**Filed Pursuant to General Instruction II.L of Form F-10**
**File No. 333-222909**

*No securities regulatory authority has expressed an opinion about these securities and it is an offence to claim otherwise.*

*This prospectus supplement, together with the short form base shelf prospectus dated March 7, 2018 to which it relates, as amended or supplemented, and each document incorporated or deemed to be incorporated by reference in the short form base shelf prospectus, constitutes a public offering of securities offered pursuant hereto only in the jurisdictions where they may be lawfully offered for sale and therein only by persons permitted to sell such securities. See "**Plan of Distribution**".*

***Information has been incorporated by reference in this prospectus supplement from documents filed with securities commissions or similar authorities in Canada.** Copies of the documents incorporated herein by reference may be obtained on request without charge from the Director of Finance of the Company at 5955 Airport Road, Suite 228, Mississauga, Ontario, Canada L4V 1R9, telephone (647) 479-9828, and are also available electronically at www.sedar.com.*

**PROSPECTUS SUPPLEMENT**
**To the Short Form Base Shelf Prospectus Dated March 7, 2018**

New Issue March 28, 2018

# APTOSE BIOSCIENCES INC.

## $30,000,000

## Common Shares

Aptose Biosciences Inc. ("**Aptose**", the "**Company**", "**we**", "**us**", "**our**" or similar terms) has entered into a Controlled Equity OfferingSM Sales Agreement (the "**Sales Agreement**") with Cantor Fitzgerald & Co. ("**Cantor Fitzgerald**") relating to the sale of our common shares (the "**Common Shares**") offered by this prospectus supplement and the accompanying prospectus. Under this prospectus supplement we may offer and sell our Common Shares having an aggregate offering price of up to $30,000,000 (the "**Offering**").

Our Common Shares are listed and posted for trading on the Toronto Stock Exchange (the "**TSX**") under the symbol "APS" and on the Nasdaq Capital Market (the "**Nasdaq**") under the symbol "**APTO**". On March 27, 2018, the last trading day before the date hereof, the closing price of the Common Shares on the TSX was CDN$4.29 and the closing price of the Common Shares on the Nasdaq was $3.32.

Upon delivery of a placement notice by us, if any, Cantor Fitzgerald may sell the Common Shares in the United States only and such sales will only be made by transactions that are deemed to be "at-the-market" distributions as defined in Rule 415 of the United States Securities Act of 1933, as amended (the "**Securities Act**"), including, sales made directly on Nasdaq, or on any other existing trading market for the Common Shares in the United States. No Common Shares will be offered or sold in Canada. Cantor Fitzgerald will make all sales using commercially reasonable efforts consistent with its normal sales and trading practices and on mutually agreed upon terms between Cantor Fitzgerald and us. The Common Shares will be distributed at the market prices prevailing on the Nasdaq at the time of the sale of such Common Shares. As a result, prices may vary as between purchasers and during the period of distribution.

**We are permitted, under a multi-jurisdictional disclosure system adopted by the United States and Canada, to prepare this prospectus supplement in accordance with Canadian disclosure requirements. The financial statements included or incorporated herein have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS"), and thus may not be comparable to financial statements of United States companies. Prospective investors should be aware that such requirements are different from those of the United States. The ability of prospective investors to enforce civil liabilities under United States federal securities laws may be affected adversely by the fact that we are incorporated under the laws of Canada, that many of our directors and officers and the experts named in this prospectus supplement 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.**

**Prospective investors should be aware that the purchase of Common Shares may have tax consequences, both in the United States and Canada, which may not be fully described herein or in the accompanying prospectus. Prospective investors should read the tax discussion in this prospectus supplement and consult with an independent tax advisor. See the sections entitled "*Certain Canadian Federal Income Tax Considerations*" and "*Material U.S. Federal Income Taxation Considerations*".**

**THESE COMMON SHARES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION (THE "SEC") 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 SUPPLEMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENCE.**

**Cantor Fitzgerald is not registered as an investment dealer in any Canadian jurisdiction and, accordingly, Cantor Fitzgerald will only sell the Common Shares into the United States and will not, directly or indirectly, solicit offers to purchase or sell the Common Shares in Canada.**

The compensation to Cantor Fitzgerald for sales of our Common Shares under this prospectus supplement will be equal to 3.0% of the gross proceeds from the sale of such Common Shares. See "*Plan of Distribution*". In connection with the sale of the Common Shares on our behalf, Cantor Fitzgerald will be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation of Cantor Fitzgerald will be deemed to be underwriting commissions or discounts.

Nasdaq has also approved listing of the Common Shares subject to our fulfillment of all of the requirements of the Nasdaq. The TSX has accepted notice of the Offering and we are relying on the exemption included in section 602.1 of the TSX Company Manual.

**Investing in our securities involves risks, including those that are described in the "*Risk Factors*" section in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein, as well as the information under the heading "*Cautionary Note Regarding Forward Looking Information*" in this prospectus supplement, and prospective investors should consider such notes and information in connection with an investment in any securities.**

Dr. William G. Rice, President, Chief Executive Officer and Chairman of the Board of Directors of the Company, Gregory K. Chow, Senior Vice President and Chief Financial Officer of the Company, Dr. Denis Burger, a director of the Company and Dr. Erich Platzer, a director of the Company, all reside outside of Canada and have appointed Aptose Biosciences Inc., 5955 Airport Road, Suite 228, Mississauga, Ontario, Canada L4V 1R9, as agent for service of process. Purchasers are advised that it may not be possible for investors to enforce judgments obtained in Canada against any person or company that is incorporated, continued or otherwise organized under the laws of a foreign jurisdiction or resides outside of Canada, even if the party has appointed an agent for service of process.

Our head and registered offices are located at 5955 Airport Road, Suite 228, Mississauga, Ontario L4V 1R9, Canada (telephone:(647) 479-9828).

Neither Cantor Fitzgerald, any affiliate of Cantor Fitzgerald nor any person or company acting jointly or in concert with Cantor Fitzgerald, has over allotted, or will over allot, the Common Shares in connection with this Offering or effect any other transactions that are intended to stabilize or maintain the market price of the Common Shares.

**In this prospectus supplement, unless stated otherwise or the context requires, all dollar amounts are expressed in U.S. dollars.**

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### PROSPECTUS SUPPLEMENT



### PROSPECTUS

## IMPORTANT NOTICE

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of the securities we are offering and the method of distribution of those securities and also supplements and updates information regarding us contained in the accompanying base shelf prospectus. The second part, the accompanying prospectus, gives more general information about securities we may offer from time to time, some of which may not apply to the Offering. Both documents contain important information you should consider when making your investment decision. This prospectus supplement may add, update or change information contained in the accompanying prospectus. Before investing, you should carefully read both this prospectus supplement and the accompanying prospectus together with the additional information about us to which we refer you in the sections of this prospectus supplement entitled "*Documents Incorporated by Reference*" and "*Where You Can Find More Information*".

You should rely only on information contained in this prospectus supplement, the accompanying prospectus and the documents we incorporate by reference in this prospectus supplement and the accompanying prospectus. If information in this prospectus supplement is inconsistent with the accompanying prospectus or the information incorporated by reference, you should rely on this prospectus supplement. We have not authorized anyone to provide you with information that is different. If anyone provides you with any different or inconsistent information, you should not rely on it. We are offering the Common Shares only in jurisdictions where such offers are permitted by law. The information contained in this prospectus supplement and the accompanying prospectus is accurate only as of their respective dates, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus and you should not assume otherwise.

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 into this prospectus supplement and 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 or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

## ABOUT THIS PROSPECTUS SUPPLEMENT

This document is part of a "shelf" registration statement on Form F-10, as amended, that we filed with the SEC. The shelf registration statement was declared effective by the SEC on March 14, 2018. This prospectus supplement does not contain all of the information contained in the registration statement, certain parts of which are omitted in accordance with the rules and regulations of the SEC. You should refer to the registration statement and the exhibits to the registration statement for further information with respect to us and our securities.

In this prospectus supplement, unless stated otherwise or the context requires, all dollar amounts are expressed in U.S. dollars. All references to "$ or "US$" are to the lawful currency of the United States and all references to "CDN$" are to the lawful currency of Canada. This prospectus supplement and the documents incorporated by reference contain translations of some Canadian dollar amounts into U.S. dollars solely for your convenience. See the section entitled "*Financial Statements and Exchange Rate Information*".

In this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, unless the context otherwise requires, references to "we", "us", "our" or similar terms, as well as references to "Aptose" or the "Company", refer to Aptose Biosciences Inc., together with its subsidiaries.

This prospectus supplement is deemed to be incorporated by reference into the accompanying prospectus solely for the purposes of the Offering. Other documents are also incorporated or deemed to be incorporated by

reference into this prospectus supplement and into the accompanying prospectus. See the section entitled "*Documents Incorporated by Reference*".

## CAUTIONARY NOTE REGARDING FORWARD LOOKING INFORMATION

This prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein contain 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. See the section of the accompanying prospectus entitled "Forward-Looking Statements" and similarly entitled sections in the documents incorporated by reference into this prospectus supplement.

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 supplement 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 reviseforward-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.**

## DOCUMENTS INCORPORATED BY REFERENCE

**Information has been incorporated by reference in the prospectus supplement from documents filed with the securities commissions or similar authorities in Canada.** Copies of the documents incorporated herein by reference may be obtained on request, without charge, from the Director of Finance of the Company at 5955 Airport Road, Suite 228, Mississauga, Ontario, Canada L4V 1R9 (telephone (647) 479-9828), and are also available electronically at www.sedar.com.

The following documents of the Company filed with the securities commissions or similar authorities in the provinces of British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador are specifically incorporated by reference in this prospectus supplement:

(i) the annual audited consolidated financial statements of the Company and the notes thereto for the years ended December 31, 2017 and 2016, together with the auditor's report thereon;

(ii) the management's discussion and analysis of the Company for the year ended December 31, 2017;

(iii) the annual information form for the year ended December 31, 2017;

(iv) the management proxy circular of Aptose dated April 18, 2017, with respect to the annual meeting of the shareholders of Aptose held on June 6, 2017; and

(v) the material change report dated March 8, 2018 relating to the exclusive global license agreement between Aptose and OHM Oncology.

**Any documents of the type required by National Instrument 44-101 – *Short Form Prospectus Distributions* to be incorporated by reference in a short form prospectus including any material change reports (excluding any confidential material change reports), comparative interim financial statements, comparative annual financial statements and the auditor's report thereon, information circulars, annual information forms and business acquisition reports filed by the Company with a securities commission or similar regulatory authority in Canada on or after the date of this prospectus supplement and prior to the termination of the distribution under this prospectus supplement shall be deemed to be incorporated by reference into this prospectus supplement.** In addition, to the extent that any document or information incorporated by reference into this prospectus supplement is included in any report on Form 6-K, Form 40-F, Form 20-F, Form 10-K, Form 10-Q or Form 8-K (or any respective successor form) that is filed with or furnished to the SEC after the date of this prospectus supplement, that document or information shall be deemed to be incorporated by reference as an exhibit to the registration statement of which this prospectus supplement forms a part (in the case of Form 6-K and Form 8-K, if and to the extent set forth therein). We may also incorporate other information filed with or furnished to the SEC under the *United States Securities Exchange Act* of 1934, as amended (the "**Exchange Act**"), provided that information included in any report onForm 6-K or Form 8-K shall be so deemed to be incorporated by reference only if and to the extent expressly provided in such Form 6-K or Form 8-K.

Upon a new renewal annual information form and the related annual financial statements and management's discussion and analysis of financial condition and results of operations being filed by the Company with, and, where required, accepted by the applicable securities regulatory authorities during the currency of the prospectus supplement, the previous annual information form, the previous annual financial statements and all quarterly financial statements, material change reports and information circulars filed prior to the commencement of the Company's financial year in which the new renewal annual information form is filed shall be deemed no longer to be incorporated into this prospectus supplement for purposes of future offerings of securities under the prospectus supplement.

**Any statement contained in the prospectus supplement or in a document incorporated or deemed to be incorporated by reference in the prospectus supplement shall be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference in the prospectus supplement modifies or supersedes such statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document that it modifies or supersedes. The making of such a modifying or superseding statement shall not be deemed an admission for any purposes that the modified or superseded statement, when made, constituted a misrepresentation, an untrue statement of a material fact or an omission to state a material fact that is required to be stated or that is necessary to make a statement not misleading in light of the circumstances in which it was made. Only the modifying or superseding statement shall be deemed to constitute a part of this prospectus supplement.**

This prospectus supplement is being filed under legislation in the provinces of British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador that permits certain information to be incorporated by reference in this prospectus supplement and the accompanying prospectus. For more information regarding the Company and the Common Shares, please refer to the documents incorporated by reference into this prospectus supplement and the accompanying prospectus.

## DOCUMENTS FILED AS PART OF THE REGISTRATION STATEMENT

In addition to the documents referred to under the section entitled "*Documents Incorporated by Reference*" and in the section of the accompanying prospectus entitled "*Documents Filed As Part of the Registration Statement*", the following document has been or will be filed with the SEC as part of the registration statement of which this prospectus supplement forms a part: the form of Sales Agreement with Cantor Fitzgerald described in this prospectus supplement.

## THE COMPANY

Aptose is a science-driven biotechnology company advancing highly differentiated agents to treat unmet medical needs inlife-threatening cancers, such as acute myeloid leukemia, high-risk myelodysplastic syndromes, 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.

Aptose has two main programs. CG026806 ("**CG'806**"), Aptose's pan-FLT3 / pan-Bruton's tyrosine kinase inhibitor, is currently in late preclinical development and moving toward investigational new drug ("**IND**") submission. Development of CG'806 is intended for the treatment of patients with relapsed / refractory AML and patients having certain B-cell malignancies. APTO-253 is Aptose's second program 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 United States Food and Drug Administration ("**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 is currently on clinical hold by the FDA.

## THE OFFERING

| | |
|---|---|
| Common shares offered by us | Common shares having an aggregate offering price of up to $30,000,000. |
| Manner of Offering | "At-the-market" offering that may be made from time to time through our sales agent, Cantor Fitzgerald. See the section entitled "*Plan of Distribution*" on page S-7 of this prospectus supplement. |
| Use of Proceeds | We intend to use the net proceeds from this Offering as described under the heading "*Use of Proceeds*" in this prospectus supplement. We may use all or a portion of the net proceeds to (i) subject to receiving IND approval from the FDA, initiate, accelerate and expand clinical trials for CG'806; (ii) initiate, accelerate and expand our clinical trials for APTO-253 provided the clinical hold is lifted by the FDA; (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. |
| Risk Factors | Investing in our Common Shares involves a high degree of risk. Please read the information contained in and incorporated by reference under the sections entitled "*Risk Factors*" beginning on page S-9 of this prospectus supplement and page 24 of the accompanying prospectus, and under similar headings in the other documents that are filed after the date hereof and incorporated by reference into this prospectus supplement. |
| Nasdaq Symbol | "APTO" |
| TSX Symbol | "APS" |

Cantor Fitzgerald may sell the Common Shares in the United States only and such sales will only be made by transactions that are deemed to be "at-the-market" distributions as defined in Rule 415 of the Securities Act, including, without limitation, sales made directly on Nasdaq, or on any other existing trading market for the Common Shares in the United States. No Common Shares will be offered or sold in Canada.

## CONSOLIDATED FINANCIAL STATEMENTS AND EXCHANGE RATE INFORMATION

The consolidated financial statements incorporated by reference into this prospectus supplement and the financial data derived from those consolidated financial statements included in this prospectus supplement are presented in United States dollars, unless otherwise specified, and have been prepared in accordance with IFRS.

On March 27, 2018, the closing exchange rate for one Canadian dollar, expressed in United States dollars, as reported by the Bank of Canada, was CDN$1.00 = US$0.7771.

## CONSOLIDATED CAPITALIZATION

There have been no material changes in the consolidated capitalization of the Company since December 31, 2017, which have not been disclosed in the prospectus supplement or the documents incorporated by reference herein.

## TRADING PRICE AND VOLUME

The following table sets forth the reported high and low sales prices in Canadian dollars and the cumulative volume of trading of our Common Shares on the TSX for the periods indicated below:

| | Price Ranges | | |
|---|---|---|---|
| | High (CDN$) | Low (CDN$) | Trading Volumes |
| March 2017 | 1.82 | 1.35 | 924,968 |
| April 2017 | 1.38 | 1.05 | 1,264,036 |
| May 2017 | 1.79 | 1.16 | 1,901,623 |
| June 2017 | 2.20 | 1.36 | 1,009,177 |
| July 2017 | 2.19 | 1.63 | 1,070,017 |
| August 2017 | 2.20 | 1.69 | 592,046 |
| September 2017 | 2.12 | 1.69 | 1,250,418 |
| October 2017 | 2.07 | 1.64 | 595,242 |
| November 2017 | 2.92 | 1.95 | 1,484,171 |
| December 2017 | 3.00 | 2.17 | 1,048,398 |
| January 2018 | 4.80 | 2.69 | 1,965,384 |
| February 2018 | 3.71 | 3.16 | 667,313 |
| March 1-27, 2018 | 5.18 | 3.46 | 1,057,747 |

The following table sets forth the reported high and low sales prices in US dollars and the cumulative volume of trading of our Common Shares on NASDAQ for the periods indicated below:

| | Price Ranges | | |
|---|---|---|---|
| | High ($) | Low ($) | Trading Volumes |
| March 2017 | 1.37 | 1.01 | 9,984,969 |
| April 2017 | 1.05 | 0.78 | 4,648,218 |
| May 2017 | 1.32 | 0.86 | 12,405,311 |
| June 2017 | 1.70 | 1.00 | 10,651,964 |
| July 2017 | 1.75 | 1.25 | 8,193,357 |
| August 2017 | 1.75 | 1.36 | 5,057,911 |
| September 2017 | 1.75 | 1.38 | 7,204,650 |
| October 2017 | 1.61 | 1.30 | 6,255,650 |
| November 2017 | 2.30 | 1.50 | 8,801,894 |
| December 2017 | 2.58 | 1.68 | 15,383,437 |
| January 2018 | 3.90 | 2.15 | 11,914,539 |
| February 2018 | 3.03 | 2.51 | 5,609,507 |
| March 1-27, 2018 | 3.97 | 2.68 | 9,180,875 |

## PRIOR SALES

On April 2, 2015, we entered into an at-the-market ("**ATM**") equity facility with Cowen and Company, LLC, acting as sole agent. Under the terms of the ATM, Aptose was permitted to, from time to time, sell Common Shares having an aggregate offering value of up to $20,000,000 on NASDAQ. We issued a total of 10,592,093 Common Shares at prices ranging between $2.20 and $0.80 under the ATM during the 12-month period prior to the date of this prospectus supplement. The ATM expired on December 29, 2017 and as at that date the Company had issued a cumulative $20,000,000 of Common Shares pursuant to this facility.

On October 27, 2017, we entered into a Common Shares Purchase Agreement (the "**Aspire Purchase Agreement**") with Aspire Capital Fund, LLC ("**Aspire Capital**") to sell up to $15.5 million of Common Shares

to Aspire Capital. Under the terms of the Aspire Purchase Agreement, Aspire Capital has made an initial purchase of 357,143 Common Shares at a price of $1.40 per share, representing gross proceeds of approximately $500,000 ($324,000 net of share issue costs). Aspire Capital has committed to purchase up to an aggregate of $15.0 million of our Common Shares, at our request from time to time during a 30-month period beginning on the effective date of a registration statement related to the transaction and at prices based on the market price at the time of each sale. Under terms of the Aspire Purchase Agreement, we also issued 321,429 Common Shares to Aspire Capital as consideration for Aspire Capital entering into the Aspire Purchase Agreement. Between January 1, 2018 and March 27, 2018, we had issued an additional 3,200,000 Common Shares at prices ranging between $2.17 and $3.29 under the Aspire Purchase agreement for gross proceeds of approximately $8.9 million.

During the 12-month period prior to the date of this prospectus supplement, we granted the following securities pursuant to our stock incentive plan: (i) on March 28, 2017, we granted (A) options to purchase an aggregate of 480,000 Common Shares at a price of CDN$1.52 per Common Share, and (B) an aggregate of 150,000 restricted stock units which fully vested on June 28, 2017; (ii) on June 6, 2017, we granted options to purchase an aggregate of 191,250 Common Shares at a price of US$1.03 per Common Share; (iii) on June 6, 2017, we granted options to purchase an aggregate of 56,250 Common Shares at a price of CDN$1.38 per Common Share; (iv) on August 8, 2017, we granted options to purchase an aggregate of 32,500 Common Shares at a price of US$1.69 per Common Share; (v) on August 8, 2017, we granted options to purchase an aggregate of 20,000 Common Shares at a price of CDN$2.04 per Common Share; (vi) on November 14, 2017, we granted options to purchase an aggregate of 8,000 Common Shares at a price of US$2.05 per Common Share; and (vii) on December 4, 2017, we granted options to purchase an aggregate of 38,500 Common Shares at a price of US$2.01 per Common Share; (viii) on January 19, 2018, we granted options to purchase an aggregate of 670,000 Common Shares at a price of US$2.80 per Common Share; (ix) on January 19, 2018, we granted options to purchase an aggregate of 180,000 Common Shares at a price of CDN$3.52 per Common Share; (x) on January 22, 2018, we granted options to purchase an aggregate of 90,000 Common Shares at a price of CDN$3.84 per Common Share; and (xi) on January 22, 2018, we granted options to purchase an aggregate of 1,119,000 Common Shares at a price of US$3.07 per Common Share.

## USE OF PROCEEDS

The net proceeds from the Offering are not determinable in light of the nature of the distribution. The net proceeds of any given distribution of Common Shares in an "at-the-market" distribution will represent the gross proceeds after deducting the compensation payable under the Sales Agreement and expenses of the distribution. Cantor Fitzgerald will receive a cash fee equal to but not exceeding 3.0% of the aggregate gross proceeds realized from the sale of the Common Shares for services rendered in connection with the Offering. If we sell $30 million of Common Shares, we estimate the total expenses of this Offering, excluding the fees paid to Cantor Fitzgerald, will be approximately $300,000.

We intend to use the net proceeds of the Offering to (i) subject to receiving IND approval from the FDA, initiate, accelerate and expand clinical trials for CG'806; (ii) initiate, accelerate and expand our clinical trials for APTO-253 provided the clinical hold is lifted by the FDA; (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.

## PLAN OF DISTRIBUTION

We have entered into the Sales Agreement with Cantor Fitzgerald under which we may issue and sell our Common Shares having an aggregate gross sales price of up to $30 million from time to time through Cantor Fitzgerald acting as the agent.

Upon delivery of a placement notice and subject to the terms and conditions of the Sales Agreement, Cantor Fitzgerald may sell our Common Shares by any method permitted by law deemed to be an "at-the-market" offering as defined in Rule 415 of the Securities Act, including sales made directly on Nasdaq or other existing trading markets in the United States. We may instruct Cantor Fitzgerald not to sell Common Shares if the sales cannot be effected at or above the price designated by us from time to time. We or Cantor Fitzgerald may suspend the offering of Common Shares upon notice and subject to other conditions. No Common Shares will be distributed, offered or sold in Canada, including through the TSX or other trading markets in Canada. The Common Shares will be distributed at the market prices prevailing on the Nasdaq at the time of the sale of such Common Shares.

To compensate Cantor Fitzgerald for its services in acting as agent in the sale of the Common Shares, we will pay a cash commission equal to 3.0% of aggregate gross proceeds realized from the sale of the Common Shares. We will reimburse Cantor Fitzgerald for up to $50,000 of legal fees reasonably incurred for the Offering. Settlement for sales of Common Shares will occur on the second business day following the date on which any sales are made, or on some other date that is agreed upon by us and Cantor Fitzgerald in connection with a particular transaction, in return for payment of the net proceeds to us. Sales of our Common Shares as contemplated in this prospectus supplement will be settled through the facilities of The Depository Trust Company or by such other means as we and Cantor Fitzgerald may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

Cantor Fitzgerald will use its commercially reasonable efforts, consistent with its sales and trading practices, to solicit offers to purchase the Common Shares under the terms and subject to the conditions set forth in the Sales Agreement. In connection with the sale of the Common Shares on our behalf, Cantor Fitzgerald will be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation of Cantor Fitzgerald will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to Cantor Fitzgerald against certain civil liabilities, including liabilities under the Securities Act.

Cantor Fitzgerald is not registered as an investment dealer in any Canadian jurisdiction and, accordingly, Cantor Fitzgerald will only sell the Common Shares into the United States and will not, directly or indirectly, solicit offers to purchase or sell the Common Shares in Canada.

The offering of Common Shares pursuant to the Sales Agreement will terminate upon the earlier of (i) sale of all Common Shares subject to the Sales Agreement or (ii) termination of the Sales Agreement as permitted therein. We and Cantor Fitzgerald may also terminate the Sales Agreement at any time upon ten days' notice.

As sales agent, Cantor Fitzgerald will not engage in any transactions that stabilize the price of the Common Shares. No underwriter or dealer involved in the Offering, no affiliate of such an underwriter or dealer, and no person or company acting jointly or in concert with such an underwriter or dealer has over-allotted, or will over-allot, Common Shares in connection with the Offering or effect any other transactions that are intended to stabilize or maintain the market price of our Common Shares.

Nasdaq has also approved listing of the Common Shares subject to our fulfillment of all of the requirements of the Nasdaq. The TSX has accepted notice of the Offering and we are relying on the exemption included in section 602.1 of the TSX Company Manual.

Cantor Fitzgerald and its affiliates may in the future provide various investment banking, commercial banking and other financial services for Aptose and its affiliates, for which services they may in the future receive customary fees. To the extent required by under the Exchange Act, Cantor Fitzgerald will not engage in any market making activities involving our Common Shares while the Offering is ongoing under this prospectus supplement.

This prospectus supplement in electronic format may be made available on a website maintained by Cantor Fitzgerald, and Cantor Fitzgerald may distribute this prospectus supplement and the accompanying prospectus electronically.

## RISK FACTORS

*An investment in our Common Shares is highly speculative and subject to a number of known and unknown risks. Only those persons who can bear the risk of the entire loss of their investment should purchase our Common Shares. You should carefully consider the risk factors below, those in our annual information form for the fiscal year ended December 31, 2017 incorporated by reference herein, the other information contained in this prospectus supplement and the accompanying prospectus, as updated by our subsequent filings under Canadian securities laws, and the risk factors and other information contained in this prospectus supplement, before purchasing any of our Common Shares. Any of the matters highlighted in these risk factors could have a material adverse effect on our business, results of operations and financial condition, causing an investor to lose all, or part of, its, his or her investment.*

*The risks and uncertainties described in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein are not the only ones we face. Additional risks and uncertainties that we are not aware of or focused on, or that we currently deem to be immaterial, may also impair our business operations and cause the trading price of our Common Shares to decline.*

***We will have broad discretion as to the use of the proceeds from the Offering, and may not use the proceeds effectively.***

We will have broad discretion in the application of the net proceeds from the Offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our Common Shares. Failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our product candidates, and cause the price of our Common Shares to decline.

***Resales of our Common Shares in the public market during this Offering by our shareholders may cause the market price of our Common Shares to fall.***

We may issue Common Shares from time to time in connection with this Offering. The issuance from time to time of these Common Shares, or our ability to issue these Common Shares in this Offering, could result in re-sales of our Common Shares by our current shareholders concerned about the potential dilution of their holdings. In turn, these re-sales could have the effect of depressing the market price for our Common Shares.

***There may be future sales or other dilution of our equity, which may adversely affect the market price of our Common Shares.***

We are generally not restricted from issuing additional Common Shares, including any securities that are convertible into or exchangeable for, or that represent the right to receive, Common Shares. The market price of our Common Shares could decline as a result of sales of Common Shares or securities that are convertible into or exchangeable for, or that represent the right to receive, Common Shares after this Offering or the perception that such sales could occur.

***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.

## CERTAIN CANADIAN FEDERAL INCOME TAX CONSIDERATIONS

In the opinion of McCarthy Tétrault LLP, counsel to the Company, the following is, as of the date of this prospectus supplement, a summary of the principal Canadian federal income tax considerations under the *Income Tax Act* (Canada) ("**Tax Act**") and the regulations thereunder generally applicable to an investor who acquires as beneficial owner Common Shares pursuant to the Offering and who, for the purposes of the Tax Act and at all relevant times deals at arm's length with the Company and Cantor Fitzgerald, is not affiliated with the Company or Cantor Fitzgerald, is not exempt from tax under Part I of the Tax Act, and who acquires and holds the Common Shares, as capital property (a "**Holder**"). Generally, the Common Shares will be considered to be capital property to a Holder thereof provided that the Holder does not use the Common Shares in the course of carrying on a business of trading or dealing in securities and such Holder has not acquired them or been deemed to have acquired them in one or more transactions considered to be an adventure or concern in the nature of trade.

This summary is generally applicable to a Holder who, at all relevant times, for purposes of the Tax Act: (i) is not, and is not deemed to be, resident in Canada for the purposes of the Tax Act or any applicable income tax treaty or convention; and (ii) does not and will not use or hold, and is not and will not be deemed to hold, the Common Shares in connection with carrying on a business in Canada ("**Non-Resident Holders**"). This summary does not apply to a Holder that has or will enter into a "synthetic disposition arrangement" or "derivative forward agreement" (as such terms are defined in the Tax Act). Such Holders should consult their own tax advisors with respect to an investment in Common Shares.

This summary is based upon the current provisions of the Tax Act and the Regulations in force as of the date hereof and counsel's understanding of the administrative policies and assessing practices of the Canada Revenue Agency (the "**CRA**") published in writing by the CRA prior to the date hereof. This summary takes into account all specific proposals to amend the Tax Act and the Regulations publicly announced by or on behalf of the Minister of Finance (Canada) prior to the date hereof (the "**Tax Proposals**") and assumes that the Tax Proposals will be enacted in the form proposed, although no assurance can be given that the Tax Proposals will be enacted in their current form or at all.

Other than the Tax Proposals, this summary does not otherwise take into account or anticipate any changes in law, whether by legislative, governmental, administrative or judicial decision or action, nor does it take into account or consider any provincial, territorial or foreign income tax considerations, which considerations may differ significantly from the Canadian federal income tax considerations discussed in this summary. This summary also does not take into account any change in the administrative policies or assessing practices of the CRA.

**This summary is of a general nature only, is not exhaustive of all possible Canadian federal income tax considerations and is not intended to be, nor should it be construed to be, legal or tax advice to any particular Holder. Holders should consult their own tax advisors with respect to their particular circumstances.**

*Currency*

For purposes of the Tax Act, all amounts relating to the acquisition, holding or disposition of the Common Shares (including dividends, adjusted cost base and proceeds of disposition) must be expressed in Canadian dollars based on the daily noon rate as quoted by the Bank of Canada for the applicable day or such other rate of exchange that is acceptable to the CRA.

*Dividends*

Dividends paid or credited or deemed to be paid or credited to aNon-Resident Holder by the Company are subject to Canadian withholding tax at the rate of 25% on the gross amount of the dividend unless such rate is

reduced by the terms of an applicable tax treaty. For example, under the *Canada-United States Tax Convention* (1980), as amended (the "**Treaty**"), the rate of withholding tax on dividends paid or credited to a beneficially entitled Non-Resident Holder who is resident in the U.S. for purposes of the Treaty and who is fully entitled to the benefits of the Treaty (a "**U.S. Holder**") is generally limited to 15% of the gross amount of the dividend (or 5% in the case of a U.S. Holder that is a corporation beneficially owning at least 10% of the Company's voting shares). Non-Resident Holders are urged to consult their own tax advisors to determine their entitlement to relief under an applicable income tax treaty.

*Dispositions of Common Shares*

Upon a disposition (or a deemed disposition) of a Common Share (other than to the Company unless purchased by the Company in the open market in the manner in which shares are normally purchased by any member of the public in the open market), a Non-Resident Holder generally will realize a capital gain (or a capital loss) equal to the amount by which the proceeds of disposition of such security, as applicable, net of any reasonable costs of disposition, are greater (or are less) than the adjusted cost base of such security to the Non-Resident Holder.

A Non-Resident Holder generally will not be subject to tax under the Tax Act in respect of a capital gain realized on the disposition or deemed disposition of a Common Share, unless the Common Share constitutes "taxable Canadian property" to the Non-Resident Holder thereof for purposes of the Tax Act, and the Non-Resident Holder is not entitled to relief under the terms of an applicable tax treaty. In addition, capital losses arising on the disposition or deemed disposition of a Common Share will not be recognized under the Tax Act, unless the Common Share constitutes "taxable Canadian property" to the Non-Resident Holder thereof for purposes of the Tax Act, and the Non-Resident Holder is not entitled to relief under the terms of an applicable tax treaty.

Provided the Common Shares are listed on a "designated stock exchange", as defined in the Tax Act (which currently includes the NASDAQ and TSX), at the time of disposition, the Common Shares generally will not constitute taxable Canadian property of a Non-Resident Holder at that time, unless at any time during the 60 month period immediately preceding the disposition the following two conditions are met concurrently: (i) one or any combination of (a) the Non-Resident Holder, (b) persons with whom the Non-Resident Holder did not deal at arm's length, or (c) partnerships in which the Non-Resident Holder or a person with whom the Non-Resident Holder did not deal at arm's length held a membership interest directly or indirectly through one or more partnerships owned 25% or more of the issued shares of any class or series of shares of the Company; and (ii) more than 50% of the fair market value of the shares of the Company was derived directly or indirectly from one or any combination of (a) real or immovable property situated in Canada, (b) "Canadian resource properties" (as defined in the Tax Act), (c) "timber resource properties" (as defined in the Tax Act) or (d) an option, an interest or right in any of the foregoing property, whether or not such property exists. Notwithstanding the foregoing, a Common Share may otherwise be deemed to be taxable Canadian property to a Non-Resident Holder for purposes of the Tax Act.

Non-Resident Holders whose Common Shares are taxable Canadian property should consult their own tax advisors.

## MATERIAL U.S. FEDERAL INCOME TAXATION CONSIDERATIONS

The following discussion is limited to certain material U.S. federal income tax considerations relating to the purchase, ownership and disposition of the Common Shares by U.S. Holders (as defined below) who purchase Common Shares under the Offering. This discussion applies to U.S. Holders that hold Common Shares as capital assets. This summary is for general information purposes only and does not purport to be a complete analysis or listing of all potential U.S. federal income tax considerations that may apply to a U.S. Holder arising from and relating to the acquisition, ownership, and disposition of Common Shares. Except as discussed below, this summary does not discuss tax reporting requirements. Accordingly, this summary is not intended to be, and should not be construed as, legal or U.S. federal income tax advice with respect to any U.S. Holder.

No legal opinion from U.S. legal counsel or ruling from the Internal Revenue Service (the "**IRS**") has been requested, or will be obtained, regarding the U.S. federal income tax consequences of the acquisition, ownership, and disposition of Common Shares. This summary is not binding on the IRS, and the IRS is not precluded from taking a position that is different from, and contrary to, the positions taken in this summary. In addition, because the authorities on which this summary is based are subject to various interpretations, the IRS and the U.S. courts could disagree with one or more of the conclusions described in this summary.

This discussion is based on the U.S. Internal Revenue Code of 1986, as amended (the "**Code**"), U.S. Treasury regulations promulgated thereunder and administrative and judicial interpretations thereof, all as in effect on the date hereof and all of which are subject to change, possibly with retroactive effect. This summary does not discuss the potential effects, whether adverse or beneficial, of any proposed legislation.

This discussion does not address all of the U.S. federal income tax considerations that may be relevant to specific U.S. Holders in light of their particular circumstances or to U.S. Holders subject to special treatment under U.S. federal income tax law (such as certain financial institutions, insurance companies, broker-dealers and traders in securities or other persons that generally mark their securities to market for U.S. federal income tax purposes, tax-exempt entities, retirement plans, regulated investment companies, real estate investment trusts, certain former citizens or residents of the United States, persons who hold Common Shares as part of a "straddle", "hedge", "conversion transaction", "synthetic security" or integrated investment, persons that have a "functional currency" other than the U.S. dollar, persons that own (or are deemed to own) 10% or more (by voting power or value) of Common Shares, corporations that accumulate earnings to avoid U.S. federal income tax, persons required to accelerate the recognition of any item of gross income with respect to Common Shares as a result of such income being recognized on an applicable financial statement, and partnerships and other pass-through entities, and investors in such pass-through entities). This discussion does not address any U.S. state or local ornon-U.S. tax considerations or any U.S. federal estate, gift or alternative minimum tax considerations. In addition, except as specifically set forth below, this summary does not discuss applicable tax reporting requirements.

As used in this discussion, the term "U.S. Holder" means a beneficial owner of the Common Shares that is, for U.S. federal income tax purposes, (1) an individual who is a citizen or resident of the United States, (2) a corporation (or entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof, or the District of Columbia, (3) an estate the income of which is subject to U.S. federal income tax regardless of its source or (4) a trust (x) with respect to which a court within the United States is able to exercise primary supervision over its administration and one or more United States persons have the authority to control all of its substantial decisions or (y) that has elected under applicable U.S. Treasury regulations to be treated as a domestic trust for U.S. federal income tax purposes.

If an entity treated as a partnership for U.S. federal income tax purposes holds the Common Shares, the U.S. federal income tax considerations relating to an investment in the Common Shares will depend in part upon the status and activities of such entity and the particular partner. Any such entity should consult its own tax advisor regarding the U.S. federal income tax considerations applicable to it and its partners of the purchase, ownership and disposition of the Common Shares.

Persons holding Common Shares should consult their own tax advisors as to the particular tax considerations applicable to them relating to the purchase, ownership and disposition of Common Shares, including the applicability of U.S. federal, state and local tax laws and non-U.S. tax laws.

**Distributions**

Subject to the discussion below under "*Passive Foreign Investment Company Considerations*", a U.S. Holder that receives a distribution with respect to the Common Shares generally will be required to include the gross amount of such distribution (before reduction for any Canadian withholding taxes) in gross income as a dividend

when actually or constructively received to the extent of the U.S. Holder's pro rata share of our current and/or accumulated earnings and profits (as determined under U.S. federal income tax principles). To the extent a distribution received by a U.S. Holder is not a dividend because it exceeds the U.S. Holder's *pro rata* share of our current and accumulated earnings and profits, it will be treated first as a tax-free return of capital and reduce (but not below zero) the adjusted tax basis of the U.S. Holder's Common Shares. To the extent the distribution exceeds the adjusted tax basis of the U.S. Holder's Common Shares, the remainder will be taxed as capital gain. Because we may not calculate our earnings and profits under U.S. federal income tax principles, U.S. Holders should expect all distributions to be reported to them as dividends.

The U.S. dollar value of any distribution on the Common Shares made in Canadian dollars generally should be calculated by reference to the exchange rate between the U.S. dollar and the Canadian dollar in effect on the date of receipt (or deemed receipt) of such distribution by the U.S. Holder regardless of whether the Canadian dollars so received are in fact converted into U.S. dollars at that time. If the Canadian dollars received are converted into U.S. dollars on the date of receipt (or deemed receipt), a U.S. Holder generally should not recognize currency gain or loss on such conversion. If the Canadian dollars received are not converted into U.S. dollars on the date of receipt (or deemed receipt), a U.S. Holder generally will have a basis in such Canadian dollars equal to the U.S. dollar value of such Canadian dollars on the date of receipt (or deemed receipt). Any gain or loss on a subsequent conversion or other disposition of such Canadian dollars by such U.S. Holder generally will be treated as ordinary income or loss and generally will be income or loss from sources within the United States for U.S. foreign tax credit purposes. Different rules apply to U.S. Holders who use the accrual method of tax accounting. Each U.S. Holder should consult its own U.S. tax advisors regarding the U.S. federal income tax consequences of receiving, owning, and disposing of foreign currency.

Distributions on the Common Shares that are treated as dividends generally will constitute income from sources outside the United States for foreign tax credit purposes and generally will constitute passive category income. Such dividends will not be eligible for the "dividends received" deduction generally allowed to corporate shareholders with respect to dividends received from U.S. corporations. Dividends paid by a "qualified foreign corporation" are eligible for taxation at a reduced capital gains rate rather than the marginal tax rates generally applicable to ordinary income provided that a holding period requirement (more than 60 days of ownership, without protection from the risk of loss, during the 121-day period beginning 60 days before the ex-dividend date) and certain other requirements are met. However, if we are a PFIC for the taxable year in which the dividend is paid or the preceding taxable year (see discussion below under "*Passive Foreign Investment Company Considerations*"), we will not be treated as a qualified foreign corporation, and therefore the reduced capital gains tax rate described above will not apply. Each U.S. Holder is advised to consult its own tax advisors regarding the availability of the reduced tax rate on dividends.

If a U.S. Holder is subject to Canadian withholding tax on dividends paid on the holder's Common Shares, the U.S. Holder may be eligible, subject to a number of complex limitations, to claim a credit against its U.S. federal income tax for the Canadian withholding tax imposed on the dividends. A U.S. Holder may claim a deduction for the Canadian withholding tax in lieu of a credit, but only for a year in which the U.S. Holder elects to do so for all creditable foreign income taxes. The rules governing the foreign tax credit are complex. Each U.S. Holder is advised to consult its own tax advisor regarding the availability of the foreign tax credit under its particular circumstances.

**Sale, Exchange or Other Disposition of Common Shares**

Subject to the discussion below under "*Passive Foreign Investment Company Considerations*" a U.S. Holder generally will recognize capital gain or loss for U.S. federal income tax purposes upon the sale, exchange or other disposition of Common Shares. The amount of gain recognized will equal the excess of the amount realized (i.e., the amount of cash plus the fair market value of any property received) over the U.S. Holder's adjusted tax basis in the Common Shares sold or exchanged. The amount of loss recognized will equal the excess of the U.S. Holder's adjusted tax basis in the Common Shares sold or exchanged over the amount realized. Such capital

gain or loss generally will be long-term capital gain or loss if, on the date of sale, exchange or other disposition, the Common Shares were held by the U.S. Holder for more than one year. Net long-term capital gain derived by a non-corporate U.S. Holder currently is subject to tax at reduced rates. The deductibility of a capital loss is subject to limitations. Any gain or loss recognized from the sale, exchange or other disposition of Common Shares will generally be gain or loss from sources within the United States for U.S. foreign tax credit purposes, except as otherwise provided in an applicable income tax treaty and if an election is properly made under the Code.

**Passive Foreign Investment Company Considerations**

In general, a corporation organized outside the United States will be treated as a PFIC in any taxable year in which either (1) at least 75% of its gross income is "passive income" or (2) at least 50% of the average quarterly value of its assets is attributable to assets that produce passive income or are held for the production of passive income. Passive income for this purpose generally includes, among other things, dividends, interest, royalties, rents, and gains from commodities transactions and from the sale or exchange of property that gives rise to passive income. In determining whether a foreign corporation is a PFIC, a proportionate share of the items of gross income and assets of each corporation in which it owns, directly or indirectly, at least a 25% interest (by value) are taken into account.

We believe we were a PFIC for our taxable year ended December 31, 2017 and based on the nature of our business, the projected composition of our gross income and the projected composition and estimated fair market values of our assets, we expect to be a PFIC for our taxable year ending December 31, 2018 and may be a PFIC in subsequent tax years. No opinion of legal counsel or ruling from the IRS concerning our status as a PFIC has been obtained or is currently planned to be requested. However, the determination of our PFIC status is made annually after the close of each taxable year and it is difficult to predict before such determination whether we will be a PFIC for any given taxable year. Even if we determine that we are not a PFIC after the close of a taxable year, there can be no assurance that the IRS will agree with our conclusion. No assurance can be provided regarded our PFIC status, and neither we nor our United States counsel expresses any opinion with respect to our PFIC status for the taxable year ended December 31, 2017 or for any other taxable year.

If we are a PFIC at any time when a U.S. Holder owns Common Shares, such U.S. Holder will generally be subject to federal tax under the excess distribution regime on (1) distributions paid during a taxable year that are greater than 125% of the average annual distributions paid in the three preceding taxable years, or, if shorter, the U.S. Holder's holding period for the Common Shares, and (2) any gain recognized on a sale, exchange or other disposition (which would include a pledge) of Common Shares. Under the excess distribution regime, the U.S. Holder's tax liability will be determined by allocating such distribution or gain ratably to each day in the U.S. Holder's holding period for the Common Shares. The amount allocated to the current taxable year (i.e., the year in which the distribution occurs or the gain is recognized) and any year prior to the first taxable year in which we were a PFIC in the holding period will be taxed as ordinary income earned in the current taxable year. The amount allocated to other taxable years will be taxed at the highest marginal rate in effect (for individuals or corporations as applicable) for ordinary income in each such taxable year, and an interest charge, generally that applicable to the underpayment of tax, will be added to the tax. Once we are a PFIC with respect to a particular U.S. Holder, we generally will remain a PFIC with respect to the U.S. Holder, unless we cease to meet the gross income and asset tests described above and the U.S. Holder makes a "deemed sale" election with respect to all of the U.S. Holder's Common Shares. If such election is made, the U.S. Holder will be deemed to have sold the Common Shares held at their fair market value on the last day of the last taxable year in which we qualified as a PFIC, and any gain from such deemed sale would be taxed under the excess distribution regime described above. After the deemed sale election, the U.S. Holder's Common Shares would not be treated as Common Shares of a PFIC unless we subsequently became a PFIC.

If we are a PFIC for any taxable year during which a U.S. Holder holds the Common Shares and one of oumon-United States subsidiaries is also a PFIC (i.e., a lower-tier PFIC), the U.S. Holder will be treated as owning a

proportionate amount (by value) of the Common Shares of the lower-tier PFIC and will be subject to the rules described above on certain distributions by the lower-tier PFIC and a disposition (or deemed disposition) of Common Shares of thelower-tier PFIC, even though the U.S. Holder would not receive the distributions or the proceeds from the disposition of the Common Shares of the lower-tier PFIC. Each U.S. Holder is advised to consult its own tax advisors regarding the application of the PFIC rules to any of our subsidiaries.

The tax considerations that would apply if we were a PFIC would be different from those described above if a U.S. Holder were able to make a valid "qualified electing fund", or "QEF election". We do not intend to provide U.S. Holders with the information required to permit them to make a QEF election and, accordingly, prospective investors should assume that a QEF election will not be available.

A U.S. Holder may avoid taxation under the excess distribution regime if the holder makes a valid"mark-to-market" election. An electing U.S. Holder generally would take into account as ordinary income each year, the excess of the fair market value of the Common Shares held at the end of the taxable year over the adjusted tax basis of such Common Shares. The U.S. Holder would also take into account, as an ordinary loss each year, the excess of the adjusted tax basis of such Common Shares over their fair market value at the end of the taxable year, but only to the extent of the excess of amounts previously included in income over ordinary losses deducted as a result of the mark-to-market election. The U.S. Holder's tax basis in the Common Shares would be adjusted to reflect any income or loss recognized as a result of the mark-to-market election. Any gain from a sale, exchange or other disposition of the Common Shares in any taxable year in which we are a PFIC, (i.e., when we meet the gross income test or asset test described above) would be treated as ordinary income and any loss from a sale, exchange or other disposition would be treated first as an ordinary loss (to the extent of any net mark-to-market gains previously included in income) and thereafter as a capital loss. If we cease to be a PFIC, any gain or loss recognized by a U.S. Holder on the sale or exchange of the Common Shares would be classified as a capital gain or loss.

A mark-to-market election is available to a U.S. Holder only for "marketable stock". Generally, stock will be considered marketable stock if it is "regularly traded" on a "qualified exchange" within the meaning of applicable U.S. Treasury regulations. A class of stock is regularly traded during any calendar year during which such class of stock is traded, other than in *de minimis* quantities, on at least 15 days during each calendar quarter. The Common Shares should be marketable stock as long as they are listed on the TSX and are regularly traded. A mark-to-market election will not apply to the Common Shares for any taxable year during which we are not a PFIC, but will remain in effect with respect to any subsequent taxable year in which we again become a PFIC. Such election will not apply to any subsidiary that we own. Accordingly, a U.S. Holder may continue to be subject to the PFIC rules with respect to any lower-tier PFICs notwithstanding the U.S. Holder's mark-to-market election.

Each U.S. person who is a shareholder of a PFIC generally must file an annual report with the IRS containing certain information, and the failure to file such report could result in the imposition of penalties on such U.S. person and in the extension of the statute of limitations with respect to federal income tax returns filed by such U.S. person.

The U.S. federal income tax rules relating to PFICs are very complex. U.S. Holders are urged to consult their own tax advisors with respect to the purchase, ownership and disposition of Common Shares, the consequences to them of an investment in a PFIC, any elections available with respect to the Common Shares and the IRS information reporting obligations with respect to the purchase, ownership and disposition of Common Shares in the event we are considered a PFIC.

**Additional Tax on Passive Income**

Certain U.S. Holders that are individuals, estates or trusts (other than trusts that are exempt from tax) will be subject to a 3.8% tax on all or a portion of their "net investment income", which includes dividends on the

Common Shares, and net gains from the disposition of the Common Shares. Further, excess distributions treated as dividends, gains treated as excess distributions, and mark-to-market inclusions and deductions are all included in the calculation of net investment income.

Treasury regulations provide, subject to the election described in the following paragraph, that solely for purposes of this additional tax, that distributions of previously taxed income will be treated as dividends and included in net investment income subject to the additional 3.8% tax. Additionally, to determine the amount of any capital gain from the sale or other taxable disposition of Common Shares that will be subject to the additional tax on net investment income, a U.S. Holder who has made a QEF election will be required to recalculate its basis in the Common Shares excluding QEF election basis adjustments.

Alternatively, a U.S. Holder may make an election which will be effective with respect to all interests in a PFIC for which a QEF election has been made and which as held in that year or acquired in future years. Under this election, a U.S. Holder pays the additional 3.8% tax on QEF election income inclusions and on gains calculated after giving effect to related tax basis adjustments. U.S. Holders that are individuals, estates or trusts should consult their own tax advisors regarding the applicability of this tax to any of their income or gains in respect of the Common Shares.

**Information Reporting with Respect to Foreign Financial Assets**

U.S. individuals that own "specified foreign financial assets" with an aggregate fair market value exceeding certain threshold amounts generally are required to file an information report on IRS Form 8938 with respect to such assets with their tax returns. Significant penalties may apply to persons who fail to comply with these rules. Specified foreign financial assets include not only financial accounts maintained in foreign financial institutions, but also, unless held in accounts maintained by a financial institution, any stock or security issued by a non-U.S. person. Upon the issuance of future U.S. Treasury regulations, these information reporting requirements may apply to certain U.S. entities that own specified foreign financial assets. The failure to report information required under the current regulations could result in substantial penalties and in the extension of the statute of limitations with respect to federal income tax returns filed by a U.S. Holder. U.S. Holders should consult their own tax advisors regarding the possible implications of these U.S. Treasury regulations for an investment in Common Shares.

**Special Reporting Requirements for Transfers to Foreign Corporations**

A U.S. Holder that acquires Common Shares generally will be required to file Form 926 with the IRS if (1) immediately after the acquisition such U.S. Holder, directly or indirectly, owns at least 10% of the Common Shares, or (2) the amount of cash transferred in exchange for Common Shares during the 12-month period ending on the date of the acquisition exceeds US$100,000. Significant penalties may apply for failing to satisfy these filing requirements. U.S. Holders are urged to contact their own tax advisors regarding these filing requirements.

**Information Reporting and Backup Withholding**

Dividends on and proceeds from the sale or other disposition of Common Shares may be reported to the IRS unless the U.S. Holder establishes a basis for exemption. Backup withholding may apply to amounts subject to reporting if (1) the holder fails to provide an accurate taxpayer identification number or otherwise establish a basis for exemption, or (2) is described in certain other categories of persons.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules generally will be allowed as a refund or a credit against a U.S. Holder's U.S. federal income tax liability if the required information is furnished by the U.S. Holder on a timely basis to the IRS.

**THE DISCUSSION ABOVE IS A GENERAL SUMMARY. IT DOES NOT COVER ALL TAX MATTERS THAT MAY BE OF IMPORTANCE TO A US HOLDER. EACH US HOLDER IS URGED**

**TO CONSULT ITS OWN TAX ADVISOR ABOUT THE TAX CONSEQUENCES TO IT OF AN INVESTMENT IN COMMON SHARES IN LIGHT OF THE INVESTOR'S OWN CIRCUMSTANCES.**

## MATERIAL CONTRACTS

The only material contracts entered into by Aptose from the date of the accompanying prospectus other than in the ordinary course of business are (i) the Controlled Equity Offering℠ Sales Agreement with Cantor Fitzgerald dated March 27, 2018 and (ii) the exclusive global license agreement with Ohm Oncology, an affiliate of Laxai Avanti Life Sciences, dated March 6, 2018. See "*Plan of Distribution*" for further details on the Sales Agreement.

## AGENT FOR SERVICE OF PROCESS

Dr. William G. Rice, President, Chief Executive Officer and Chairman of the Board of Directors of the Company, Gregory K. Chow, Senior Vice President and Chief Financial Officer of the Company, Dr. Denis Burger, a director of the Company and Dr. Erich Platzer, a director of the Company all reside outside of Canada and have appointed Aptose Biosciences Inc., 5955 Airport Road, Suite 228, Mississauga, Ontario, Canada L4V 1R9 as agent for service of process.

Purchasers are advised that it may not be possible for investors to enforce judgments obtained in Canada against any person or company that is incorporated, continued or otherwise organized under the laws of a foreign jurisdiction or resides outside of Canada, even if the party has appointed an agent for service of process.

## WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form F-10 under Securities Act relating to the offering of the Common Shares, of which this prospectus supplement forms a part. This prospectus supplement does not contain all of the information set forth in the registration statement, certain parts of which are omitted in accordance with the rules and regulations of the SEC. Reference is made to such registration statement and the exhibits thereto for further information with respect to us and the Common Shares.

We are required to file with the various securities commissions or similar authorities in each of the applicable provinces and territories of Canada, annual and quarterly reports, material change reports and other information. We are also subject to the informational requirements of the Exchange Act, and, accordingly, file with, or furnish to, the SEC certain reports and other information. Under the multi-jurisdictional disclosure system adopted by the United States and Canada, these reports and other information (including financial information) may be prepared in accordance with the disclosure requirements of Canada, which differ from those in the United States. You may read and copy any document we file with or furnish to the SEC at the SEC's public reference room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of the same documents from the public reference room by paying a fee. Please call the SEC at 1-800-SEC-0330 or contact them at www.sec.gov for further information on the public reference room and copying charges.

## ENFORCEABILITY OF CERTAIN CIVIL LIABILITIES

Aptose is a corporation formed under, and governed by, the laws of the Canada. Many of our directors and officers and the experts named in this prospectus supplement 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. As a result, it may be difficult for investors in the United States to effect service of process within the United

States upon those directors, officers and experts who are not residents of the United States or to enforce against them judgments of United States courts based upon civil liability under the United States federal securities laws or the securities laws of any state within the United States.

Aptose filed with the SEC, concurrently with the registration statement on Form F-10 of which this prospectus supplement forms a part, an appointment of agent for service of process on Form F-X. Under the Form F-X, Aptose appointed Aptose Biosciences U.S. Inc., Unit 120, 12770 High Bluff Drive, San Diego, CA 92130, telephone (647) 479-9828, as its agent for service of process in the United States in connection with any investigation or administrative proceeding conducted by the SEC, and any civil suit or action brought against or involving Aptose in a United States court arising out of or related to or concerning the offering of securities under the registration statement. However, it may not be possible for investors to enforce outside the United States judgments against Aptose obtained in the United States in any such actions, including actions predicated upon the civil liability provisions of the United States federal and state securities laws.

## 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 Cantor Fitzgerald & Co. by Goodwin Procter LLP, New York, New York.

## INTEREST OF EXPERTS

As of the date hereof, the partners and associates of McCarthy Tétrault LLP, as a group, Dorsey & Whitney LLP, as a group, and Goodwin Procter LLP, as a group, beneficially owned, directly or indirectly, less than 1% of the outstanding Common Shares of the Company or any of its associates or affiliates.

Our auditor, KPMG LLP, Chartered Professional Accountants, Bay Adelaide Centre, 333 Bay Street, Suite 4600, Toronto, Ontario, Canada, M5H 2S5, have confirmed they are independent with respect to the Company within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation or regulations.

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***Base Shelf Prospectus***

*No securities regulatory authority has expressed an opinion about these securities and it is an offence to claim otherwise.*

*This short form prospectus has been filed under legislation in the provinces of British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador that permits certain information about these securities to be determined after this prospectus has become final and that permits the omission from this prospectus of that information. The legislation requires the delivery to purchasers of a prospectus supplement containing the omitted information within a specified period of time after agreeing to purchase any of these securities.*

***Information has been incorporated by reference in this prospectus from documents filed with securities commissions or similar authorities in Canada.*** *Copies of the documents incorporated herein by reference may be obtained on request without charge from the Director of Finance of the Company at 5955 Airport Road, Suite 228, Mississauga, Ontario, Canada L4V 1R9, telephone (647) 479-9828, and are also available electronically at www.sedar.com.*

March 7, 2018

**SHORT FORM BASE SHELF PROSPECTUS**

**New Issue**

# APTOSE BIOSCIENCES INC.

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

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Under this short form base shelf prospectus (the "**Prospectus**"), Aptose Biosciences Inc. ("**Aptose**", the "**Company**", "**we**", "**us**" or "**our**") may, from time to time during the 25-month period that this Prospectus, including any amendments, remains valid, offer and issue common shares (the "**Common Shares**") of its share capital, or warrants to purchase Common Shares (the "**Warrants**") or units comprised of one or more of the other securities described in this Prospectus in any combination (the "**Units**" and together with the Common

Shares and the Warrants, the "**Securities**") in one or more offerings of up to US$100,000,000 (or the equivalent in foreign currencies). The Securities may be offered separately or together, in amounts, at prices and on terms based on market conditions at the time of the sale and set forth in an accompanying prospectus supplement (a "**Prospectus Supplement**"). The Company may sell the Warrants in one or more series.

**We are permitted, under a multi-jurisdictional disclosure system adopted by the United States and Canada, to prepare this Prospectus in accordance with Canadian disclosure requirements. The financial statements included or incorporated herein have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS"), and thus may not be comparable to financial statements of United States companies. Prospective investors should be aware that such requirements are different from those of the United States. The ability of prospective investors to enforce civil liabilities under United States federal securities laws may be affected adversely by the fact that we are incorporated under the laws of Canada, that 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.**

**Prospective investors should be aware that the purchase of Securities may have tax consequences, both in the United States and Canada, which may not be fully described herein or in any applicable Prospectus Supplement. Prospective investors should read the tax discussion, if any, in the applicable Prospectus Supplement and consult with an independent tax advisor.**

**THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION (THE "SEC") 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 OFFENCE.**

The specific terms of the Securities with respect to a particular offering will be set out in the applicable Prospectus Supplement and may include, where applicable: (i) in the case of Common Shares, the number of Common Shares offered, the issue price and currency (in the event the offering is a fixed price distribution), the manner in which the offering price and currency will be determined (in the event the offering is a non-fixed price distribution) and any other terms specific to the Common Shares being offered; (ii) in the case of Warrants, the designation, number and terms of the Common Shares purchasable upon exercise of the Warrants, any procedures that will result in the adjustment of these numbers, the exercise price, dates and periods of exercise, the currency in which the Warrants are offered and any other specific terms; and (iii) in the case of Units, the number of Units offered, the issue price, the currency, the terms of the Units and of the securities comprising the Units and any other terms specific to the Units being offered. Where required by statute, regulation or policy, and where Securities are offered in currencies other than Canadian dollars, appropriate disclosure of foreign exchange rates applicable to such Securities will be included in the Prospectus Supplement describing such Securities. We may also include in a Prospectus Supplement specific terms pertaining to the Securities which are not within the options and parameters set forth in this Prospectus.

All shelf information permitted under applicable securities legislation to be omitted from this Prospectus will be contained in one or more Prospectus Supplements that will be delivered to purchasers together with this Prospectus. Each Prospectus Supplement will be incorporated by reference into this Prospectus for the purposes of applicable securities legislation as of the date of the Prospectus Supplement and only for the purposes of the distribution of the Securities to which the Prospectus Supplement pertains. This Prospectus and any applicable Prospectus Supplement should be read carefully before investing in the Securities.

We may offer and sell these Securities to or through one or more underwriters, dealers and agents, or directly to purchasers, on a continuous or delayed basis. The Prospectus Supplement for each offering of Securities will describe in detail the plan of distribution. If underwriters, dealers and agents are used to sell these Securities, we will name them and describe their compensation in a Prospectus Supplement.

Our outstanding Common Shares are listed and posted for trading on the Toronto Stock Exchange, which we refer to as the "TSX", under the symbol "APS" and the NASDAQ Capital Market, which we refer to as "NASDAQ", under the symbol "APTO". On March 6, 2018, the last reported sale price of our Common Shares on the TSX was Cdn$4.08 per Common Share and on NASDAQ was US$3.18 per Common Share. **There is no market through which the Securities, other than the Common Shares, may be sold and purchasers may not be able to resell the Securities purchased under this Prospectus. This may affect the pricing of the Securities in the secondary market, the transparency and availability of trading prices, the liquidity of the Securities and the extent of issuer regulation. See "Risk Factors".**

Securities offered pursuant to this Prospectus and any related Prospectus Supplement will constitute a public offering of such Securities only in those jurisdictions where they may be lawfully offered for sale and therein only by persons permitted to sell such Securities. We may offer and sell Securities to or through underwriters or dealers, directly to one or more purchasers pursuant to applicable statutory exemptions, or through agents designated from time to time at amounts and prices and other terms determined by us. The Prospectus Supplement relating to a particular offering of Securities will identify each underwriter, dealer or agent engaged in connection with the offering and sale of Securities and will set forth the plan of distribution for such Securities, including the proceeds to the Company and any fees, discounts, concessions or other compensation payable to the underwriters, dealers or agents, and any other material terms of the plan of distribution. See "Plan of Distribution".

In connection with any underwritten offering of the Securities (unless otherwise specified in a Prospectus Supplement), the underwriters or agents may over-allot or effect transactions which stabilize or maintain the market price of the Securities offered at a higher level than that which might exist in the open market. Such transactions, if commenced, may be interrupted or discontinued at any time. See "Plan of Distribution".

Dr. William G. Rice, President, Chief Executive Officer and Chairman of the Board of Directors of the Company, Gregory K. Chow, Senior Vice President and Chief Financial Officer of the Company, Dr. Denis Burger, a director of the Company and Dr. Erich Platzer, a director of the Company, all reside outside of Canada and have appointed Aptose Biosciences Inc., 5955 Airport Road, Suite 228, Mississauga, Ontario, Canada L4V 1R9, as agent for service of process. Purchasers are advised that it may not be possible for investors to enforce judgments obtained in Canada against any person or company that is incorporated, continued or otherwise organized under the laws of a foreign jurisdiction or resides outside of Canada, even if the party has appointed an agent for service of process.

Our head, registered and principal executive offices are located at 5955 Airport Road, Suite 228, Mississauga, Ontario L4V 1R9, Canada (telephone: (647) 479-9828).

**Investing in the Securities involves risks, including those that are described in the "Risk Factors" section of this Prospectus or incorporated by reference into this Prospectus. The Company will apply to list the Common Shares distributed under this Prospectus including the Common Shares underlying the Units and Warrants, if any. However, unless specified in the applicable Prospectus Supplement, there is no market through which the Units and Warrants may be sold and purchasers may not be able to resell the Units and Warrants purchased under this Prospectus and the Prospectus Supplements. This may affect the pricing of the Units and Warrants in the secondary market, the transparency and availability of trading prices, the liquidity of the Units and Warrants and the extent of issuer regulation. See "Risk Factors".**

**No underwriter, dealer, placement agent, other intermediary or agent has been involved in the preparation of this Prospectus or performed any review of the contents of this Prospectus.**

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## GENERAL MATTERS

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 the Securities described in this Prospectus in one or more offerings up to a total dollar amount of initial aggregate offering price of US$100,000,000. This Prospectus provides you with a general description of the Securities that we may offer. Each time we sell Securities under this process, we will provide a Prospectus Supplement that will contain specific information about the terms of that offering, including a description of any risks relating to the offering if those terms and risks are not described in this Prospectus. A Prospectus Supplement may also add, update, or change information contained in this Prospectus. If there is any inconsistency between the information in this Prospectus and the applicable Prospectus Supplement, you should rely on the information in the Prospectus Supplement.

Before investing in our Securities, please carefully read both this Prospectus and any Prospectus Supplement together with the documents incorporated by reference into this Prospectus, as listed under "Documents Incorporated by Reference," and the additional information described below under "Where You Can Find More Information."

**Acquiring, owning or disposing of Securities may subject investors to tax consequences in the United States and in Canada. This Prospectus or any applicable Prospectus Supplement may not describe these tax consequences fully. Prospective investors should read the tax discussion in any Prospectus Supplement with respect to a particular offering and consult your own tax advisor with respect to your own particular circumstances.**

Prospective investors should rely only on the information contained in or incorporated by reference into this Prospectus or any applicable Prospectus Supplement. We have not authorized anyone to provide prospective investors with different information. If anyone provides a prospective investor with different or inconsistent information, it should not be relied upon. 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 the Securities and is not soliciting an offer to buy the 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. Prospective investors should assume that the information contained in this Prospectus and in any applicable Prospectus Supplement is accurate only as of the date on the front cover of this Prospectus or Prospectus Supplement, as applicable, and the information incorporated by reference into this Prospectus or any Prospectus Supplement is accurate only as of the date of the document incorporated by reference. Our business, financial condition, results of operations and prospects may have changed since that date.

**The corporate website of the Company is www.aptose.com. The information on the Company's website is not intended to be included or incorporated by reference into this Prospectus and prospective investors should not rely on such information when deciding whether or not to invest in the Securities.**

Statistical information and other data relating to the pharmaceutical and biotechnology industry included in this Prospectus are derived from recognized industry reports published by industry analysts, industry associations and/or independent consulting and data compilation organizations. Market data and industry forecasts used throughout this Prospectus were obtained from various publicly available sources. Although the Company believes that these independent sources are generally reliable, the accuracy and completeness of the information from such sources are not guaranteed and have not been independently verified.

In this Prospectus, unless the context otherwise requires, references to "Aptose", the "Company", "we", "us", and "our" refer to Aptose Biosciences Inc. and its wholly owned subsidiaries through which it conducts its business.

## Financial Statements and Exchange Rate Information

The consolidated financial statements incorporated by reference into this Prospectus and the documents incorporated by reference into this Prospectus, and the financial data derived from those consolidated financial statements included in this Prospectus, are presented in Canadian dollars, unless otherwise specified, and have been prepared in accordance with IFRS. References in this Prospectus to "dollars", "US$" or "$" are to United States dollars. Canadian dollars are indicated by the symbol "Cdn$".

The following table lists, for each period presented, the high and low exchange rates, the average of the exchange rates during the period indicated, and the exchange rates at the end of the period indicated, for one Canadian dollar, expressed in United States dollars, based on the closing exchange rate published by the Bank of Canada for the applicable periods.

| | Year ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| High for the period | 0.8245 | 0.7977 | 0.8511 |
| Low for the period | 0.7276 | 0.6869 | 0.7161 |
| End of period | 0.7971 | 0.7448 | 0.7821 |
| Average for the period | 0.7701 | 0.7550 | 0.7225 |

On March 6, 2018, the closing exchange rate for one Canadian dollar, expressed in United States dollars, as reported by the Bank of Canada, was Cdn$1.00 = US$0.7753.

## 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 secure and maintain strategic partnerships to assist in the further development of our product candidates and to build our pipeline;
- our plans to conduct clinical trials and preclinical programs;
- our ability to accrue appropriate numbers and types of patients;
- our ability to file and maintain intellectual property to protect our pharmaceutical assets;
- our reliance on external contract research/manufacturing organizations for certain activities;
- 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;
- 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 ("**FDA**") or Health Canada 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;
- 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" 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 status as a foreign private issuer may limit the information which would be publicly available to our shareholders;
- our broad discretion in how we use the proceeds of the sale of the common shares to Aspire Capital pursuant to the Purchase Agreement;
- 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 quarterly filings, annual information forms, annual reports and annual filings with Canadian securities regulators and the SEC, 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.

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.**

## DOCUMENTS INCORPORATED BY REFERENCE

**Information has been incorporated by reference in the Prospectus from documents filed with the securities commissions or similar authorities in Canada**. Copies of the documents incorporated herein by reference may be obtained on request, without charge, from the Director of Finance of the Company at 5955 Airport Road, Suite 228, Mississauga, Ontario, Canada L4V 1R9 (telephone (647) 479-9828), and are also available electronically at www.sedar.com.

The following documents of the Company filed with the securities commissions or similar authorities in the provinces of British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador are specifically incorporated by reference in this Prospectus:

(i) the annual report on form 20-F for the fiscal year ended December 31, 2016 (the "**AIF**");

(ii) the annual audited consolidated financial statements of the Company and the notes thereto for the years ended December 31, 2016 and 2015 as well as the seven months ended December 31, 2014, together with the auditor's report thereon;

(iii) the management's discussion and analysis of the Company for the year ended December 31, 2016;

(iv) the unaudited condensed consolidated interim financial statements of the Company and the notes thereto for the three and nine months ended September 30, 2017 and 2016;

(v) the management's discussion and analysis of Aptose for the three and nine months ended September 30, 2017;

(vi) the management proxy circular of Aptose dated April 18, 2017 with respect to the annual meeting of the shareholders of Aptose held on June 6, 2017;

(vii) the material change report of Aptose dated January 24, 2017 with respect to the prioritization of resources toward the development of CG026806 ("**CG'806**"); and

(viii) the material change report of Aptose dated October 30, 2017 with respect to a Common Shares purchase agreement (the "**Aspire Purchase Agreement**") with Aspire Capital Fund, LLC ("**Aspire Capital**").

**Any documents of the type required by National Instrument 44-101 – *Short Form Prospectus Distributions* to be incorporated by reference in a short form Prospectus including any material change reports (excluding any confidential material change reports), comparative interim financial statements, comparative annual financial statements and the auditor's report thereon, information circulars, annual information forms and business acquisition reports filed by the Company with a securities commission or similar regulatory authority in Canada on or after the date of this Prospectus and prior to the termination of the distribution under this Prospectus shall be deemed to be incorporated by reference into this Prospectus.** In addition, to the extent that any document or information incorporated by reference into this Prospectus is included in any report on Form 6-K, Form 40-F, Form 20-F, Form 10-K, Form 10-Q or Form 8-K (or any respective successor form) that is filed with or furnished to the SEC after the date of this Prospectus, that document or information shall be deemed to be incorporated by reference as an exhibit to the registration statement of which this Prospectus forms a part (in the case of Form 6-K and Form 8-K, if and to the extent set forth therein). We may also incorporate other information filed with or furnished to the SEC under the *United States Securities Exchange Act of 1934*, as amended (the "**Exchange Act**"), provided that information included in any report on Form 6-K or Form 8-K shall be so deemed to be incorporated by reference only if and to the extent expressly provided in such Form 6-K or Form 8-K.

Upon a new renewal annual information form and the related annual financial statements and management's discussion and analysis of financial condition and results of operations being filed by the Company with, and, where required, accepted by the applicable securities regulatory authorities during the currency of the Prospectus,

the previous annual information form, the previous annual financial statements and all quarterly financial statements, material change reports and information circulars filed prior to the commencement of the Company's financial year in which the new renewal annual information form is filed shall be deemed no longer to be incorporated into this Prospectus for purposes of future offerings of Securities under the Prospectus.

**Any statement contained in the Prospectus or in a document incorporated or deemed to be incorporated by reference in the Prospectus shall be deemed to be modified or superseded for purposes of this Prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference in the Prospectus modifies or supersedes such statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document that it modifies or supersedes. The making of such a modifying or superseding statement shall not be deemed an admission for any purposes that the modified or superseded statement, when made, constituted a misrepresentation, an untrue statement of a material fact or an omission to state a material fact that is required to be stated or that is necessary to make a statement not misleading in light of the circumstances in which it was made. Only the modifying or superseding statement shall be deemed to constitute a part of this Prospectus.**

## WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC, under the U.S. Securities Act of 1933, as amended, a registration statement on Form F-10 relating to the Securities. This Prospectus, which constitutes a part of the registration statement, does not contain all of the information contained in the registration statement, certain items of which are contained in the exhibits to the registration statement as permitted by the rules and regulations of the SEC. See "*Documents Filed as Part of the Registration Statement*". Statements included or incorporated by reference in this Prospectus about the contents of any contract, agreement or other documents referred to are not necessarily complete, and in each instance, readers should refer to the exhibits for a complete description of the matter involved. Each time we sell Securities under the registration statement, we will provide a Prospectus Supplement that will contain specific information about the terms of that offering. The Prospectus Supplement may also add, update or change information contained in this Prospectus.

We are subject to the information reporting requirements of the Exchange Act, and applicable Canadian securities legislation, and in accordance therewith we file and furnish annual and quarterly financial information and material change reports, business acquisition reports and other material with the securities commission or similar regulatory authority in each of the provinces of Canada and with the SEC. Under a multi-jurisdictional disclosure system adopted by the United States and Canada, documents and other information that are filed with the SEC may generally be prepared in accordance with the disclosure requirements of Canada, which are different from those of the United States. Prospective investors may read and download any public document that we have filed with the securities commission or similar regulatory authority in each of the provinces of Canada on SEDAR at www.sedar.com. The reports and other information filed and furnished by us with the SEC can be inspected on the SEC's website at www.sec.gov/edgar.shtml (EDGAR) and such information can also be inspected and copies ordered at the public reference facilities maintained by the SEC at the following location: 100 F Street NE, Washington, D.C. 20549. Reports and other information about the Corporation may also be inspected at the offices of the New York Stock Exchange, 20 Broad Street, New York, New York 10005.

## ENFORCEMENT OF CIVIL LIABILITIES

Aptose is a corporation formed under, and governed by, the laws of the 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. As a result, it may be difficult for investors in the United States to effect service of process within the United States upon those directors, officers and experts who are not residents of the United States or to enforce against them judgments of United States courts based upon civil liability under the United States federal securities laws or the securities laws of any state within the United States.

Aptose filed with the SEC, concurrently with the registration statement on Form F-10 of which this Prospectus forms a part, an appointment of agent for service of process on Form F-X. Under the Form F-X, Aptose appointed Aptose Biosciences U.S. Inc., Unit 120, 12770 High Bluff Drive, San Diego, CA 92130, telephone (647) 479-9828, as its agent for service of process in the United States in connection with any investigation or administrative proceeding conducted by the SEC, and any civil suit or action brought against or involving Aptose in a United States court arising out of or related to or concerning the offering of Securities under the registration statement. However, it may not be possible for investors to enforce outside the United States judgments against Aptose obtained in the United States in any such actions, including actions predicated upon the civil liability provisions of the United States federal and state securities laws.

## THE COMPANY

**This summary does not contain all of the information about the Company that may be important to you and your investment decision. You should carefully read the entire Prospectus and the applicable Prospectus Supplement, including the section entitled "Risk Factors", as well as the risk factors described in the documents incorporated by reference into this Prospectus and the applicable Prospectus Supplement, before making an investment decision.**

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 ("**AML**"), high-risk myelodysplastic syndromes ("**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.

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.

We have three subsidiaries: Aptose Biosciences U.S. Inc., a company incorporated under the laws of Delaware; Aptose Suisse GmbH, a company incorporated under the laws of Zug, Switzerland; and NuChem Pharmaceuticals Inc., a company 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 Aptose Suisse GmbH, and 80% of the issued and outstanding voting share capital of NuChem Pharmaceuticals Inc.

### Products

#### *CG'806*

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. Aptose's pan-FLT3 /

pan-BTK inhibitor, CG'806, is currently in preclinical development and advancing toward Investigational New Drug ("**IND**") submission.

As a potent inhibitor of FLT3-ITD, CG'806 may become an effective therapy in a high-risk subset of AML patients. This is because the FLT3-ITD mutation occurs in approximately 30% of patients with AML and is associated with a poor prognosis. In murine xenograft studies of human AML (FLT3-ITD), CG'806 administered orally once daily for 14 days resulted in tumor elimination without measurable toxicity. Importantly, CG'806 targets other oncogenic kinases which may also be operative in FLT3-ITD AML, including wild type FLT3, BTK, AURK, RET and SRC family kinases, thereby potentially allowing the agent to become an important therapeutic option for a broader group of this difficult-to-treat AML patient population. The findings that CG'806 targets all forms of FLT3 and other oncogenic pathways, and that CG'806 was well tolerated from a safety perspective during efficacy studies, suggest that CG'806 may also have applicability in treating patients, particularly those over the age of 65, who cannot tolerate other therapies.

Separate from the AML and FLT3 story, overexpression of the BTK enzyme can drive oncogenic expression of certain B cell malignancies, such as chronic lymphocytic leukemia ("**CLL**"), mantle cell lymphoma (MCL), diffuse large cell B cell lymphoma (DLBCL) and others. Therapy of these patients with covalent, irreversible BTK inhibitors, such as ibrutinib, that target the active site Cysteine residue of BTK can be beneficial in many patients. However, therapy with covalent BTK inhibitors can select for BTK with a C481S mutation, thereby conferring resistance to covalent BTK inhibitors. Furthermore, approximately half of CLL patients have discontinued treatment with ibrutinib after 3.4 years of therapy due to the development of resistance (in particular, patients having tumors that developed the BTK-C481S mutation), refractory properties (patient tumors did not respond to ibrutinib), or intolerance (side effects led to discontinuation of ibrutinib), according to a study performed at The Ohio State University. As a non-covalent, reversible inhibitor of BTK, CG'806 does not rely on the Cysteine 481 residue (C481) for inhibition of the BTK enzyme. Indeed, recent X-ray crystallographic studies (with wild type and C481S BTK) demonstrated that CG'806 binds productively to the BTK active site in a position that is indifferent to the presence or absence of mutations at the 481 residue. Moreover, in vitro studies demonstrated that CG'806 kills B cell malignancy cell lines approximately 1000 times more potently than ibrutinib, and CG'806 demonstrated a high degree of safely in animal efficacy studies. Consequently, patients who have relapsed, are refractory or intolerant to ibrutinib or other commercially approved or development stage BTK inhibitors with B cell malignancies may continue to be sensitive to CG'806 therapy since CG'806 inhibits the wild type and mutant forms of BTK, as well as other kinases that drive the survival and proliferation of B cell malignancies.

On December 11, 2017 at the American Society of Hematology Annual Meeting, we presented with the OHSU Knight Cancer Institute preclinical data demonstrating that CG'806, a pan-FLT3/pan-BTK inhibitor, has broad and potent drug activity against AML, CLL and other hematologic disease subtypes. We also announced the presentation of preclinical data from research led by The University of Texas MD Anderson Cancer Center demonstrating that CG'806 exerts a profound anti-leukemia effect in human and murine leukemia cell lines harboring FLT-3 ITD mutations, mutations that are usually associated with very poor prognoses in leukemia patients. In addition, CG'806 induces apoptosis, or programmed cell death, in AML patient samples by multiple mechanisms and is able to overcome resistance that is seen with other FLT3 inhibitors. The data were highlighted in poster presentations on December 10 and 11, 2017 at the American Society of Hematology Annual Meeting.

On December 26, 2017, we announced that the FDA has granted orphan drug designation to CG'806 for the treatment of patients with AML. Orphan drug designation is granted by the FDA to encourage companies to develop therapies for the treatment of diseases that affect fewer than 200,000 individuals in the United States. Orphan drug status provides research and development tax credits, an opportunity to obtain grant funding, exemption from FDA application fees and other benefits. If CG'806 is approved to treat AML, the orphan drug designation provides Aptose with seven years of marketing exclusivity.

As at September 30, 2017, direct costs relating to the research and development of CG'806 represented approximately US$2.7 million. We have invested significant time, effort and capital to create a scalable chemical synthetic route for the manufacture of CG'806 drug substance, to develop an oral formulation for clinical development, and to study the actions of CG'806 in various preclinical biological pathway studies. The total direct costs of such activities and to reach the submission of the IND are currently expected to range between US$4 million and US$5.5million. Our efforts to develop the scalable chemical synthetic route have taken longer than anticipated and thus pushed the timeline for the IND submission and initiation of the first-in-human Phase I clinical trial further into the future than we had originally anticipated. We now have solved the synthetic route, can scale the manufacture of API, and now have manufactured and delivered a batch of API which will be used for planned Dose Range Finding Studies and toxicology studies. Likewise, we also reported that we selected the oral formulation that we intend to take into first-in-human clinical trials. Provided we are able to manufacture CG'806 for both the non-clinical studies and clinical trial, complete the non-clinical studies, and receive a favorable approval from the FDA on our IND submission and continue on the anticipated timeline, we expect to initiate a first-in-human Phase I clinical trial by late 2018. However any interruptions in these activities could cause a delay in the anticipated commencement of the Phase I trial. Greater granularity on the timing of the IND submission and clinical trial will be provided in the coming months. CG'806 is being developed with the intent to deliver the agent as an oral therapeutic and to develop it in parallel for AML and for appropriate B cell malignancies (likely CLL). As clinical trials are lengthy, complex, costly, and uncertain processes, an estimate of the future costs is not reasonable at this time.

***APTO-253***

APTO-253 is our second anticancer agent and at the Phase Ib 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.

APTO-253 was being evaluated by us in a Phase Ib clinical trial in patients with relapsed / refractory hematologic malignancies, particularly AML and high-risk MDS before being placed on clinical hold by the FDA in November 2015. If and when the APTO-253 clinical trial is re-initiated, upon completion of the dose-escalation stage of the study and determination of the appropriate dose, the plan would be to enroll additional AML patients for a disease-specific single-agent expansion cohorts. For future development, upon selection of a lead hematologic indication from this Phase Ib study, combination of APTO-253 with a standard therapy would be considered.

As previously disclosed, the Phase Ib trial was placed on clinical hold in order to solve a chemistry-based formulation issue, and the chemistry of the API and the formulation had undergone minor modifications to deliver a stable and soluble drug product for return to the clinical setting. In December 2016, we announced that we had successfully manufactured multiple non-GMP batches of a new drug product formulation for APTO-253, including a batch that had been stable and soluble for over six months. However, the 40L batch that was the intended clinical supply encountered an unanticipated mishap during the filling process that compromised the stability of that batch of drug product. On January 23, 2017, we announced that the root cause and corrective action studies would take longer than originally expected and that we would temporarily delay clinical activities with APTO-253 in order to elucidate the cause of manufacturing setback, with the intention of restoring the molecule to a state supporting clinical development and partnering. Formal root cause analyses studies have now been completed and have identified the reason for the drug product stability failure, and we have established a corrective and prevention action plan for the manufacture of future batches of drug product. Given these findings, we plan to manufacture a new clinical supply of drug product, perform all of the anticipated studies required to demonstrate fitness of the drug product for clinical usage, and then present the findings to the FDA in the second quarter of 2018 with the hope of having the clinical hold removed by the end of the second quarter of 2018 and returning APTO-253 to the clinical trial soon thereafter. The total direct costs of such activities to reach the presentation of the findings to the FDA are currently expected to range between US$1.7 million and

US$2.2 million. Investors are cautioned that there can be no assurance that the FDA will remove the clinical hold. From June 1, 2014, being the beginning of the fiscal year when APTO-253 was redirected from solid tumor indications to hematologic malignancies, until September 30, 2017, direct costs relating to the research and development of APTO-253 represented approximately US$8.9 million.

In the event the clinical hold is removed by the FDA, based on our current estimates and the information available to us at this time, we expect to complete the clinical drug product manufacture, initiate studies to investigate additional drug delivery methods for APTO-253 and to initiate additional non-clinical studies for solid tumor and hematalogic development. As preparing, submitting, and advancing applications for regulatory approval, developing drugs and drug product and clinical trials are sometimes complex, costly, and time consuming processes, an estimate of the future costs is not reasonable at this time

## CONSOLIDATED CAPITALIZATION

There have been no material changes in the consolidated capitalization of the Company since September 30, 2017, the date of the Company's unaudited interim condensed consolidated financial statements for the nine months ended September 30, 2017, which have not been disclosed in the Prospectus or the documents incorporated by reference herein.

## PRIOR SALES

On April 2, 2015, we entered into an at-the-market ("**ATM**") equity facility with Cowen and Company, LLC, acting as sole agent. Under the terms of the ATM, Aptose was permitted to, from time to time, sell Common Shares having an aggregate offering value of up to US$20,000,000 on NASDAQ. We issued a total of 10,592,093 Common Shares at prices ranging between US$2.20 and US$0.80 under the ATM during the 12-month period prior to the date of this Prospectus. The ATM expired on December 29, 2017 and as at that date the Company had issued a cumulative $20,000,000 of Common Shares pursuant to this facility.

On October 27, 2017, we entered into the Aspire Purchase Agreement, 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 US$15,500,000 of Common Shares over approximately 30-months. Pursuant to the terms of this agreement, on October 31, 2017, Aspire Capital purchased 357,143 Common Shares at US$1.40 per Common Share and we issued 321,429 Common Shares to Aspire Capital in consideration for entering into the Aspire Purchase Agreement. During the period of January 16, 2018 to the date of the Prospectus, we issued a total of 1,800,000 Common Shares to Aspire Capital at prices ranging between US$2.1667 and US$2.82 pursuant to the Aspire Purchase Agreement.

During the 12-month period prior to the date of the Prospectus, we granted the following securities pursuant to our stock incentive plan: (i) on March 28, 2017, we granted (A) options to purchase an aggregate of 480,000 Common Shares at a price of Cdn$1.52 per Common Share, and (B) an aggregate of 150,000 restricted stock units which fully vested on June 28, 2017; (ii) on June 6, 2017, we granted options to purchase an aggregate of 191,250 Common Shares at a price of US$1.03 per Common Share; (iii) on June 6, 2017, we granted options to purchase an aggregate of 56,250 Common Shares at a price of Cdn$1.38 per Common Share; (iv) on August 8, 2017, we granted options to purchase an aggregate of 32,500 Common Shares at a price of US$1.69 per Common Share; (v) on August 8, 2017, we granted options to purchase an aggregate of 20,000 Common Shares at a price of Cdn$2.04 per Common Share; (vi) on November 14, 2017, we granted options to purchase an aggregate of 8,000 Common Shares at a price of US$2.05 per Common Share; (vii) on December 4, 2017, we granted options to purchase an aggregate of 38,500 Common Shares at a price of US$2.01 per Common Share; (viii) on January 19, 2018, we granted options to purchase an aggregate of 670,000 Common Shares at a price of US$2.80 per Common Share; (ix) on January 19, 2018, we granted options to purchase an aggregate of 180,000 Common Shares at a price of Cdn$3.52 per Common Share; (x) on January 22, 2018, we granted options to purchase an aggregate of 90,000 Common Shares at a price of Cdn$3.84 per Common Share; and (xi) on January 22, 2018, we granted options to purchase an aggregate of 1,119,000 Common Shares at a price of US$3.07 per Common Share.

## USE OF PROCEEDS

The aggregate proceeds of distributions of Securities under this Prospectus shall not exceed US$100,000,000. Unless otherwise indicated in a Prospectus Supplement, the net proceeds that we receive from the sale of the Securities offered by this Prospectus will be used by us to potentially (i) initiate, accelerate and expand clinical trials for CG'806; (ii) initiate, accelerate and expand our clinical trials for APTO-253 provided the clinical hold is lifted by the FDA; (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. However, there is no certainty as to how the net proceeds that we receive from the sale of the Securities offered by this Prospectus may be used given that market opportunities and evolution of our current clinical assets may affect projections.

We expect that our currently available cash and proceeds available through the Aspire Purchase Agreement will be sufficient to pay planned operational expenditures over the next 25 months, including research and development costs. However, proceeds raised under the Prospectus may allow us to initiate and complete

Phase Ib clinical trials for APTO-253 in AML and initiate and complete two separate Phase I clinical trials for CG'806 in both AML and B cell malignancies.

We believe that our intended use of the net proceeds that we receive from the sale of the Securities offered by this Prospectus is consistent with our primary business objective of developing our core assets, CG'806 and APTO-253. Commercialization and production of biopharmaceuticals can only be achieved once all regulatory steps have been completed. The regulatory approval process usually includes three phases of clinical trials which, depending on the drug or drug product being tested, will vary in time required to complete. The phases typically extend for a number of years and are costly to complete. Given the uncertainty around the design, regulatory requirements and timing of future non-clinical activities and clinical trials, an estimate of the future costs of the regulatory phases is not reasonable at this time.

While we intend to use the net proceeds that we receive from the sale of the Securities offered by this Prospectus as outlined above or in the applicable Prospectus Supplement, the timing and actual use of the net proceeds may vary depending on operating and capital needs, the progress and outcome of our non-clinical activities, clinical trials and research and development programs, the progress of the formal review of strategic alternatives and business and operations circumstances. There may be circumstances where, on the basis of results obtained or for other sound business reasons, a re-allocation of funds may be necessary or prudent. Accordingly, management of the Company will have broad discretion in the application of the proceeds of an offering of Securities. The actual amount we spend in connection with each intended use of proceeds may vary significantly from the amounts specified in the applicable Prospectus Supplement and will depend on a number of factors, including those referred to under "Risk Factors" in our AIF and any other factors set forth in the applicable Prospectus Supplement.

We have not allocated any portion of the net proceeds for any particular use as of the date of this Prospectus, nor have we entered into any negotiations regarding any potential future transaction or signed any letter of intent or initiated due diligence on any such future transaction. The net proceeds may be invested temporarily until they are used for their stated purpose.

The net proceeds to the Company from any offering of Securities, the proposed use of those proceeds and the specific business objectives which we expect to accomplish with such proceeds will be set forth in the applicable Prospectus Supplement relating to that offering of Securities.

*Negative Cash Flow*

For the nine months ended September 30, 2017, cash used in operating activities by us was Cdn$2.664 million and we had a net loss of Cdn$3.31 million for such period. Our working capital as at September 30, 2017 was approximately Cdn$12.07 million. We have not generated any significant revenue from product sales to date and it is possible that we will never have sufficient product sales revenue to achieve profitability and positive cash flow. We expect to continue to incur losses for at least the next several years as we or our collaborators and licensees pursue clinical trials and research and development efforts. To become profitable, we, either alone or with our collaborators and licensees, must successfully develop, manufacture and market CG'806, as well as continue to identify, develop, manufacture and market new product candidates. It is possible that we will never have significant product sales revenue or receive royalties on our licensed product candidates. If funding is insufficient at any time in the future, we may not be able to develop or commercialize our products, take advantage of business opportunities or respond to competitive pressures.

## PLAN OF DISTRIBUTION

We may sell the Securities offered by this Prospectus to or through underwriters or dealers, and also may sell those 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, or if indicated in a Prospectus Supplement, pursuant to delayed delivery contracts, by remarketing firms or by other means. Underwriters may sell Securities to or through dealers. Each Prospectus Supplement will set forth the terms of the offering, including the name or names of any underwriters, dealers or agents and any fees or compensation payable to them in connection with the offering and sale of a particular series or issue of Securities, the public offering price or prices of the Securities and the proceeds from the sale of the Securities.

The Securities may be sold, from time to time, in one or more transactions at a fixed price or prices which may be changed or at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices, including sales in transactions that are deemed to be "at-the-market distributions" as defined in National Instrument 44-102—S*helf Distributions*, including sales made directly on the TSX, NASDAQ or other existing trading markets for the 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.

The Prospectus Supplement for any of the Securities being offered will set forth the terms of the offering of those Securities, including the name or names of any underwriters, dealers or agents, the offering price of the Securities (in the event the offering is a fixed price distribution), the currency or currencies in which the Securities will be offered, the manner in which the offering price will be determined (in the event the offering is a non-fixed price distribution), the proceeds to the Company from that sale if determinable, any underwriting fees or discounts and other items constituting underwriters' compensation, any public offering price, and any discounts or concessions allowed or re-allowed or paid to dealers or agents. Only underwriters named in the relevant Prospectus Supplement are deemed to be underwriters in connection with the Securities offered by that Prospectus Supplement.

If underwriters purchase Securities as principal, the Securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase those Securities will be subject to certain conditions precedent, and the underwriters will be obligated to purchase all the Securities offered by the Prospectus Supplement if any of such Securities are purchased. Any public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may be changed from time to time. The Securities may also be sold directly by the Company at prices and upon terms agreed to by the purchaser and the Company or through agents designated by the Company from time to time. Any agent involved in the offering and sale of the Securities pursuant to this Prospectus will be named, and any commissions payable by the Company to that agent will be set forth, in the applicable Prospectus Supplement. Unless otherwise indicated in the Prospectus Supplement, any agent would be acting on a best efforts basis for the period of its appointment.

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 U.S. Securities Act of 1933, as amended,, and Canadian securities legislation, or to contribution with respect to payments which 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. Except as set forth in a Prospectus Supplement, in connection with any offering of Securities, other than an "at-the-market distribution", the underwriters, dealers or agents, as the case may be, may over-allot or effect transactions intended to 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.

Any offering of Securities, other than Common Shares, will be a new issue of securities with no established trading market. Unless otherwise specified in the applicable Prospectus Supplement, such Securities will not be listed on any securities exchange. Any underwriters, dealers or agents to or through which Securities other than our Common Shares are sold by us for public offering and sale may make a market in such Securities, but such underwriters, dealers or agents will not be obligated to do so and may discontinue any such market making at any time and without notice. No assurance can be given that a market for trading in Securities of any series or issue will develop or as to the liquidity of any such market, whether or not such Securities are listed on a securities exchange

The place, time of delivery, and other terms of the offered Securities will be described in the applicable Prospectus Supplement.

## TRADING PRICE AND VOLUME

The following table sets forth the reported high and low sales prices in Canadian dollars and the cumulative volume of trading of the Common Shares of Aptose on the TSX for the periods indicated below:

| | Price Ranges | | |
|---|---|---|---|
| | High (Cdn$) | Low (Cdn$) | Trading Volumes |
| March 2017 | 1.82 | 1.35 | 924,968 |
| April 2017 | 1.38 | 1.05 | 1,264,036 |
| May 2017 | 1.79 | 1.16 | 1,901,623 |
| June 2017 | 2.20 | 1.36 | 1,009,177 |
| July 2017 | 2.19 | 1.63 | 1,070,017 |
| August 2017 | 2.20 | 1.69 | 592,046 |
| September 2017 | 2.12 | 1.69 | 1,250,418 |
| October 2017 | 2.07 | 1.64 | 595,242 |
| November 2017 | 2.92 | 1.95 | 1,484,171 |
| December 2017 | 3.00 | 2.17 | 1,048,398 |
| January 2018 | 4.80 | 2.69 | 1,965,384 |
| February 2018 | 3.71 | 3.16 | 667,313 |
| March 1-6, 2018 | 4.10 | 3.46 | 148,933 |

The following table sets forth the reported high and low sales prices in US dollars and the cumulative volume of trading of the Common Shares of Aptose on NASDAQ for the periods indicated below:

| | Price Ranges | | |
|---|---|---|---|
| | High (US$) | Low (US$) | Trading Volumes |
| March 2017 | 1.37 | 1.01 | 9,984,969 |
| April 2017 | 1.05 | 0.78 | 4,648,218 |
| May 2017 | 1.32 | 0.86 | 12,405,311 |
| June 2017 | 1.70 | 1.00 | 10,651,964 |
| July 2017 | 1.75 | 1.25 | 8,193,357 |
| August 2017 | 1.75 | 1.36 | 5,057,911 |
| September 2017 | 1.75 | 1.38 | 7,204,650 |
| October 2017 | 1.61 | 1.30 | 6,255,650 |
| November 2017 | 2.30 | 1.50 | 8,801,894 |
| December 2017 | 2.58 | 1.68 | 15,383,437 |
| January 2018 | 3.90 | 2.15 | 11,914,539 |
| February 2018 | 3.03 | 2.51 | 5,609,507 |
| March 1-6, 2018 | 3.19 | 2.68 | 998,017 |

## DESCRIPTION OF SHARE CAPITAL

### Authorized Capital

Our authorized share capital consists of an unlimited number of Common Shares, without par value. As of March 6, 2018, there were 29,302,053 Common Shares issued and outstanding.

### 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 ratably 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. We will consider paying dividends in 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 the board of directors to retain all earnings to finance our business plan.

## DESCRIPTION OF WARRANTS

We may issue Warrants for the purchase of Common Shares. Warrants may be offered separately or together with other Securities offered by this Prospectus, as the case may be. Unless the applicable Prospectus Supplement otherwise indicates, each series of Warrants will be issued under a separate warrant indenture to be entered into between us and one or more banks or trust companies acting as warrant agent. The applicable Prospectus Supplement will include details of the warrant agreements covering the Warrants being offered. The warrant agent will act solely as our agent and will not assume a relationship of agency with any holders of warrant certificates or beneficial owners of Warrants.

The following sets forth certain general terms and provisions of the Warrants offered under this Prospectus. The specific terms of the Warrants, and the extent to which the general terms described in this section apply to those Warrants, will be set forth in the applicable Prospectus Supplement. The terms of any Warrants offered under a Prospectus Supplement may differ from the terms described below.

The particular terms of each issue of Warrants will be described in the related Prospectus Supplement. This description will include some or all of the following:

- the designation and aggregate number of Warrants;
- the price at which the Warrants will be offered;
- the currency or currencies in which the Warrants will be offered;
- the designation and terms of our Common Shares purchasable upon exercise of the Warrants;
- the date on which the right to exercise the Warrants will commence and the date on which the right will expire;
- the number of Common Shares that may be purchased upon exercise of each Warrant and the price at which and currency or currencies in which our Common Shares may be purchased upon exercise of each Warrant;
- the designation and terms of any Securities with which the Warrants will be offered, if any, and the number of the Warrants that will be offered with each security;
- the date or dates, if any, on or after which the Warrants and the related Securities will be transferable separately;
- if applicable, whether the Warrants will be subject to redemption or call and, if so, the terms of such redemption or call provisions;
- material United States and Canadian tax consequences of owning the Warrants; and
- any other material terms or conditions of the Warrants.

Each Warrant will entitle the holder to purchase Common Shares, as specified in the applicable Prospectus Supplement at the exercise price that we describe therein. Unless we otherwise specify in the applicable Prospectus Supplement, holders of the Warrants may exercise the Warrants at any time up to the specified time on the expiration date that we set forth in the applicable Prospectus Supplement. After the close of business on the expiration date, unexercised Warrants will become void.

The warrant indenture, if any, and the warrant certificate will specify that upon the subdivision, consolidation, reclassification or other material change of our Common Shares or any other reorganization, amalgamation, merger or sale of all or substantially all of our assets, the Warrants will thereafter evidence the right of the holder to receive the Securities, property or cash deliverable in exchange for or on the conversion of or in respect of our Common Shares to which the holder of a common share would have been entitled immediately after such event. Similarly, any distribution to all or substantially all of the holders of Common

Shares of rights, options, warrants, evidences of indebtedness or assets will result in an adjustment in the number of Common Shares to be issued to holders of Warrants.

Prior to the exercise of any Warrants to purchase Common Shares, holders of the Warrants will not have any of the rights of holders of the underlying Common Shares, including the right to receive payments of dividends, if any, on the underlying Common Shares, or to exercise any applicable right to vote.

## DESCRIPTION OF UNITS

We may issue Units comprised of one or more of the other Securities that may be offered under this Prospectus, in any combination. The following information, together with the additional information we may include in any applicable Prospectus Supplements, summarizes the material terms and provisions of any such the Units that we may offer under this Prospectus. While the information below will apply generally to any Units that we may offer under this Prospectus, we will describe the particular terms of any series of Units in detail in the applicable Prospectus Supplement. The terms of any Units offered under a Prospectus Supplement may differ from the general terms described below.

We may file the form of unit agreement, if any, between us and a unit agent that describes the terms and conditions of the series of Units we are offering, and any supplemental agreements, concurrently with the filing of the applicable Prospectus Supplement under which such series of Units are offered. This summary is subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement, if any, and any supplemental agreements applicable to a particular series of Units. We urge you to read the applicable Prospectus Supplements related to the particular series of Units that we sell under this Prospectus, as well as the complete unit agreement, if any, and any supplemental agreements that contain the terms of the Units.

We may issue Units comprising one or more of Common Shares and Warrants 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, under which a Unit may be issued, if any, may provide that the Securities included in the Unit may not be held or transferred separately, at any time or at any time before a specified date. We will describe in the applicable Prospectus Supplement the terms of the series of Units.

The provisions described in this section, as well as those described under “Description of Share Capital” and “Description of Warrants” will apply to each Unit and to any Common Share or Warrant included in each Unit, respectively.

We may issue Units in such amounts and in numerous distinct series as we determine.

## RISK FACTORS

An investment in our Securities is highly speculative and subject to a number of known and unknown risks. Only those persons who can bear the risk of the entire loss of their investment should purchase our Securities. You should carefully consider the risk factors below, those in our AIF for the fiscal year ended December 31, 2016 incorporated by reference herein, the other information contained in this Prospectus, as updated by our subsequent filings under the Exchange Act and Canadian securities laws, and the risk factors and other information contained in any applicable Prospectus Supplement, before purchasing any of our Securities. Any of the matters highlighted in these risk factors could have a material adverse effect on our business, results of operations and financial condition, causing an investor to lose all, or part of, its, his or her investment.

The risks and uncertainties described in this Prospectus and the documents incorporated by reference into this Prospectus are not the only ones we face. Additional risks and uncertainties that we are not aware of or focused on, or that we currently deem to be immaterial, may also impair our business operations and cause the trading price of our Securities to decline.

***Clinical trials are long, expensive and uncertain processes and the FDA or Health Canada may ultimately not approve any of our product candidates.***

In the past five years, none of our product candidates has received regulatory approval for commercial use and sale in North America. We cannot market a pharmaceutical product in any jurisdiction until it has completed thorough preclinical testing and clinical trials in addition to that jurisdiction's extensive regulatory approval process. Approval in one country does not assure approval in another country. In general, significant research and development and clinical studies are required to demonstrate the safety and effectiveness of our product candidates before we can submit any regulatory applications.

Clinical trials are long, expensive and uncertain processes. Clinical trials may not be commenced or completed on schedule and the FDA or Health Canada or any other regulatory body may not ultimately approve our product candidates for commercial sale. The clinical trials of any of our drug candidates could be unsuccessful, which would prevent us from advancing, commercializing or partnering the drug.

Even if the results of our preclinical studies or clinical trials are initially positive, it is possible that we will obtain different results in the later stages of drug development or that results seen in clinical trials will not continue with longer term treatment. Positive results in Phase I clinical trials may not be repeated in larger Phase II or Phase III clinical trials.

Our preclinical studies and clinical trials may not generate positive results that will allow us to move towards the commercial use and sale of our product candidates. Furthermore, negative preclinical or clinical trial results may cause our business, financial condition, or results of operations to be materially adversely affected. For example, our Phase Ib clinical trial of APTO-253 in patients with AML was placed on clinical hold by the FDA in November 2015 and since that time the Company has encountered manufacturing setbacks which have further delayed the return of APTO-253 to the clinic. There can be no assurance that the clinical hold will be lifted by the FDA, that the Company will have the resources, or that we will decide, to continue the development of APTO-253. Even if the Phase Ib of APTO-253 is continued, there is a long development path ahead that will take many years to complete and is prone to the risks of failure or delays inherent in drug development. Likewise, our CG'806 product candidate has not yet entered clinical trials and it is expected to undergo many years of testing and regulatory examinations prior to any potential regulatory approvals.

Preparing, submitting and advancing applications for regulatory approval is complex, expensive and time intensive and entails significant uncertainty. A commitment of substantial resources to conduct time-consuming research, preclinical studies and clinical trials is required if we are to complete development of our products.

Clinical trials of our products require that we identify and enroll a large number of patients with the illness under investigation. We may not be able to enroll a sufficient number of appropriate patients to complete our clinical trials in a timely manner, particularly in smaller indications and indications where there is significant competition for patients. If we experience difficulty in enrolling a sufficient number of patients to conduct our clinical trials, we may need to delay or terminate ongoing clinical trials and will not accomplish objectives material to our success. Delays in planned patient enrolment or lower than anticipated event rates in our current clinical trials or future clinical trials also may result in increased costs, program delays, or both.

In addition, unacceptable toxicities or adverse side effects may occur at any time in the course of preclinical studies or human clinical trials or, if any product candidates are successfully developed and approved for marketing, during commercial use of any approved products. The appearance of any unacceptable toxicities or adverse side effects could interrupt, limit, delay or abort the development of any of our product candidates or, if previously approved, necessitate their withdrawal from the market. Furthermore, disease resistance or other unforeseen factors may limit the effectiveness of our potential products.

***We may not achieve our projected development goals in the time frames we announce and expect.***

We set goals for, and make public statements regarding, the expected timing of the accomplishment of objectives material to our success, such as the submission of IND, the commencement and completion of clinical trials and the expected costs to develop our product candidates. The actual timing and costs of these events can vary dramatically due to factors within and beyond our control, such as delays or failures in our IND submissions or clinical trials, issues related to the manufacturing of drug supply, uncertainties inherent in the regulatory approval process, market conditions and interest by partners in our product candidates among other things. We may not make regulatory submissions or receive regulatory approvals as planned; our clinical trials may not be completed; or we may not secure partnerships for any of our product candidates. Any failure to achieve one or more of these milestones as planned would have a material adverse effect on our business, financial condition and results of operations.

***Delays in clinical testing could result in delays in commercializing our product candidates and our business may be substantially harmed.***

We cannot predict whether any clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. Our product development costs will increase if we experience delays in clinical testing. Significant clinical trial delays could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before us, which would impair our ability to successfully commercialize our product candidates and may harm our financial condition, results of operations and prospects. The recommencement and completion of clinical trials for our products, including the APTO-253 phase I clinical trial and the IND submission for CG'806, may be delayed for a number of reasons, including delays related, but not limited, to:

- failure by regulatory authorities to grant permission to proceed or placing the clinical trial on hold;
- patients failing to enroll or remain in our trials at the rate we expect;
- suspension or termination of clinical trials by regulators for many reasons, including concerns about patient safety or failure of our contract manufacturers to comply with cGMP requirements;
- any changes to our manufacturing process that may be necessary or desired;
- delays or failure to obtain GMP-grade clinical supply from contract manufacturers of our products necessary to conduct clinical trials;
- product candidates demonstrating a lack of safety or efficacy during clinical trials;
- patients choosing an alternative treatment for the indications for which we are developing any of our product candidates or participating in competing clinical trials;

- patients failing to complete clinical trials due to dissatisfaction with the treatment, side effects or other reasons;
- reports of clinical testing on similar technologies and products raising safety and/or efficacy concerns;
- competing clinical trials and scheduling conflicts with participating clinicians;
- clinical investigators not performing our clinical trials on their anticipated schedule, dropping out of a trial, or employing methods not consistent with the clinical trial protocol, regulatory requirements or other third parties not performing data collection and analysis in a timely or accurate manner;
- failure of our contract research organizations, or CROs, to satisfy their contractual duties or meet expected deadlines;
- inspections of clinical trial sites by regulatory authorities or Institutional Review Boards, or ethics committees finding regulatory violations that require us to undertake corrective action, resulting in suspension or termination of one or more sites or the imposition of a clinical hold on the entire study;
- one or more Institutional Review Boards or ethics committees rejecting, suspending or terminating the study at an investigational site, precluding enrollment of additional subjects, or withdrawing its approval of the trial; or
- failure to reach agreement on acceptable terms with prospective clinical trial sites.

Our product development costs will increase if we experience delays in testing or approval or if we need to perform more or larger clinical trials than planned. Additionally, changes in regulatory requirements and policies may occur, and we may need to amend study protocols to reflect these changes. Amendments may require us to resubmit our study protocols to regulatory authorities or Institutional Review Boards or ethics committees for re-examination, which may impact the cost, timing or successful completion of that trial. Delays or increased product development costs may have a material adverse effect on our business, financial condition and prospects.

***We rely on contract manufacturers over whom we have limited control. 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.***

We rely on contract manufacturing organizations ("**CMOs**"), to manufacture our product candidates for some preclinical studies and clinical trials. We rely on CMOs for manufacturing, filling, packaging, storing and shipping of drug product in compliance with cGMP regulations applicable to our products. The FDA ensures the quality of drug products by carefully monitoring drug manufacturers' compliance with cGMP regulations. The cGMP regulations for drugs contain minimum requirements for the methods, facilities and controls used in manufacturing, processing and packing of a drug product.

We contracted with multiple CMOs for the manufacture of APTO-253 and CG'806 to supply drug supply and then drug product for our clinical trials. The synthesis of CG'806 drug supply is challenging from a scale-up synthetic chemistry perspective. The formulation and manufacture of APTO-253 is a complex process with many variables involved. We pre-qualified CMOs to have the capacity, the systems and the experience to supply CG'806 and APTO-253 for our clinical trials. We have qualified the manufacturing facilities and the FDA has also performed site audits for our selected CMOs. In spite of the efforts to prequalify CMOs, delays and errors may occur, and any such manufacturing failures, delays or compliance issues could cause delays in the completion of our clinical trial programs.

There can be no assurances that CMOs will be able to meet our timetable and requirements. We have contracted with alternate suppliers in the event our current CMOs are unable to scale up production, or if our current CMOs otherwise experience any other significant problems in the manufacture of CG'806 and APTO-253. However, it is possible that all third-party manufacturing sources may experience failure or delays and may demand commercially unreasonable terms, which may lead to further delays in the development of our product

candidates. Further, contract manufacturers must operate in compliance with cGMP and failure to do so could result in, among other things, the disruption of product supplies. Our dependence upon third parties for the manufacture of our products may adversely affect our profit margins and our ability to develop and deliver products on a timely and competitive basis.

## CERTAIN INCOME TAX CONSIDERATIONS

The applicable Prospectus Supplement may describe certain Canadian federal income tax consequences to an investor who is a resident of Canada or who is a non-resident of Canada of acquiring, owning or disposing of any Securities offered thereunder, including to the extent applicable, whether any dividends or interest relating to the Securities will be subject to Canadian non-resident withholding tax.

The applicable Prospectus Supplement may also describe certain material U.S. federal income tax consequences of the acquisition, ownership and disposition of any Securities offered thereunder by an initial investor who is subject to United States federal taxation.

## LEGAL MATTERS

Unless otherwise specified in a Prospectus Supplement, certain legal matters relating to the offering of Securities under this Prospectus will be passed upon 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 any offering of Securities under this Prospectus will be passed upon for any underwriters, dealers or agents by counsel to be designated at the time of the offering by such underwriters, dealers or agents.

As of the date hereof, the partners and associates of McCarthy Tétrault LLP, as a group, beneficially owned, directly or indirectly, less than 1% of the outstanding Common Shares of the Company or any of its associates or affiliates.

Any securities offered pursuant to this Prospectus, including by way of at-the-market offerings, will be conducted in accordance with applicable securities legislation in Canada and the United States, and, if applicable, will be subject to regulatory approval or exemptive relief.

## AUDITOR

Our auditor is KPMG LLP, Chartered Professional Accountants, Bay Adelaide Centre, 333 Bay Street, Suite 4600, Toronto, Ontario, Canada, M5H 2S5 and they have confirmed they are independent with respect to the Company within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation or regulations.

## TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for our Common Shares is Computershare Investor Services Inc. at its principal offices in Toronto, Ontario, Canada.

## AGENT FOR SERVICE OF PROCESS

Dr. William G. Rice, President, Chief Executive Officer and Chairman of the Board of Directors of the Company, Gregory K. Chow, Senior Vice President and Chief Financial Officer of the Company, Dr. Denis Burger, a director of the Company and Dr. Erich Platzer, a director of the Company all reside outside of Canada and have appointed Aptose Biosciences Inc., 5955 Airport Road, Suite 228, Mississauga, Ontario, Canada L4V 1R9 as agent for service of process.

Purchasers are advised that it may not be possible for investors to enforce judgments obtained in Canada against any person or company that is incorporated, continued or otherwise organized under the laws of a foreign jurisdiction or resides outside of Canada, even if the party has appointed an agent for service of process.

## DOCUMENTS FILED AS PART OF THE REGISTRATION STATEMENT

The following documents have been or will be filed with the SEC as part of the registration statement of which this Prospectus forms a part: the documents referred to under “Documents Incorporated by Reference”; consent of KPMG LLP; consent of McCarthy Tétrault LLP; and powers of attorney from directors and officers of the Company.


# US$30,000,000 of

# Common Shares

## Prospectus


**March 28, 2018**