Aptose,” the “Company,” “we,” “us,” and “our” refer to Aptose Biosciences Inc., and, unless the context requires otherwise, the subsidiaries through which it conducts business.

Unless stated otherwise or if the context otherwise requires, all references to dollar amounts in this prospectus and any prospectus supplement are references to U. S. dollars.

RISK FACTORS

An investment in our securities involves a significant degree of risk. You should carefully consider the risk factors and all of the other information included in this prospectus, any prospectus supplement, the documents we have incorporated by reference into this prospectus and any prospectus supplement, and in any related free writing prospectus, including those in Item 1A “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, as updated by annual, quarterly and other reports and documents we file with the SEC after the date of this prospectus and that are incorporated by reference into this prospectus, in evaluating an investment in our securities. If any of these risks were actually to occur, our business, financial condition or results of operations could be materially adversely affected. When we offer and sell any securities pursuant to a prospectus supplement, we may include in the applicable prospectus supplement additional risk factors relevant to those securities.

FORWARD-LOOKING STATEMENTS

This prospectus, including the documents incorporated by reference herein, contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and “forward-looking information” within the meaning of applicable Canadian securities law. We refer to such forward-looking statements and forward-looking information collectively as “forward-looking statements”. These statements relate to future events or future performance and reflect our expectations and assumptions regarding our growth, results of operations, performance and business prospects and opportunities. Such forward-looking statements reflect our current beliefs and are based on information currently available to us. In some cases, forward-looking statements can be identified by terminology such as “may”, “would”, “could”, “will”, “should”, “expect”, “plan”, “intend”, “anticipate”, “believe”, “estimate”, “predict”, “potential”, “continue” or the negative of these terms or other similar expressions concerning matters that are not historical facts. The forward-looking statements in this Prospectus and, including any documents incorporated by reference herein, include, among others, statements regarding our future operating results, economic performance and product development efforts and statements in respect of:

- our ability to obtain the substantial capital we require to fund research and operations;
- our business strategy;
- our clinical development plans;
- our plans to conduct clinical trials and preclinical programs;
- our ability to accrue appropriate numbers and types of patients;
- our reliance on external contract research/manufacturing organizations for certain activities;
- our plans to secure and maintain strategic partnerships to assist in the further development of our product candidates and to build our pipeline;
- our ability to file and maintain intellectual property to protect our pharmaceutical assets;
- potential exposure to legal actions and potential need to take action against other entities;
- our expectations regarding the progress and the successful and timely completion of the various stages of our drug discovery, drug synthesis and formulation, preclinical and clinical studies and the regulatory approval process;
- our plans, objectives, expectations and intentions; and
- other statements including words such as “anticipate”, “contemplate”, “continue”, “believe”, “plan”, “estimate”, “expect”, “intend”, “will”, “should”, “may”, and other similar expressions.

The forward-looking statements contained in this prospectus and in the documents incorporated by reference reflect our current views with respect to future events, are subject to significant risks and uncertainties, and are 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 that may be expressed or implied by such forward-looking statements, including, among others:

- our lack of product revenues and net losses and a history of operating losses;

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- our early stage of development, particularly the inherent risks and uncertainties associated with (i) developing new drug candidates generally, (ii) demonstrating the safety and efficacy of these drug candidates in clinical studies in humans, and (iii) obtaining regulatory approval to commercialize these drug candidates;
- our need to raise substantial additional capital in the future and that we may be unable to raise such funds when needed and on acceptable terms;
- further equity financing, which may substantially dilute the interests of our existing shareholders;
- clinical studies and regulatory approvals of our drug candidates are subject to delays, and may not be completed or granted on expected timetables, if at all, and such delays may increase our costs and could substantially harm our business;
- our reliance on external contract research/manufacturing organizations for certain activities and if we are subject to quality, cost, or delivery issues with the preclinical and clinical grade materials supplied by contract manufacturers, our business operations could suffer significant harm;
- clinical studies are long, expensive and uncertain processes and the United States Food and Drug Administration, or “FDA”, or other similar foreign regulatory agency that we are required to report to, may ultimately not approve any of our product candidates;
- our ability to comply with applicable governmental regulations and standards;
- our inability to achieve our projected development goals in the time frames we announce and expect;
- difficulties in enrolling patients for clinical trials may lead to delays or cancellations of our clinical trials;
- our reliance on third-parties to conduct and monitor our preclinical studies;
- our ability to attract and retain key personnel, including key executives and scientists;
- any misconduct or improper activities by our employees;
- our exposure to exchange rate risk;
- our ability to commercialize our business attributed to negative results from clinical trials;
- the marketplace may not accept our products or product candidates due to the intense competition and technological change in the biotechnical and pharmaceuticals, and we may not be able to compete successfully against other companies in our industries and achieve profitability;
- our ability to obtain and maintain patent protection;
- our ability to afford substantial costs incurred with defending our intellectual property;
- our ability to protect our intellectual property rights and not infringe on the intellectual property rights of others;
- our business is subject to potential product liability and other claims;
- potential exposure to legal actions and potential need to take action against other entities;
- commercialization limitations imposed by intellectual property rights owned or controlled by third parties;
- our ability to maintain adequate insurance at acceptable costs;
- our ability to find and enter into agreements with potential partners;
- extensive government regulation;

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- data security incidents and privacy breaches could result in increased costs and reputational harm; ·
- our share price has been and is likely to continue to be volatile; ·
- future sales of our common shares by us or by our existing shareholders could cause our share price to drop; ·
- changing global market and financial conditions; ·
- changes in an active trading market in our common shares;
- difficulties by non-Canadian investors to obtain and enforce judgments against us because of our Canadian incorporation and presence;
- potential adverse U. S. federal tax consequences for U. S. shareholders because we are a “passive foreign investment company”;
- our “emerging growth company” and “smaller reporting company” status;

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- any failures to maintain an effective system of internal controls may result in material misstatements of our financial statements, or cause us to fail to meet our reporting obligations or fail to prevent fraud;
- our broad discretion in how we use the proceeds of the sale of the common shares to Aspire Capital pursuant to the purchase agreement between us and Aspire;
- any failure of Aspire to purchase common shares from us when required to do so;
- our ability to expand our business through the acquisition of companies or businesses; and
- other risks detailed from time-to-time in our on-going filings with the SEC and Canadian securities regulators, and those which are discussed under the heading “Risk Factors” in this prospectus and in the documents incorporated by reference.

Should one or more of these risks or uncertainties materialize, or should the assumptions described in the sections entitled “Risk Factors” in this prospectus and in the documents incorporated by reference underlying those forward-looking statements prove incorrect, actual results may vary materially from those described in the forward-looking statements.

More detailed information about these and other factors is included in this prospectus under the section entitled “Risk Factors” and in the documents incorporated by reference into this prospectus. Although we have attempted to identify factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. Forward-looking statements are based upon our beliefs, estimates and opinions at the time they are made and we undertake no obligation to update forward-looking statements if these beliefs, estimates and opinions or circumstances should change, except as required by applicable law. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

Forward-looking statements contained in this prospectus are made as of the date of this prospectus. Forward-looking statements made in a document incorporated by reference into this prospectus are made as of the date of the original document and have not been updated by us except as expressly provided for in this prospectus.

Except as required under applicable securities legislation, we undertake no obligation to publicly update or revise forward-looking statements, whether as a result of new information, future events or otherwise. **We qualify all the forward-looking statements contained in this prospectus and the documents incorporated by reference in this prospectus by the foregoing cautionary statements.**

ENFORCEABILITY OF CIVIL LIABILITIES

We are incorporated under the laws of Canada. Many of our directors and officers and the experts named in this prospectus are residents of countries other than the United States, and all or a substantial portion of their assets and some of our assets are located outside the United States. We have appointed Aptose Biosciences U. S. Inc. as our agent for service of process in the United States, but it may be difficult for holders of securities who reside in the United States to effect service within the United States upon those directors, officers and experts who are not residents of the United States. Additionally, it may not be possible for you to enforce judgments obtained in U. S. courts based upon the civil liability provisions of the U. S. federal securities laws or other laws of the United States. In addition, there is doubt as to whether an original action could be brought in Canada against us or our directors or officers based solely upon U. S. federal or state securities laws and as to the enforceability in Canadian courts of judgments of U. S. courts obtained in actions based upon the civil liability provisions of U. S. federal or state securities laws.

APTOSE BIOSCIENCES INC.

This summary does not contain all the information about us that may be important to you. Please carefully read both this prospectus and any prospectus supplement together with the additional information contained in or incorporated by reference into this prospectus and any prospectus supplement.

Aptose is a science-driven biotechnology company advancing highly differentiated agents to treat unmet medical needs in life-threatening cancers, such as acute myeloid leukemia, or “AML”, certain B-cell malignancies, high-risk myelodysplastic syndromes, or “MDS”, and other hematologic malignancies. Based on insights into the genetic and epigenetic profiles of certain cancers and patient populations, we are building a pipeline of novel and targeted oncology therapies directed at dysregulated processes and signaling pathways in cancer cells, and this strategy is intended to optimize efficacy and quality of life by minimizing the cytotoxic side effects associated with conventional therapies and minimize the emergence of drug resistance. Our product pipeline includes cancer drug candidates that exert potent activity as stand-alone agents and that enhance the activities of other anticancer agents without causing overlapping toxicities. Indeed, we believe our targeted products can emerge as first-in-class or best-in-class agents that deliver single agent benefit and may serve as part of a combination therapeutic strategy for specific populations of cancer patients.

We currently are engaged in the development of a clinical-stage program, a late preclinical stage program, and a third program that is discovery-stage and positioned for potential partnering. Our pan-FLT3 / pan-BTK inhibitor, CG-806, is currently in the Investigational New Drug, or “IND”, review period with the FDA, with anticipation of commencing a Phase 1 in the first half of 2019. On December 26, 2017, CG-806 received orphan drug designation from the FDA for the treatment of AML. APTO-253 is our second anticancer agent and at the Phase 1b clinical stage for the treatment of patients with relapsed / refractory blood cancers, including AML and high-risk MDS, under an IND allowed by the FDA to evaluate APTO-253 as a therapeutic agent dosed on a weekly administration schedule for the treatment of certain hematologic malignancies. The APTO-253 program has received orphan drug designation from the FDA for the treatment of AML, and is currently on clinical hold while attempts are made to manufacture a newly formulated and stable clinical supply.

As noted above, we are committed to the development of anticancer drugs that target aberrant oncologic signaling processes that underlie particular life-threatening malignancies. This targeted approach is intended to impact the disease-causing events in cancer cells without affecting normal processes within cells. Such an approach requires that we first identify critical underlying oncogenic mechanisms in cancer cells and then develop a therapeutic that selectively impacts such oncogenic mechanisms. As a multi-kinase pan-FLT3 /pan-BTK inhibitor, CG 806 targets multiple critical pathways that lead to the proliferation of cancer cells, including the B-cell receptor signaling pathways (drive certain B cell malignancies) and FLT3 receptor pathways (drive AML). Further, we created the APTO-253 small molecule targeted drug that inhibits expression of the c-Myc oncogene and is under development as a novel therapy for AML and the related MDS.

We were incorporated under the *Business Corporations Act* (Ontario) on September 5, 1986 under the name RML Medical Laboratories Inc. On October 28, 1991, we amalgamated with Mint Gold Resources Ltd., which caused us to become a reporting issuer in Ontario. On August 25, 1992, we changed our name to IMUTEC Corporation. On November 27, 1996, we changed our name to Imutec Pharma Inc., and on November 19, 1998, we changed our name to Lorus Therapeutics Inc. On October 1, 2005, we continued under the *Canada Business Corporations Act* and on July 10, 2007 we completed a plan of arrangement and corporate reorganization with, among others, 6650309 Canada Inc., 6707157 Canada Inc. and Pinnacle International Lands, Inc. On May 25, 2010, we consolidated our outstanding common shares on the basis of one post-consolidation common share for each 30 pre-consolidation common shares.

On August 28, 2014 we changed our name from Lorus Therapeutics Inc. to Aptose Biosciences Inc. and on October 1, 2014 we consolidated our outstanding common shares on the basis of one post-consolidation common share for each twelve pre-consolidation common shares.

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We have two subsidiaries: Aptose Biosciences U. S. Inc., a corporation incorporated under the laws of Delaware; and NuChem Pharmaceuticals Inc., a corporation incorporated under the laws of Ontario, Canada. Aptose Biosciences Inc. owns 100% of the issued and outstanding voting share capital of Aptose Biosciences U. S. Inc., and 80% of the issued and outstanding voting share capital of NuChem Pharmaceuticals Inc.

Our head, registered and records office is located at 251 Consumers Road, Suite 1105, Toronto, Ontario, Canada, M2J 4R3. Our executive office is located at 12770 High Bluff Drive, Suite 120, San Diego, CA 92130. We maintain a website at www.aptose.com. Information contained on our website is not part of this prospectus.

USE OF PROCEEDS

Unless otherwise specified in a prospectus supplement, the net proceeds that we receive from the sale of our securities will be used for working capital and general corporate purposes, including, but not limited to, progressing our research and development programs, and supporting our clinical programs and manufacturing activities.

More specific allocations may be included in a prospectus supplement relating to a specific offering of securities. All expenses relating to an offering of securities and any compensation paid to underwriters, dealers or agents, as the case may be, will be paid out of our general funds, unless otherwise stated in the applicable prospectus supplement.

DESCRIPTION OF SHARE CAPITAL, WARRANTS AND RELATED INFORMATION

The descriptions below of our share capital, warrants and related information are summaries and are qualified by reference to documents incorporated by reference to the registration statement of which this prospectus is a part.

Authorized Capital

Our authorized share capital consists of an unlimited number of common shares, no par value, of which 38,161,808 were issued and outstanding as at December 31, 2018. None of our common shares are held by us or on our behalf.

Common Shares

The holders of our common shares are entitled to receive notice of and to attend and vote at all annual and special meetings of our shareholders. Our common shares carry one vote per common share and do not have cumulative voting rights. The holders of our common shares are entitled, at the discretion of our board of directors, to receive out of any or all of our profits or surplus properly available for the payment of dividends, any dividend declared by the board of directors and payable by us on our common shares. The holders of our common shares will participate on a pro rata basis in any distribution of our remaining property upon our liquidation, dissolution or winding-up or any other return of capital or distribution of our assets among our shareholders for the purpose of winding up our affairs.

Dividend Policy

We have not paid any dividends since our incorporation. At the discretion of our board of directors, we will consider paying dividends in the future as our operational circumstances may permit, having regard to, among other things, our earnings, cash flow and financial requirements. It is the current policy of our board of directors to retain all earnings to finance our business plan.

Description of Warrants

The following description of the terms of warrants provides some general terms and provisions of warrants in respect of which a prospectus supplement may be filed. This summary is not complete. The particular terms and provisions of warrants offered by any prospectus supplement, and the extent to which the general terms and provisions described below may apply to them, will be described in the applicable prospectus supplement. Warrants may be offered separately or in combination with common shares.

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The description of general terms and provisions of warrants described in any prospectus supplement will include, but is not limited to, where applicable:

- the designation and aggregate number of warrants offered;
- the price at which the warrants will be offered;
- the currency or currencies in which the warrants are denominated;
- the number of common shares that may be purchased on the exercise of the warrants and conditions and procedures that will result in an adjustment of that number;
- the exercise price of the warrants and the dates or periods during which the warrants are exercisable;
- any minimum or maximum amount of warrants that may be exercised at any one time;
- any terms, procedures and limitations relating to the transferability, exchange or exercise of the warrants; and
- any other material terms of the warrants.

If the warrants are issued pursuant to warrant agreements or warrant indentures, we will so specify in the prospectus supplement relating to the warrants being offered pursuant to the prospectus supplement. We will file any warrant agreement or warrant indenture with the SEC and incorporate them by reference as an exhibit to the registration statement of which this prospectus is a part, on or before the time we issue a series of warrants.

Each warrant will entitle the holder to acquire such number of common shares at such exercise price and in accordance with such terms as shall in each case be set forth in, or be determinable as set forth in, the prospectus supplement relating to the warrants offered by the prospectus supplement. Warrants may be exercised at any time up to the close of business on the expiration date set forth in the prospectus supplement relating to the warrants offered thereby. After the close of business on the expiration date, unexercised warrants will become void.

The warrants may be exercised as set forth in the prospectus supplement relating to the warrants offered thereby. Upon receipt of payment and the taking of other action specified in the applicable prospectus supplement, we will, as soon as practicable, forward the securities purchasable upon exercise. If less than all of the warrants represented by such warrant certificate are exercised, a new warrant certificate will be issued for the remaining warrants.

Before the exercise of their warrants, holders of warrants will not have any of the rights of holders of common shares. Therefore, holders of warrants will not be entitled, by virtue of being such holders, to vote, consent, receive dividends, receive notice as shareholders with respect to any meeting of shareholders for the election of our directors or any other matter, or to exercise any rights whatsoever as our shareholders. We reserve the right to include in a prospectus supplement specific terms of the warrants that are not within the options and parameters described in this prospectus. In addition, to the extent that any particular terms of the warrants described in a prospectus supplement differ from any of the terms described in this prospectus, the description of those terms included in this prospectus shall be deemed to have been superseded by the description of the differing terms set forth in such prospectus supplement with respect to such warrants.

Description of Units

We may issue units comprised of one or more of the securities described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement, if any, under which a unit is issued may provide that the securities comprising the unit may not be held or transferred separately, at any time or at any time before a specified date.

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The particular terms and provisions of units offered by any prospectus supplement, and the extent to which the general terms and provisions described below may apply thereto, will be described in the prospectus supplement filed in respect of such units. This description will include, where applicable:

- the designation and aggregate number of units offered;
- the price at which the units will be offered;
- the currency or currencies in which the units are denominated;
- the terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- the number of securities that may be purchased upon exercise of each unit and the price at which the currency or currencies in which that amount of securities may be purchased upon exercise of each unit;
- any provisions for the issuance, payment, settlement, transfer, adjustment or exchange of the units or of the securities comprising the units; and
- any other material terms of the units.

We reserve the right to set forth in a prospectus supplement specific terms of the units that are not within the options and parameters set forth in this prospectus. In addition, to the extent that any particular terms of the units described in a prospectus supplement differ from any of the terms described in this prospectus, the description of such terms set forth in this prospectus shall be deemed to have been superseded by the description of the differing terms set forth in such prospectus supplement with respect to such units.

GLOBAL SECURITIES

Book-Entry, Delivery and Form

Unless we indicate differently in any applicable prospectus supplement or free writing prospectus, the securities initially will be issued in book-entry form and represented by one or more global notes or global securities, or, collectively, global securities. The global securities will be deposited with, or on behalf of, The Depository Trust Company, New York, New York, or DTC, as depository, and registered in the name of Cede & Co., the nominee of DTC. Unless and until it is exchanged for individual certificates evidencing securities under the limited circumstances described below, a global security may not be transferred except as a whole by the depository to its nominee or by the nominee to the depository, or by the depository or its nominee to a successor depository or to a nominee of the successor depository.

DTC has advised us that it is:

- a limited-purpose trust company organized under the New York Banking Law;
- a “banking organization” within the meaning of the New York Banking Law;
- a member of the Federal Reserve System;
- a “clearing corporation” within the meaning of the New York Uniform Commercial Code; and
- a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934.

DTC holds securities that its participants deposit with DTC. DTC also facilitates the settlement among its participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerized book-entry changes in participants’ accounts, thereby eliminating the need for physical movement of securities certificates. “Direct participants” in DTC include securities brokers and dealers, including underwriters, banks, trust companies, clearing corporations and other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation, or DTCC. DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others, which we sometimes refer to as indirect participants, that clear through or maintain a custodial relationship with a direct participant, either directly or indirectly. The rules applicable to DTC and its participants are on file with the SEC.

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Purchases of securities under the DTC system must be made by or through direct participants, which will receive a credit for the securities on DTC's records. The ownership interest of the actual purchaser of a security, which we sometimes refer to as a beneficial owner, is in turn recorded on the direct and indirect participants' records. Beneficial owners of securities will not receive written confirmation from DTC of their purchases. However, beneficial owners are expected to receive written confirmations providing details of their transactions, as well as periodic statements of their holdings, from the direct or indirect participants through which they purchased securities. Transfers of ownership interests in global securities are to be accomplished by entries made on the books of participants acting on behalf of beneficial owners. Beneficial owners will not receive certificates representing their ownership interests in the global securities, except under the limited circumstances described below.

To facilitate subsequent transfers, all global securities deposited by direct participants with DTC will be registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of securities with DTC and their registration in the name of Cede & Co. or such other nominee will not change the beneficial ownership of the securities. DTC has no knowledge of the actual beneficial owners of the securities. DTC's records reflect only the identity of the direct participants to whose accounts the securities are credited, which may or may not be the beneficial owners. The participants are responsible for keeping account of their holdings on behalf of their customers.

So long as the securities are in book-entry form, you will receive payments and may transfer securities only through the facilities of the depository and its direct and indirect participants. We will maintain an office or agency in the location specified in the prospectus supplement for the applicable securities, where notices and demands in respect of the securities and the indenture may be delivered to us and where certificated securities may be surrendered for payment, registration of transfer or exchange.

Conveyance of notices and other communications by DTC to direct participants, by direct participants to indirect participants and by direct participants and indirect participants to beneficial owners will be governed by arrangements among them, subject to any legal requirements in effect from time to time.

Redemption notices will be sent to DTC. If less than all of the securities of a particular series are being redeemed, DTC's practice is to determine by lot the amount of the interest of each direct participant in the securities of such series to be redeemed.

Neither DTC nor Cede & Co. (or such other DTC nominee) will consent or vote with respect to the securities. Under its usual procedures, DTC will mail an omnibus proxy to us as soon as possible after the record date. The omnibus proxy assigns the consenting or voting rights of Cede & Co. to those direct participants to whose accounts the securities of such series are credited on the record date, identified in a listing attached to the omnibus proxy.

So long as securities are in book-entry form, we will make payments on those securities to the depository or its nominee, as the registered owner of such securities, by wire transfer of immediately available funds. If securities are issued in definitive certificated form under the limited circumstances described below and unless if otherwise provided in the description of the applicable securities herein or in the applicable prospectus supplement, we will have the option of making payments by check mailed to the addresses of the persons entitled to payment or by wire transfer to bank accounts in the United States designated in writing to the applicable trustee or other designated party at least 15 days before the applicable payment date by the persons entitled to payment, unless a shorter period is satisfactory to the applicable trustee or other designated party.

Redemption proceeds, distributions and dividend payments on the securities will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit direct participants' accounts upon DTC's receipt of funds and corresponding detail information from us on the payment date in accordance with their respective holdings shown on DTC records. Payments by participants to beneficial owners will be governed by standing instructions and customary practices, as is the case with securities held for the account of customers in bearer form or registered in "street name." Those payments will be the responsibility of participants and not of DTC or us, subject to any statutory or regulatory requirements in effect from time to time. Payment of redemption proceeds, distributions and dividend payments to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC, is our responsibility, disbursement of payments to direct participants is the responsibility of DTC, and disbursement of payments to the beneficial owners is the responsibility of direct and indirect participants.

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Except under the limited circumstances described below, purchasers of securities will not be entitled to have securities registered in their names and will not receive physical delivery of securities. Accordingly, each beneficial owner must rely on the procedures of DTC and its participants to exercise any rights under the securities and the indenture.

The laws of some jurisdictions may require that some purchasers of securities take physical delivery of securities in definitive form. Those laws may impair the ability to transfer or pledge beneficial interests in securities.

DTC may discontinue providing its services as securities depository with respect to the securities at any time by giving reasonable notice to us. Under such circumstances, in the event that a successor depository is not obtained, securities certificates are required to be printed and delivered.

As noted above, beneficial owners of a particular series of securities generally will not receive certificates representing their ownership interests in those securities. However, if:

- DTC notifies us that it is unwilling or unable to continue as a depository for the global security or securities representing such series of securities or if DTC ceases to be a clearing agency registered under the Exchange Act at a time when it is required to be registered and a successor depository is not appointed within 90 days of the notification to us or of our becoming aware of DTC's ceasing to be so registered, as the case may be;
- we determine, in our sole discretion, not to have such securities represented by one or more global securities; or
- an event of default has occurred and is continuing with respect to such series of securities,

we will prepare and deliver certificates for such securities in exchange for beneficial interests in the global securities. Any beneficial interest in a global security that is exchangeable under the circumstances described in the preceding sentence will be exchangeable for securities in definitive certificated form registered in the names that the depository directs. It is expected that these directions will be based upon directions received by the depository from its participants with respect to ownership of beneficial interests in the global securities.

Euroclear, Clearstream and CDS

If so provided in the applicable prospectus supplement, you may hold interests in a global security through the Canadian Depository for Securities, which we refer to as "CDS", Clearstream Banking S.A., which we refer to as "Clearstream," or Euroclear Bank S.A./N.V., as operator of the Euroclear System, which we refer to as "Euroclear," either directly if you are a participant in CDS, Clearstream or Euroclear or indirectly through organizations which are participants in CDS, Clearstream or Euroclear. CDS, Clearstream and Euroclear will hold interests on behalf of their respective participants through customers' securities accounts in the names of CDS, Clearstream and Euroclear, respectively, on the books of their respective U. S. depositories (if applicable), which in turn will hold such interests in customers' securities accounts in such depositories' names on DTC's books.

CDS, Clearstream and Euroclear are securities clearance systems in Canada (CDS) and Europe (Clearstream and Euroclear). CDS, Clearstream and Euroclear hold securities for their respective participating organizations and facilitate the clearance and settlement of securities transactions between those participants through electronic book-entry changes in their accounts, thereby eliminating the need for physical movement of certificates.

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Payments, deliveries, transfers, exchanges, notices and other matters relating to beneficial interests in global securities owned through CDS, Euroclear or Clearstream must comply with the rules and procedures of those systems. Transactions between participants in CDS, Euroclear or Clearstream, on one hand, and other participants in DTC, on the other hand, are also subject to DTC's rules and procedures.

Investors will be able to make and receive through CDS, Euroclear and Clearstream payments, deliveries, transfers and other transactions involving any beneficial interests in global securities held through those systems only on days when those systems are open for business. Those systems may not be open for business on days when banks, brokers and other institutions are open for business in the United States.

Cross-market transfers between participants in DTC, on the one hand, and participants in CDS, Euroclear or Clearstream, on the other hand, will be effected through DTC in accordance with the DTC's rules on behalf of CDS, Euroclear or Clearstream, as the case may be, by their respective U. S. depositories (if applicable); however, such cross-market transactions will require delivery of instructions to CDS, Euroclear or Clearstream, as the case may be, by the counterparty in such system in accordance with the rules and procedures and within the established deadlines (if applicable) of such system. CDS, Euroclear or Clearstream, as the case may be, will, if the transaction meets its settlement requirements and if applicable, deliver instructions to its U. S. depository to take action to effect final settlement on its behalf by delivering or receiving interests in the global securities through DTC, and making or receiving payment in accordance with normal procedures for same-day fund settlement. If applicable, participants in CDS, Euroclear or Clearstream may not deliver instructions directly to their respective U. S. depositories.

Due to time zone differences, the securities accounts of a participant in Euroclear or Clearstream purchasing an interest in a global security from a direct participant in DTC will be credited, and any such crediting will be reported to the relevant participant in Euroclear or Clearstream, during the securities settlement processing day (which must be a business day for Euroclear or Clearstream) immediately following the settlement date of DTC. Cash received in Euroclear or Clearstream as a result of sales of interests in a global security by or through a participant in Euroclear or Clearstream to a direct participant in DTC will be received with value on the settlement date of DTC but will be available in the relevant Euroclear or Clearstream cash account only as of the business day for Euroclear or Clearstream following DTC's settlement date.

Other

The information in this section of this prospectus concerning DTC, CDS, Clearstream, Euroclear and their respective book-entry systems has been obtained from sources that we believe to be reliable, but we do not take responsibility for this information. This information has been provided solely as a matter of convenience. The rules and procedures of DTC, CDS, Clearstream and Euroclear are solely within the control of those organizations and could change at any time. Neither we nor the trustee nor any agent of ours or of the trustee has any control over those entities and none of us takes any responsibility for their activities. You are urged to contact DTC, CDS, Clearstream and Euroclear or their respective participants directly to discuss those matters. In addition, although we expect that DTC, CDS, Clearstream and Euroclear will perform the foregoing procedures, none of them is under any obligation to perform or continue to perform such procedures and such procedures may be discontinued at any time. Neither we nor any agent of ours will have any responsibility for the performance or nonperformance by DTC, CDS, Clearstream and Euroclear or their respective participants of these or any other rules or procedures governing their respective operations.

PLAN OF DISTRIBUTION

We may sell securities to or through underwriters or dealers, and also may sell securities to one or more other purchasers directly or through agents, including sales pursuant to ordinary brokerage transactions and transactions in which a broker-dealer solicits purchasers. Underwriters may sell securities to or through dealers. Each prospectus supplement for a particular offering of securities will set forth the terms of the offering, including:

- the name or names of any underwriters, dealers, or agents;
- the purchase price of, and form of consideration for, the securities and the proceeds to us;
- any delayed delivery arrangements;
- any underwriting commissions, fees, discounts and other items constituting underwriters' compensation;
- the offering price for the securities (or the manner of determination of the offering price if offered on an non-fixed price basis);
- any discounts or concessions allowed or re-allowed or paid to dealers;
- the expected delivery date of the sale of the offered securities; and
- any securities exchanges on which the securities may be listed.

The securities may be sold, from time to time, in one or more transactions at a fixed price or prices that may be changed or at market prices prevailing at the time of sale, at prices related to such prevailing market prices, at varying prices determined at the time of sale, or at negotiated prices, including sales made directly on NASDAQ or other existing trading markets for the securities. We may engage in at-the-market offerings of our securities. The prices at which the securities may be offered may vary as between purchasers and during the period of distribution. If, in connection with the offering of securities at a fixed price or prices, the underwriters have made a *bona fide* effort to sell all of the securities at the initial offering price fixed in the applicable prospectus supplement, the public offering price may be decreased and thereafter further changed, from time to time, to an amount not greater than the initial public offering price fixed in such prospectus supplement, in which case the compensation realized by the underwriters will be decreased by the amount that the aggregate price paid by purchasers for the securities is less than the gross proceeds paid by the underwriters to us.

Underwriters, dealers and agents who participate in the distribution of the securities may be entitled under agreements to be entered into with us to indemnification by us against certain liabilities, including liabilities under the Securities Act of 1933, or to contribution with respect to payments that such underwriters, dealers or agents may be required to make in respect thereof. Such underwriters, dealers and agents may be customers of, engage in transactions with, or perform services for us in the ordinary course of business.

In connection with any offering of securities, other than an at-the-market offering, the underwriters may over-allot or effect transactions that stabilize or maintain the market price of the securities offered at a level above that which might otherwise prevail in the open market. Such transactions, if commenced, may be discontinued at any time.

MATERIAL INCOME TAX CONSIDERATIONS

The applicable prospectus supplement may describe material U. S. federal income tax consequences of the acquisition, ownership and disposition of any of the securities offered by this prospectus by an investor who is subject to U. S. federal taxation.

The applicable prospectus supplement may also describe material Canadian federal income tax considerations generally applicable to investors described therein of purchasing, holding and disposing of the applicable securities, including, in the case of an investor who is not a resident of Canada, Canadian non-resident withholding tax considerations.

LEGAL MATTERS

Unless otherwise specified in a prospectus supplement, certain legal matters relating to the securities will be passed upon for us by Dorsey & Whitney LLP, Vancouver, B. C., and Seattle, Washington, with respect to matters of United States law, and McCarthy Tétrault LLP, Toronto, Ontario, with respect to matters of Canadian law.

EXPERTS

Our consolidated financial statements as of December 31, 2018 and December 31, 2017 and for each of the years in the two-year period ended December 31, 2018, have been audited by KPMG LLP as set forth in their reports thereon and incorporated herein by reference.

Such consolidated financial statements have been incorporated by reference herein in reliance upon the report of KPMG LLP, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We are subject to the information requirements of the Exchange Act and, accordingly, we file reports with and furnish other information to the SEC. We have filed with the SEC a registration statement on Form S-3 under the Securities Act of 1933 with respect to the securities offered by this prospectus. This prospectus does not contain all of the information contained in the registration statement that we filed. For further information regarding us and the securities covered by this prospectus, you may desire to review the full registration statement, including its exhibits. The registration statement, including its exhibits, as well as the documents that we file with the SEC, may be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street, N.E., Room 1580, Washington, D. C. 20549. You may obtain information on the operation of the public reference room by calling 1-800-SEC-0330. Copies of such materials are also available by mail from the Public Reference Branch of the SEC at 100 F Street, N.E., Washington, D. C. 20549 at prescribed rates. In addition, the SEC maintains a website (<http://www.sec.gov>) from which interested persons can electronically access the registration statement, including the exhibits to the registration statement.

INCORPORATION BY REFERENCE

The SEC allows us to “incorporate by reference” information we file with the SEC. This means that we can disclose important information to you by referring you to those documents.

We incorporate by reference into this prospectus the documents listed below:

- (a) our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on March 12, 2019;
- (b) all other reports filed by us pursuant to Section 13(a) or 15(d) of the Exchange Act since December 31, 2018; and
- (c) 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 documents filed by us under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of this prospectus but before the termination of the offering of the securities covered by this prospectus, are hereby incorporated by reference into this prospectus.

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We have not authorized anyone to provide you with any different or additional information other than that contained in or incorporated by reference into this prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any information that others may provide.

Any statement contained in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

The documents incorporated by reference into this prospectus are available from us upon request. We will provide a copy of any and all of the information that is incorporated by reference into this prospectus to any person, including a beneficial owner, to whom a prospectus is delivered, without charge, upon written or oral request. If exhibits to the documents incorporated by reference into this prospectus are not themselves specifically incorporated by reference in this prospectus, then the exhibits will not be provided.

Requests for any of these documents should be directed to:

Investor Relations
Aptose Biosciences Inc.
251 Consumers Road, Suite 1105
Toronto, Ontario, Canada M2J 4R3
(647)479-9828



\$12,073,999 of

Common Shares

Prospectus

May 1, 2019