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

FORM 20-F

(Mark One)

☐ Registration statement pursuant to Section 12(b) or 12(g) of the Securities Exchange Act of 1934.

Or

☒ Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Or

☐ Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Or

☐ Shell company report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.
Date of event requiring this shell company report _____.

Commission file number 001-32001

APTOSE BIOSCIENCES INC.

(Exact Name of Registrant as Specified in Its Charter)

Canada
(Jurisdiction of Incorporation or Organization)

5955 Airport Road, Suite #228
Mississauga, Ontario
L4V 1R9
Canada
(Address of Principal Executive Offices)

Gregory Chow
Chief Financial Officer
5955 Airport Road, Suite #228
Mississauga, Ontario
L4V 1R9
Canada
Telephone: (647) 479-9828
Facsimile: (905) 234-2120
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act: None

Title of Each Class	Name of Each Exchange On Which Registered
Common Shares	NASDAQ Stock Market

Securities registered or to be registered pursuant to Section 12(g) of the Act:**None**

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:**None**

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

Common Shares, without par value, at December 31, 2016: 15,721,388

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes ☐ No ☒

If this is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes ☐ No ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes ☐ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Act.

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☒

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing.
U.S. GAAP ☐ International Financial Reporting Standards as issued by the International Accounting Standards Board ☒ Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes ☐ No ☒

TABLE OF CONTENTS

GENERAL

On July 10, 2007 (the "**Arrangement Date**"), the Company completed a plan of arrangement and corporate reorganization with, among others, 4325231 Canada Inc. (now Global Summit Real Estate Inc.), formerly Lorus Therapeutics Inc. ("**Old Lorus**"), 6707157 Canada Inc. and Pinnacle International Lands, Inc. (the "**Arrangement**"). As a result of the plan of arrangement and reorganization, among other things, each common share of Old Lorus was exchanged for one common share ("**Common Share**") of the Company and the assets (excluding certain deferred tax assets) and liabilities of Old Lorus (including all of the shares of its subsidiaries) were transferred, directly or indirectly, to the Company and/or our subsidiaries. We continued the business of Old Lorus after the Arrangement Date with the same officers and employees and continued to be governed by the same directors as Old Lorus prior to the Arrangement Date.

On August 28, 2014 (the "**Name Change Date**"), we changed our name from Lorus Therapeutics Inc. to Aptose Biosciences Inc. In this Annual Report on Form 20-F, all references to "**Aptose**", the "**Company**", "**we**", "**our**", "**us**" and similar expressions, unless otherwise stated, are references to Old Lorus prior to the Arrangement Date, Lorus Therapeutics Inc. after the Arrangement Date and Aptose Biosciences Inc. after the Name Change Date. References to this "**Form 20-F**" and this "**Annual Report**" mean references to this Annual Report on Form 20-F dated as of March 28, 2017 for the twelve months ended December 31, 2016.

We use the Canadian dollar as our reporting and functional currency. All references in this Annual Report to "dollars" or "$" are expressed in Canadian dollars, unless otherwise indicated. See also "Item 3. Key Information - Exchange Rate Information" for more detailed currency and conversion information. Our consolidated financial statements, which form part of this Annual Report, are presented in Canadian dollars and are prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("**IFRS**"), which differ in certain respects from accounting principles generally accepted in the United States ("**U.S. GAAP**").

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. Historical trading prices and volumes disclosed are on a post-consolidated basis and reflect the one for twelve.

FORWARD-LOOKING STATEMENTS

This Annual Report contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 or "forward-looking information" (within the meaning of applicable Canadian securities legislation). Such statements include, but are not limited to, statements relating to:

- 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 strategic partnerships to assist in the further development of our product candidates and to build our pipeline;
- our plans to conduct clinical trials and pre-clinical programs;
- our reliance on external contract research/manufacturing organizations for certain activities;
- our expectations regarding the progress and the successful and timely completion of the various stages of our drug discovery, pre-clinical and clinical studies and the regulatory approval process;
- potential exposure to legal actions and potential need to take action against other entities.
- our plans, objectives, expectations and intentions; and
- other statements including words such as "anticipate", "contemplate", "continue", "believe", "plan", "estimate", "expect", "intend", "will", "should", "may", "hope" and other similar expressions.

The forward-looking statements 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 ability to obtain the substantial capital we require to fund research and operations;
- our lack of product revenues and 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 drug candidates require time-consuming and costly preclinical and clinical testing and regulatory approvals before commercialization;
- 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 delay our ability to generate revenue;
- the regulatory approval process;
- our ability to recruit patients for clinical trials;
- the progress of our clinical trials;
- our ability to find and enter into agreements with potential partners;
- our ability to attract and retain key personnel;
- our ability to obtain and maintain patent protection;
- our ability to protect our intellectual property rights and not infringe on the intellectual property rights of others;
- our reliance on external contract research/manufacturing organizations for certain activities;
- our ability to comply with applicable governmental regulations and standards;
- development or commercialization of similar products by our competitors, many of which are more established and have or have access to greater financial resources than us;
- commercialization limitations imposed by intellectual property rights owned or controlled by third parties;
- 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;
- our ability to maintain adequate insurance at acceptable costs;
- further equity financing may substantially dilute the interests of our shareholders;
- changing market conditions; 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 United States Securities and Exchange Commission ("**SEC**"), and those which are discussed under the heading "Item 3. Key Information—D. Risk Factors" in this document.

Should one or more of these risks or uncertainties materialize, or should the assumptions set out in the section entitled "Item 3. Key Information—D. Risk Factors" underlying those forward-looking statements prove incorrect, actual results may vary materially from those described herein. These forward-looking statements are made as of the date of this Annual Report or, in the case of documents incorporated by reference herein, as of the date of such documents, and we do not intend, and do not assume any obligation, to update these forward-looking statements, except as required by law. Such statements may not prove to be accurate as actual results and future events could differ materially from those anticipated in such statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and accordingly investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein. New factors emerge from time to time, and it is not possible for management of the Company to predict all of these factors or to assess in advance the impact of each such factor on the Company's business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statement.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

A. ***Selected financial data.***

The following tables present our selected consolidated financial data. You should read these tables in conjunction with our audited consolidated financial statements and accompanying notes included in Item 18 of this Annual Report and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Item 5 of this Annual Report.

The selected consolidated financial information set forth below has been derived from the Company's audited consolidated financial statements that are prepared in accordance with IFRS, which differ in certain respects from the principles the Company would have followed had its consolidated financial statements been prepared in accordance with U.S. GAAP. The selected audited consolidated financial information should be read in conjunction with our audited consolidated financial statements and related notes thereto.

Effective July 17, 2014, we changed our fiscal year end from May 31 to December 31. As a result of that change, the period ending December 31, 2014 is for a seven month transition period.

The following table presents a summary of our consolidated statements of operations derived from our audited consolidated financial statements for the fiscal years ended December 31, 2016 and 2015, the seven months ended December 31, 2014 and fiscal years ended May 31, 2014 and 2013.

Consolidated statements of operations data

(In thousands, except per share data)

	December 31, 2016	December 31, 2015	December 31, 2014	May 31, 2014	May 31, 2013
In accordance with IFRS					
Revenue	$ —	$ —	$ —	$ —	$ —
Research and development	$ 10,322	$ 6,254	$ 2,404	$ 3,015	$ 3,317
General and administrative	$ 8,344	$ 9,845	$ 5,542	$ 7,317	$ 2,257
Operating expenses	$ 18,666	$ 16,099	$ 7,946	$ 10,332	$ 5,589
Finance expense	$ 66	$ 43	$ 104	$ 297	$ 21
Finance income	$ (105)	$ (1,516)	$ (279)	$ (76)	$ (30)
Net loss	$ (18,627)	$ (14,626)	$ (7,771)	$ (10,553)	$ (5,565)
Basic and diluted loss per Common Share (post-consolidation)	$ (1.46)	$ (1.23)	$ (0.67)	$ (2.02)	$ (1.58)
Weighted average number of Common Shares outstanding (post-consolidation)	12,743	11,906	11,605	5,216	3,521

The following table presents a summary of our consolidated balance sheets as at December 31, 2016, 2015 and 2014, May 31, 2014 and 2013.

Consolidated balance sheet data

(In thousands,)	As at December 31				
	2016	**2015**	**2014**	**2014**	**2013**
In accordance with IFRS					
Cash and cash equivalents	**$ 10,662**	**$ 11,503**	$ 14,365	$ 19,367	$ 653
Investments	$ —	**$ 8,245**	$ 16,180	$ 11,019	$ —
Total assets	**$ 11,610**	**$ 21,249**	$ 31,600	$ 30,899	$ 1,035
Total liabilities	**$ 1,770**	**$ 2,356**	$ 2,328	$ 2,460	$ 1,816
Total shareholders' equity (deficit)	**$ 9,840**	**$ 18,893**	$ 29,272	$ 28,439	$ (781)
Number of Common Shares outstanding (post- consolidation)	**15,721**	**12,048**	11,700	10,388	3,521
Dividends paid on Common Shares	—	—	—	—	—

Exchange Rate Information

The following table sets out the average exchange rates of CDN$1.00 for US$1.00 for the following periods as taken from the Bank of Canada's website.

Period	**Average Close**
Fiscal Year Ended December 31, 2016	1.3256
Fiscal Year Ended December 31, 2015	1.2787
Seven Months Ended December 31, 2014	1.1080
Fiscal Year Ended May 31, 2014	1.0662
Fiscal Year Ended May 31, 2013	1.0042
Fiscal Year Ended May 31, 2012	1.0005

The following table sets forth the high and low exchange rates of CDN$1.00 for US$1.00 for each month during the previous six months.

Period	**High**	**Low**
February 2017	$ 1.3428	$ 1.3004
January 2017	$ 1.3438	$ 1.3030
December 2016	$ 1.3556	$ 1.3120
November 2016	$ 1.3582	$ 1.3337
October 2016	$ 1.3403	$ 1.3104
September 2016	$ 1.3248	$ 1.2843

On March 27, 2017, the noon buying rate of CDN$1.00 for US$1.00, as per the Bank of Canada, was CDN$1.00 = US$1.3368.

B. ***Capitalization and indebtedness.***

Not applicable.

C. ***Reasons for the offer and use of proceeds.***

Not applicable.

D. ***Risk factors*****.**

Investing in our securities involves a high degree of risk. Before making an investment decision with respect to our Common Shares, you should carefully consider the following risk factors, in addition to the other information included or incorporated by reference in this Annual Report. Additional risks not currently known by us or that we consider immaterial at the present time may also impair our business, financial condition, prospects or results of operations. If any of the following risks occur, our business, financial condition, prospects or results of operations would likely be materially adversely affected. In that case, the trading price of our Common Shares could decline and you may lose all or part of the money you paid to buy our Common Shares. The risks set out below are not the only risks and uncertainties we currently face; other risks may arise in the future.

RISKS RELATED TO OUR BUSINESS

We have a history of operating losses. We expect to incur net losses and we may never achieve or maintain profitability.

We have not been profitable since our inception in 1986. We reported net losses of $18.7 million in the fiscal year ended December 31, 2016, $14.6 million in the fiscal year ended December 31, 2015, $7.8 million in the 7 months ended December 31, 2014 and $10.6 million in the fiscal year ended May 31, 2014, and as of December 31, 2016, we had an accumulated deficit of $252 million.

We have not generated any significant revenue to date and it is possible that we will never have sufficient product sales revenue (if any) to achieve profitability. 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 our current product candidates APTO-253 or 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.

We currently do not earn any revenues from our drug candidates and are therefore considered to be in the development stage. The continuation of our research and development activities and the commercialization of the targeted therapeutic products are dependent upon our ability to successfully finance and complete our research and development programs through a combination of equity financing and payments from strategic partners. We have no current sources of significant payments from strategic partners.

We are an early stage development company.

We are at an early stage of development. In the past five years, none of our potential products has obtained regulatory approval for commercial use and sale in any country and as such, no significant revenues have resulted from product sales. Significant additional investment will be necessary to complete the development of any of our product candidates. Preclinical and clinical trial work must be completed before our potential products could be ready for use within the markets that we have identified. We may fail to develop any products, obtain regulatory approvals, enter clinical trials or commercialize any products. We do not know whether any of our potential product development efforts will prove to be effective, meet applicable regulatory standards, obtain the requisite regulatory approvals, be capable of being manufactured at a reasonable cost or be accepted in the marketplace. We also do not know whether sales, license fees or related royalties will allow us to recoup any investment we make in the commercialization of our products.

The product candidates we are currently developing are not expected to be commercially viable for at least the next several years and we may encounter unforeseen difficulties or delays in commercializing our product candidates. In addition, our potential products may not be effective or may cause undesirable side effects.

Our product candidates require significant funding to reach regulatory approval assuming positive clinical results. For example, our clinical candidate APTO-253 began enrolment in a Phase I clinical trial in patients with relapsed or refractory hematologic malignancies and was placed on clinical hold by the United States Food and Drug Administration ("**FDA**") following a voluntary suspension of dosing by us. We are currently working with the FDA to have such hold lifted but significant additional funding or a partnership will be necessary to complete, if required, Phase II or Phase III clinical trials. Such funding for our product candidates may be difficult, or impossible to raise in the public or private markets or through partnerships. If funding or partnerships are not readily attainable, the development of our product candidates may be significantly delayed or stopped altogether. The announcement of a delay or discontinuation of development would likely have a negative impact on our share price.

We need to raise additional capital.

We have an ongoing need to raise additional capital. To obtain the necessary capital, we must rely on some or all of the following: additional share issues, debt issuances (including promissory notes), collaboration agreements or corporate partnerships and grants and tax credits to provide full or partial funding for our activities. Additional funding may not be available on terms that are acceptable to us or in amounts that will enable us to carry out our business plan.

Our need for capital may require us to:

- engage in equity financings that could result in significant dilution to existing investors;
- delay or reduce the scope of or eliminate one or more of our development programs;
- obtain funds through arrangements with collaborators or others that may require us to relinquish rights to technologies, product candidates or products that we would otherwise seek to develop or commercialize ourselves;
- license rights to technologies, product candidates or products on terms that are less favourable to us than might otherwise be available;
- utilize investigator-sponsored or government-sponsored clinical trials that are not under our control;
- collaborate with academic groups that have the ability to publish findings with our product candidates without our ability to prevent such publications;
- considerably reduce operations; or
- cease our 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 IRBs, 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 IRBs 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 IRBs 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, or 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.

Clinical trials are long, expensive and uncertain processes and the FDA or Health Canada may ultimately not approve any of our product candidates. We may never develop any commercial drugs or other products that generate revenues.

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.

Our failure to develop safe, commercially viable drugs would substantially impair our ability to generate revenues and sustain our operations and would materially harm our business and adversely affect our share price.

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 commencement and completion of clinical trials and our ability to secure the financing necessary to continue the development of our product candidates. The actual timing of these events can vary dramatically due to factors within and beyond our control, such as delays or failures in our 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. Our clinical trials may not be completed; we may not make regulatory submissions or receive regulatory approvals as planned; 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.

If we have difficulty enrolling patients in clinical trials, the completion of the trials may be delayed or cancelled.

As our product candidates advance from preclinical testing to clinical testing, and then through progressively larger and more complex clinical trials, we will need to enroll an increasing number of patients that meet our eligibility criteria. There is significant competition for recruiting cancer patients in clinical trials, and we may be unable to enroll the patients we need to complete clinical trials on a timely basis or at all. Certain factors that affect enrollment of patients onto our clinical trials are impacted by external forces that may be beyond our control. Such factors include, but are not limited to, the following:

- size and nature of the patient population;
- eligibility and exclusion criteria for the trial;
- design of the study protocol;
- competition with other companies for clinical sites or patients;
- the perceived risks and benefits of the product candidate under study;
- the patient referral practices of physicians; and
- the number, availability, location and accessibility of clinical trial sites.

We rely and will continue to rely on third parties to conduct and monitor many of our preclinical studies and our clinical trials, and their failure to perform as required could cause substantial harm to our business.

We rely and will continue to rely on third parties to conduct a significant portion of our preclinical and clinical development activities. Preclinical activities include in vivo studies providing access to specific disease models, pharmacology and toxicology studies, and assay development. Clinical development activities include trial design, regulatory submissions, clinical patient recruitment, clinical trial monitoring, clinical data management and analysis, safety monitoring and project management, contract manufacturing and quality assurance. If there is any dispute or disruption in our relationship with third parties, or if they are unable to provide quality services in a timely manner and at a feasible cost, our active development programs will face delays. Further, if any of these third parties fails to perform as we expect or if their work fails to meet regulatory requirements, our testing could be delayed, cancelled or rendered ineffective.

We heavily rely on the capabilities and experience of our key executives and scientists and the loss of any of them could affect our ability to develop our products.

The loss of Dr. William G. Rice, our Chairman, President and Chief Executive Officer, or other key members of our staff, including Gregory Chow, our Senior Vice President and Chief Financial Officer, could harm us. We have employment agreements with Dr. Rice and Mr. Chow, although such employment agreements do not guarantee their retention. We also depend on our scientific and clinical collaborators and advisors, all of whom have outside commitments that may limit their availability to us. In addition, we believe that our future success will depend in large part upon our ability to attract and retain highly skilled scientific, managerial, medical, clinical and regulatory personnel, particularly as we expand our activities and seek regulatory approvals for clinical trials. We routinely enter into consulting agreements with our scientific and clinical collaborators and advisors, key opinion leaders and academic partners in the ordinary course of our business. We also enter into contractual agreements with physicians and institutions who will recruit patients into our clinical trials on our behalf in the ordinary course of our business. Notwithstanding these arrangements, we face significant competition for these types of personnel from other companies, research and academic institutions, government entities and other organizations. We cannot predict our success in hiring or retaining the personnel we require for continued growth. The loss of the services of any of our executive officers or other key personnel could potentially harm our business, operating results or financial condition.

Our employees may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have a material adverse effect on our business.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include failures to comply with FDA regulations, provide accurate information to the FDA, comply with manufacturing standards we have established, comply with federal and state health-care fraud and abuse laws and regulations, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a substantial impact on our business and results of operations, including the imposition of substantial fines or other sanctions.

Exchange rate risk

We are exposed to fluctuations of the Canadian dollar against certain other currencies because we publish our consolidated financial statements and hold most of our investments in Canadian dollars, while we incur many of our expenses in foreign currencies, primarily the United States dollar. Fluctuations in the value of currencies such as the recent depreciation of the Canadian dollar against the United States dollar could cause us to incur currency exchange losses. We do not currently employ a hedging strategy against exchange rate risk. We cannot assert with any assurance that we will not suffer losses as a result of unfavorable fluctuations in the exchange rates between the Canadian dollar, the United States dollar and other currencies.

We may expand our business through the acquisition of companies or businesses or by entering into collaborations or by in-licensing product candidates, each of which could disrupt our business and harm our financial condition.

We may in the future seek to expand our pipeline and capabilities by acquiring one or more companies or businesses, entering into collaborations or in-licensing one or more product candidates. For example, in June 2016, we entered into a definitive agreement with South Korean company, CrystalGenomics, Inc. (CG), granting Aptose an exclusive option to research, develop and commercialize CG026806 (CG'806) in all countries of the world except Korea and China, for all fields of use.

Acquisitions, collaborations and in-licenses involve numerous risks, including, but not limited to:

- substantial cash expenditures;
- technology development risks;
- potentially dilutive issuances of equity securities;
- incurrence of debt and contingent liabilities, some of which may be difficult or impossible to identify at the time of acquisition;
- difficulties in assimilating the operations of the acquired companies;
- potential disputes regarding contingent consideration;
- diverting our management's attention away from other business concerns;
- entering markets in which we have limited or no direct experience;
- potential loss of our key employees or key employees of the acquired companies or businesses; and
- failure of the in-licenses agents or technologies to deliver the desired activities or functions.

We have experience in entering collaborations and in-licensing product candidates, however, we cannot provide assurance that any acquisition, collaboration or in-license will result in short-term or long-term benefits to us. We may incorrectly judge the value or worth of an acquired company or business or in-licensed product candidate. In addition, our future success would depend in part on our ability to manage the rapid growth associated with some of these acquisitions, collaborations and in-licenses. We cannot assure you that we would be able to successfully combine our business with that of acquired businesses, manage a collaboration or integrate in-licensed product candidates. Furthermore, the development or expansion of our business may require a substantial capital investment by us.

Negative results from clinical trials or studies of others and adverse safety events involving the targets of our products may have an adverse impact on our future commercialization efforts.

From time to time, studies or clinical trials on various aspects of biopharmaceutical products are conducted by academic researchers, competitors or others. The results of these studies or trials, when published, may have a significant effect on the market for the biopharmaceutical product that is the subject of the study. The publication of negative results of studies or clinical trials or adverse safety events related to our product candidates, or the therapeutic areas in which our product candidates compete, could adversely affect our share price and our ability to finance future development of our product candidates, and our business and financial results could be materially and adversely affected.

As a result of intense competition and technological change in the biotechnical and pharmaceutical industries, the marketplace may not accept our products or product candidates, and we may not be able to compete successfully against other companies in our industry and achieve profitability.

Many of our competitors have:

- drug products that have already been approved or are in development, and operate large, well-funded research and development programs in the biotechnical and pharmaceutical fields;
- substantially greater financial, technical and management resources, stronger intellectual property positions and greater manufacturing, marketing and sales capabilities, areas in which we have limited or no experience; and
- significantly greater experience than we do in undertaking preclinical testing and clinical trials of new or improved pharmaceutical products and obtaining required regulatory approvals.

Consequently, our competitors may obtain FDA, Health Canada and other regulatory approvals for product candidates sooner and may be more successful in manufacturing and marketing their products than we or our collaborators are.

Our competitors' existing and future products, therapies and technological approaches will compete directly with the products we seek to develop. Current and prospective competing products may be more effective than our existing and future products insofar as they may provide greater therapeutic benefits for a specific problem or may offer easier delivery or comparable performance at a lower cost.

Any product candidate that we develop and that obtains regulatory approval must then compete for market acceptance and market share. Our products may not gain market acceptance among physicians, patients, healthcare payers, insurers, the medical community and other stakeholders. Further, any products we develop may become obsolete before we recover any expenses we incurred in connection with the development of these products. As a result, we may never achieve profitability.

We may be unable to obtain patents to protect our technologies from other companies with competitive products, and patents of other companies could prevent us from manufacturing, developing or marketing our products.

Patent protection

The patent positions of pharmaceutical and biotechnology companies are uncertain and involve complex legal and factual questions. The United States Patent and Trademark Office and many other patent offices in the world have not established a consistent policy regarding the breadth of claims that they will allow in biotechnology patents.

Our pending patent applications may not result in issued patents and our issued patents may not be held valid and enforceable if challenged. Competitors may be able to circumvent any such issued patents by adoption of a competitive, though non-infringing product or process. Interpretation and evaluation of pharmaceutical or biotechnology patent claims present complex and often novel legal and factual questions. Our business could be adversely affected by increased competition in the event that any patent granted to it is held to be invalid or unenforceable or is inadequate in scope to protect our operations.

Allowable patentable subject matter and the scope of patent protection obtainable may differ between jurisdictions. If a patent office allows broad claims, the number and cost of patent interference proceedings in the United States, or analogous proceedings in other jurisdictions and the risk of infringement litigation may increase. If it allows narrow claims, the risk of infringement may decrease, but the value of our rights under our patents, licenses and patent applications may also decrease.

The scope of the claims in a patent application can be significantly modified during prosecution before the patent is issued. Consequently, we cannot know whether our pending applications will result in the issuance of patents or, if any patents are issued, whether they will provide us with significant proprietary protection or will be circumvented, invalidated or found to be unenforceable.

Publication of discoveries in scientific or patent literature often lags behind actual discoveries. Patent applications filed in the United States generally will be published 18 months after the filing date unless the applicant certifies that the invention will not be the subject of a foreign patent application. In many other jurisdictions, such as Canada, patent applications are published 18 months from the priority date. We may not be aware of such literature. Accordingly, we cannot be certain that the named inventors of our products and processes were the first to invent that product or process or that we were the first to pursue patent coverage for our inventions.

In addition, U.S. patent laws may change which could prevent or limit us from filing patent applications or patent claims in the United States to protect our products and technologies or limit the exclusivity periods that are available to patent holders for U.S. patents. For example, the Leahy-Smith America Invents Act, (the " **Leahy-Smith Act**") was signed into law in 2011 and includes a number of significant changes to U.S. patent law. These include changes to transition from a "first-to-invent" system to a "first-to-file" system and to the way issued patents are challenged. These changes may favour larger and more established companies that have more resources to devote to patent application filing and prosecution. It is not clear what, if any, impact the Leahy-Smith Act will ultimately have on the cost of prosecuting our patent applications in the United States, our ability to obtain patents in the United States based on our discoveries and our ability to enforce or defend our U.S. issued patents.

Until such time, if ever, that further patents are issued to us, we will rely upon the law of trade secrets to the extent possible given the publication requirements under international patent treaty laws and/or requirements under foreign patent laws to protect our technology and our products incorporating the technology. In this regard, we have adopted certain confidentiality procedures. These include: limiting access to confidential information to certain key personnel; requiring all directors, officers, employees and consultants and others who may have access to our intellectual property to enter into confidentiality agreements which prohibit the use of or disclosure of confidential information to third parties; and implementing physical security measures designed to restrict access to such confidential information and products. Our ability to maintain the confidentiality of our technology is crucial to our ultimate possible commercial success. The procedures adopted by us to protect the confidentiality of our technology may not be effective, third parties may gain access to our trade secrets or our trade secrets or those of our collaborators may be independently discovered by others. Our collaborators, employees and consultants and other parties may not comply with the terms of their agreements with us, and we might be unable to adequately enforce our rights or obtain adequate compensation for the damages caused by unauthorized disclosure or use of our trade secrets or know how. Further, by seeking patent protection in various countries, it is inevitable that a substantial portion of our technology will become available to our competitors, through publication of such patent applications.

Enforcement of intellectual property rights

Protection of the rights revealed in published patent applications can be complex, costly and uncertain. Our commercial success depends in part on our ability to maintain and enforce our proprietary rights. If third parties engage in activities that infringe our proprietary rights, our management's focus will be diverted and we may incur significant costs in asserting our rights. We may not be successful in asserting our proprietary rights, which could result in our patents being held invalid or a court holding that the third party is not infringing, either of which would harm our competitive position.

Others may design around our patented technology. We may have to participate in interference proceedings declared by the United States Patent and Trademark Office, European opposition proceedings, or other analogous proceedings in other parts of the world to determine priority of invention and the validity of patent rights granted or applied for, which could result in substantial cost and delay, even if the eventual outcome is favourable to us. Our pending patent applications, even if issued, may not be held valid or enforceable.

We may incur substantial cost in defending our intellectual property.

While we believe that our products and technology do not infringe proprietary rights of others, third parties may assert infringement claims in the future and such claims could be successful. Even if challenges are unsuccessful, we could incur substantial costs in defending ourselves against patent infringement claims brought by others or in prosecuting suits against others. In addition, others may obtain patents that we would need to license, which may not be available to us on reasonable terms. Whether we are able to obtain a necessary license would depend on the terms offered, the degree of risk of infringement and the need for the patent.

Our products and product candidates may infringe the intellectual property rights of others, or others may infringe on our intellectual property rights which could increase our costs.

Our success also depends on avoiding infringement of the proprietary technologies of others. In particular, there may be certain issued patents and patent applications claiming subject matter which we or our collaborators may be required to license in order to research, develop or commercialize APTO-253 or CG'806. In addition, third parties may assert infringement or other intellectual property claims against us. An adverse outcome in these proceedings could subject us to significant liabilities to third-parties, require disputed rights to be licensed from third-parties or require us to cease or modify our use of the technology. If we are required to license third-party technology, a license under such patents and patent applications may not be available on acceptable terms or at all. Further, we may incur substantial costs defending ourselves in lawsuits against charges of patent infringement or other unlawful use of another's proprietary technology. We may also need to bring claims against others who we believe are infringing our rights in order to become or remain competitive and successful. Any such claims can be time consuming and expensive to pursue.

If product liability, clinical trial liability or environmental liability claims are brought against us or we are unable to obtain or maintain product liability, clinical trial or environmental liability insurance, we may incur substantial liabilities that could reduce our financial resources.

The clinical testing and commercial use of pharmaceutical products involves significant exposure to product liability, clinical trial liability, environmental liability and other risks that are inherent in the testing, manufacturing and marketing of our products. These liabilities, if realized, could have a material adverse effect on the Company's business, results of operations and financial condition.

We have obtained limited product liability insurance coverage for our clinical trials on humans; however, our insurance coverage may be insufficient to protect us against all product liability damages. Regardless of merit or eventual outcome, liability claims may result in decreased demand for a future product, injury to reputation, withdrawal of clinical trial volunteers, loss of revenue, costs of litigation, distraction of management and substantial monetary awards to plaintiffs. Additionally, if we are required to pay a product liability claim, we may not have sufficient financial resources to complete development or commercialization of any of our product candidates and our business and results of operations will be adversely affected. In general, insurance will not protect us against some of our own actions, such as negligence.

As the Company's development activities progress towards the commercialization of product candidates, our liability coverage may not be adequate, and the Company may not be able to obtain adequate product liability insurance coverage at a reasonable cost, if at all. Even if the Company obtains product liability insurance, its financial position may be materially adversely affected by a product liability claim. A product liability claim could also significantly harm the Company's reputation and delay market acceptance of its product candidates. Additionally, product recalls may be issued at the direction of the FDA, other government agencies or other companies having regulatory control for pharmaceutical sales. If a product recall occurs in the future, such a recall could adversely affect our business, financial condition or reputation.

We may be unable to obtain partnerships for our product candidates, which could curtail future development and negatively affect our share price. In addition, our partners might not satisfy their contractual responsibilities or devote sufficient resources to our partnership.

Our strategy for the research, development and commercialization of our products requires entering into various arrangements with corporate collaborators, licensors, licensees and others, and our commercial success is dependent upon these outside parties performing their respective contractual responsibilities. The amount and timing of resources that such third parties will devote to these activities may not be within our control. These third parties may not perform their obligations as expected and our collaborators may not devote adequate resources to our programs. In addition, we could become involved in disputes with our collaborators, which could result in a delay or termination of the related development programs or result in litigation. We intend to seek additional collaborative arrangements to develop and commercialize some of our products. We may not be able to negotiate collaborative arrangements on favourable terms, or at all, in the future, and our current or future collaborative arrangements may not be successful.

If we cannot negotiate collaboration, license or partnering agreements, we may never achieve profitability and we may not be able to continue to develop our product candidates. Continuing Phase Ib, and commencing Phase II and Phase III clinical trials for APTO-253 would require significant amounts of funding and such funding may not be available to us.

Extensive Government Regulation

Government regulation is a significant factor in the development, production and marketing of the Company's products. Research and development, testing, manufacture, marketing and sales of pharmaceutical products or related products are subject to extensive regulatory oversight, often in multiple jurisdictions, which may cause significant additional costs and/or delays in bringing products to market, and in turn, may cause significant losses to investors. The regulations applicable to the Company's product candidates may change. Even if granted, regulatory approvals may include significant limitations on the uses for which products can be marketed or may be conditioned on the conduct of post-marketing surveillance studies. Failure to comply with applicable regulatory requirements can, among other things, result in warning letters, the imposition of civil penalties or other monetary payments, delay in approving or refusal to approve a product candidate, suspension or withdrawal of regulatory approval, product recall or seizure, operating restrictions, interruptions of clinical trials or manufacturing, injunctions or criminal prosecution. In addition, regulatory agencies many not approve the labeling claims that are necessary or desirable for the successful commercialization of the Company's product candidates.

Requirements for regulatory approval vary widely from country to country. Whether or not approved in Canada or the United States, regulatory authorities in other countries must approve a product prior to the commencement of marketing the product in those countries. The time required to obtain any such approval may be longer or shorter than in Canada or the United States. Approved drugs, as well as their manufacturers, are subject to continuing and ongoing review, and discovery of problems with these products or the failure to adhere to manufacturing or quality control requirements may result in regulatory restrictions being imposed.

Data security incidents and privacy breaches could result in important remediation costs, increased cyber security costs, litigation and reputational harm.

Cyber security incidents can result from deliberate attacks or unintentional events. Cyber-attacks and security breaches could include unauthorized attempts to access, disable, improperly modify or degrade the Company's information, systems and networks, the introduction of computer viruses and other malicious codes and fraudulent "phishing" emails that seek to misappropriate data and information or install malware onto users' computers. Cyber-attacks in particular vary in technique and sources, are persistent, frequently change and are increasingly more targeted and difficult to detect and prevent against. Our network security and data recovery measures and those of third parties with which we contract, many not be adequate to protect again cyber-attacks.

Disruptions due to cyber security incidents could adversely affect Aptose's business. In particular, a cyber security incident could result in the loss or corruption of data from Aptose's research and development activities, including clinical trials, which may cause significant delays to some or all of the Company's clinical programs. Also, the Company's trade secrets, including unpatented know-how, technology and other proprietary information could be disclosed to competitors further to a breach, which would harm the Company's business and competitive position. We expect that risks and exposures related to cyber security attacks will remain high for the foreseeable future due to the rapidly evolving nature and sophistication of these threats. While we have invested in the protection of data and information technology, there can be no assurance that our efforts to implement adequate security measures would be sufficient to protect the Company against cyber-attacks.

Risks Related to Our Common Shares

Our share price has been and is likely to continue to be volatile and an investment in our Common Shares could suffer a decline in value.

You should consider an investment in our Common Shares as risky and invest only if you can withstand a significant loss and wide fluctuations in the market value of your investment. The market price of our Common Shares has been highly volatile and is likely to continue to be volatile. This leads to a heightened risk of securities litigation pertaining to such volatility. Factors affecting our Common Share price include but are not limited to:

- our ability to continue as a going concern;
- our ability to raise additional capital;
- the progress of our pre-clinical and clinical trials;
- our ability to obtain partners and collaborators to assist with the future development of our products;
- general market conditions;
- announcements of technological innovations or new product candidates by us, our collaborators or our competitors;
- published reports by securities analysts;
- developments in patent or other intellectual property rights;
- the cash and investments held by us and our ability to secure future financing;
- public concern as to the safety and efficacy of drugs that we and our competitors develop;
- shareholder interest in our Common Shares; and
- low liquidity in the daily trading volume of our Common Shares.

Future sales of our Common Shares by us or by our existing shareholders could cause our share price to fall.

The issuance of Common Shares by us could result in significant dilution in the equity interest of existing shareholders and adversely affect the market price of our Common Shares. Sales by existing shareholders of a large number of our Common Shares in the public market and the issuance of Common Shares in connection with strategic alliances, or the perception that such additional sales could occur, could cause the market price of our Common Shares to decline and have an undesirable impact on our ability to raise capital.

We are susceptible to stress in the global economy and therefore, our business may be affected by the current and future global financial condition.

If the increased level of volatility and market turmoil that have marked recent years continue, our operations, business, financial condition and the trading price of our Common Shares could be materially adversely affected. Furthermore, general economic conditions may have a great impact on us, including our ability to raise capital, our commercialization opportunities and our ability to establish and maintain arrangements with others for research, manufacturing, product development and sales.

An active trading market in our Common Shares may not be sustained.

Our Common Shares are listed for trading on the NASDAQ Capital Market ("**NASDAQ**") and the Toronto Stock Exchange ("**TSX**"). However, an active trading market in our Common Shares on the stock exchanges may not be sustained and we may not be able to maintain our listings.

It may be difficult for non-Canadian investors to obtain and enforce judgments against us because of our Canadian incorporation and presence.

We are a corporation existing under the laws of Canada. Some of our directors and officers, and many of the experts named in this Annual Report and the documents incorporated by reference into this Annual Report, are residents of Canada, and all or a substantial portion of their assets, and a substantial portion of our assets, are located outside the United States. Consequently, although we have appointed an agent for service of process in the United States, it may be difficult for holders of our Common Shares who reside in the United States to effect service within the United States upon our directors and officers and experts who are not residents of the United States. It may also be difficult for holders of our Common Shares who reside in the United States to realize in the United States upon judgments of courts of the United States predicated upon our civil liability and the civil liability of our directors, officers and experts under the United States federal securities laws. Investors should not assume that Canadian courts (i) would enforce judgments of United States courts obtained in actions against us or our directors, officers or experts predicated upon the civil liability provisions of the United States federal securities laws or the securities or "blue sky" laws of any state within the United States or (ii) would enforce, in original actions, liabilities against us or our directors, officers or experts predicated upon the United States federal securities laws or any such state securities or "blue sky" laws.

We are likely a "passive foreign investment company" which may have adverse U.S. federal income tax consequences for U.S. shareholders.

U.S. investors in our Common Shares should be aware that the Company believes it was classified as a passive foreign investment company ("**PFIC**") during the tax year ended December 31, 2016 and based on the nature of our business, the projected composition of our gross income and the projected composition and estimated fair market value of our assets, the Company expects to be a PFIC for the current tax year ending December 31, 2017 and may be a PFIC in subsequent tax years. If the Company is a PFIC for any year during a U.S. shareholder's holding period, then such U.S. shareholder generally will be required to treat any gain realized upon a disposition of Common Shares, or any so-called "excess distribution" received on its Common Shares, as ordinary income, and to pay an interest charge on a portion of such gain or distributions, unless the shareholder makes a timely and effective "qualified electing fund" election ("**QEF election**") or a "mark-to-market" election with respect to the Common Shares. A U.S. shareholder who makes a QEF election generally must report on a current basis its share of the Company's net capital gain and ordinary earnings for any year in which the Company is a PFIC, whether or not the Company distributes any amounts to its shareholders. However, U.S. shareholders should be aware that we do not intend to satisfy record keeping requirements that apply to a qualified electing fund, and we do not intend to supply U.S. shareholders with information that such U.S. shareholders require to report under the QEF election rules, in the event that we are a PFIC and a U.S. shareholder wishes to make a QEF election. Thus, U.S. shareholders should assume that they will not be able to make a QEF election with respect to their Common Shares. A U.S. shareholder who makes the mark-to-market election generally must include as ordinary income each year the excess of the fair market value of the Common Shares over the taxpayer's basis therein. This paragraph is qualified in its entirety by the discussion below under the heading "Certain United States Federal Income Tax Considerations." Each U.S. shareholder should consult its own tax advisor regarding the U.S. federal, U.S. local, and foreign tax consequences of the PFIC rules and the acquisition, ownership, and disposition of our Common Shares.

We are an "emerging growth company," and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common shares less attractive to investors

We are an "emerging growth company," as defined in the U.S. Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We will cease to be an emerging growth company upon the earliest of:

- the last day of the fiscal year during which we have total annual gross revenues of $1,000,000,000 (as such amount is indexed for inflation every five years by the SEC or more;
- the last day of our fiscal year following the fifth anniversary of the completion of our first sale of common equity securities pursuant to an effective registration statement under the Securities Act;
- the date on which we have, during the previous three-year period, issued more than $1,000,000,000 in non- convertible debt; or
- the date on which we are deemed to be a "large accelerated filer", as defined in Rule 12b–2 of the Exchange Act, which would occur if the market value of our ordinary shares and ADSs that are held by non-affiliates exceeds $700,000,000 as of the last day of our most recently-completed second fiscal quarter.

We cannot predict if investors will find our common shares less attractive because we may rely on these exemptions. If some investors find our Common Shares less attractive as a result, there may be a less active trading market for our Common Shares and our share price may be more volatile.

Any failure to maintain an effective system of internal controls may result in material misstatements of our consolidated financial statements or cause us to fail to meet our reporting obligations or fail to prevent fraud; and in that case, our shareholders could lose confidence in our financial reporting, which would harm our business and could negatively impact the price of our common shares.

Section 404(a) of the Sarbanes-Oxley Act of 2002, as amended, or SOX, requires that our management assess and report annually on the effectiveness of our internal controls over financial reporting and identify any material weaknesses in our internal controls over financial reporting. Although Section 404(b) of the SOX requires our independent registered public accounting firm to issue an annual report that addresses the effectiveness of our internal controls over financial reporting, we have opted to rely on the exemptions provided to us by virtue of being a foreign private issuer and an emerging growth company, and consequently will not be required to comply with SEC rules that implement Section 404(b) of SOX until we lose our emerging growth company status.

Effective internal controls are necessary for us to provide reliable financial reports and prevent fraud. If we fail to maintain an effective system of internal controls, we might not be able to report our financial results accurately or prevent fraud; and in that case, our shareholders could lose confidence in our financial reporting, which would harm our business and could negatively impact the price of our common shares. While we believe that we have sufficient personnel and review procedures to allow us to maintain an effective system of internal controls, we cannot assure you that we will not experience potential material weaknesses in our internal control. Even if we conclude that our internal control over financial reporting provides reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with IFRS, as issued by the International Accounting Standards Board, because of its inherent limitations, internal control over financial reporting may not prevent or detect fraud or misstatements. Failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our results of operations or cause us to fail to meet our future reporting obligations.

If we fail to timely achieve and maintain the adequacy of our internal control over financial reporting, we may not be able to produce reliable financial reports or help prevent fraud. Our failure to achieve and maintain effective internal control over financial reporting could prevent us from complying with our reporting obligations on a timely basis, which could result in the loss of investor confidence in the reliability of our consolidated financial statements, harm our business and negatively impact the trading price of our common shares.

As a foreign private issuer, we are not subject to certain United States securities law disclosure requirements that apply to a domestic United States issuer, which may limit the information which would be publicly available to our shareholders.

As a foreign private issuer, we are exempt from certain rules under the Exchange Act that impose disclosure requirements as well as procedural requirements for proxy solicitations under Section 14 of the Exchange Act. In addition, our officers, directors and principal shareholders are exempt from the reporting and "short-swing" profit recovery provisions of Section 16 of the Exchange Act. Moreover, we are not required to file periodic reports and financial statements with the SEC as frequently or as promptly as a company that files as a domestic issuer whose securities are registered under the Exchange Act, nor are we generally required to comply with the SEC's Regulation FD, which restricts the selective disclosure of material non-public information. For as long as we are a "foreign private issuer" we intend to file our annual financial statements on Form 20-F and furnish our quarterly updates on Form 6-K to the SEC for so long as we are subject to the reporting requirements of Section 13(g) or 15(d) of the Exchange Act. However, the information we file or furnish is not the same as the information that is required in annual and quarterly reports on Form 10-K or Form 10-Q for U.S. domestic issuers. Accordingly, there may be less information publicly available concerning us than there is for a company that files as a domestic issuer.

Item 4. Information on the Company

A. *History and Development of the Company.*

Old Lorus was incorporated under the *Business Corporations Act* (Ontario) on September 5, 1986 under the name RML Medical Laboratories Inc. On October 28, 1991, RML Medical Laboratories Inc. amalgamated with Mint Gold Resources Ltd., resulting in Old Lorus becoming a reporting issuer (as defined under applicable securities law) in Ontario, on such date. On August 25, 1992, Old Lorus changed its name to IMUTEC Corporation. On November 27, 1996, Old Lorus changed its name to Imutec Pharma Inc., and on November 19, 1998, Old Lorus changed its name to Lorus Therapeutics Inc. On October 1, 2005, Old Lorus continued under the *Canada Business Corporations Act*.

On the Arrangement Date, Old Lorus completed a plan of arrangement and corporate reorganization with, among others, 6650309 Canada Inc. ("**New Lorus**"), 6707157 Canada Inc. and Pinnacle International Lands, Inc. As a result of the plan of arrangement and reorganization, each Common Share of Old Lorus was exchanged for one Common Share of New Lorus. New Lorus continued the business of Old Lorus after the Arrangement Date with the same officers and employees and continued to be governed by the same board of directors as Old Lorus prior to the Arrangement Date.

On August 28, 2014, New Lorus changed its 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.

The address of the Company's head and registered office is 5955 Airport Road Suite #228, Mississauga, Ontario, Canada, L4V 1R9 and our phone number is (647) 479-9828. Our corporate website is www.aptose.com. The contents of the website and items accessible through the website are specifically not incorporated in this Annual Report by reference.

Aptose has three subsidiaries: Aptose Biosciences U.S. Inc. ("**Aptose USA**"), a company incorporated under the laws of Delaware, USA, Aptose Suisse GmbH ("**Aptose Suisse**") a company incorporated under the laws of Zug, Switzerland and NuChem Pharmaceuticals Inc. ("**NuChem**"), a company incorporated under the laws of Ontario, Canada. Aptose owns 100% of the issued and outstanding voting share capital of Aptose USA and Aptose Suisse and 80% of the issued and outstanding voting share capital of NuChem.

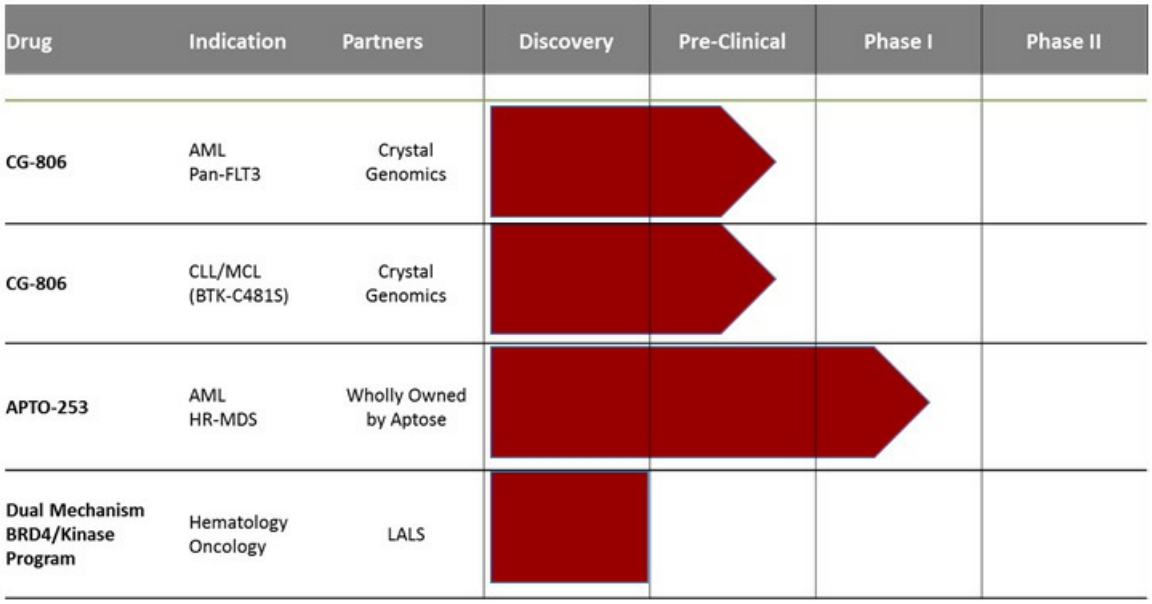
Our Common Shares are listed on the NASDAQ under the symbol "APTO" and on the TSX under the symbol "APS".

Aptose Biosciences 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, Aptose is 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. Our product pipeline includes cancer drug candidates that exert potent activity as stand-alone agents and that enhance the activities of other anticancer agents without causing overlapping toxicities. Indeed, we believe our targeted products can emerge as first-in-class or best-in-class agents that deliver single agent benefit and may serve as part of a combination therapeutic strategy for specific populations of cancer patients.

We believe the future of cancer treatment and management lies in the prospective selection and treatment of patients having malignancies that are genetically or epigenetically predisposed to response based on a drug's unique mechanism of action. We are of the view that many drugs currently approved for the treatment and management of cancer are not selective for the specific genetic alterations (targets) that cause the patient's tumor and hence lead to significant toxicities due to off-target effects. Aptose's strategy is to develop agents that target underlying disease-promoting mutations or altered pathways within a patient population, and we intend to apply this strategy across several therapeutic indications in oncology, including hematologic malignancies and solid tumor indications.

Aptose Biosciences has two preclinical/clinical-stage programs, and a third program that is discovery-stage and positioned for partnering. Aptose's pan-FLT3 / BTK program, CG'806, is currently in preclinical development and moving toward IND submission, with anticipation of commencing a Phase 1 trial the first half of 2018. 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 U.S. 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 while attempts are made to manufacture a newly formulated and stable clinical supply.

The following table sets forth various product conditions in our pipeline and their respective stages of development.



CG026806 (CG'806) is a highly potent first-in-class pan-FLT3/BTK inhibitor. This small molecule therapeutic agent, exhibits a picomolar IC_{50} toward the FMS-like tyrosine kinase 3 with the Internal Tandem Duplication (FLT3-ITD) and significant potency against other mutant forms of FLT3. Because of the potency of CG'806 against the FLT3 enzyme, it may become an effective therapy for AML patients, including the subset of patients having the FLT3-ITD, which occurs in approximately 30% of patients with AML and is associated with poor prognosis. Importantly, CG'806 targets other oncogenic kinases which may also be operative in AML, thereby potentially allowing the agent to become an important therapeutic option for a difficult-to-treat patient population.

In addition to potent inhibition of wild type and mutant forms of the FLT3 enzyme, CG'806 is a highly potent, reversible, non-covalent inhibitor of the wild type and mutant forms of the BTK enzymes. Overexpression of BTK drives certain B cell malignancies, including chronic lymphocytic leukemia (CLL), mantle cell lymphoma (MCL), diffuse large B cell lymphoma (DLBCL) and others. Treatment of such B cell malignancies with covalent BTK inhibitors that target the cysteine residue in the active site of BTK can lead to drug resistance via mutation of the cysteine amino acid residue to a serine residue (BTK-C481S mutant). CG'806 targets the ATP-binding pocket of BTK through a reversible, non-covalent mechanism, thereby allowing CG'806 to retain low nM potency against the BTK-C481S mutant enzyme. Thus, CG'806 may serve as a novel therapeutic agent to treat B cell malignancy patients that are refractory, resistant or intolerant to covalent BTK inhibitors.

In June 2016, we announced an exclusive global option and license agreement focused on the development of CG'806 of up to US$303 million, inclusive of development, regulatory and commercial-based milestones.

APTO-253, the Company's second program, is a small molecule therapeutic agent that inhibits expression of the c-Myc oncogene without causing general myelosuppression of the healthy bone marrow. The c-Myc oncogene is overexpressed in hematologic cancers, including AML. C-Myc is a transcription factor that regulates cell growth, proliferation, differentiation and apoptosis, and overexpression amplifies new sets of genes to promote oncogenesis. APTO-253 dramatically down-regulates expression of the c-Myc oncogene in AML cells and depletes those cells of the c-Myc oncoprotein, leading to apoptotic cell death in AML cells. Thus APTO-253 may serve as safe and effective c-Myc inhibitor for AML that combines well with other agents and does not impact the normal bone marrow.

In November 2015, Aptose's phase 1b trial of APTO-253 in patients with AML was placed on clinical hold. Since that time, the Company has actively evaluated multiple formulation and production methodologies with the goal of developing a superior IV formulation. In January 2017, we have announced that after successfully manufacturing multiple non-cGMP batches of a new drug product formulation for APTO-253, including a batch that has been stable and soluble for over six months, the Company encountered an additional manufacturing setback which further delayed the return of APTO-253 to the clinic. While Aptose has made significant advances in understanding the novel c-Myc inhibitory mechanism of APTO-253, additional time will be required to define the cause of the cGMP manufacturing delay and to potentially restore APTO-253 to a state it can be developed clinically and partnered. Further, we announced that we would prioritize our resources toward the development of CG'806 and temporarily delay clinical activities with APTO-253.

Aptose's leadership team comprises accomplished industry, financial and clinical research professionals who are dedicated to building a comprehensive anticancer drug pipeline and clinical development programs focused on targeted therapeutics directed against dysregulated oncogenic processes in patients with life-threatening hematologic malignancies.

Capital Expenditures and Divestitures

Not applicable.

B. ***Business overview*****.**

As noted above, Aptose is committed to the development of anticancer drugs that target aberrant oncologic signaling that underlie a particular life-threatening malignancy. 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 / BTK inhibitor, CG'806 targets multiple critical pathways that overlap to lead to the proliferation of cancer cells, including the B-cell receptor signaling pathway and FLT3 receptor pathways that converge at various points in the signaling cascade. Further, Aptose 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.

CG'806

In June 2016, Aptose entered into a definitive agreement with South Korean company, CrystalGenomics, Inc. (CG), granting Aptose an exclusive option to research, develop and commercialize CG026806 (CG'806) in all countries of the world except Korea and China, for all fields of use. CG'806 is a highly potent, non-covalent small molecule therapeutic agent, exhibiting a picomolar IC50 toward the FMS-like tyrosine kinase 3 with the Internal Tandem Duplication (FLT3-ITD and single-digit nanomolar IC50's against Bruton's tyrosine kinase (BTK) and its C481S mutant (BTK-C481S)). Further, CG'806 is a multi-targeted BTK / FLT3-ITD inhibitor as it impacts other relevant oncogenic targets, including the Aurora kinases (AURK), RET, MET, DDR2, and SRC kinases.

As a potent inhibitor of FLT3-ITD and other mutant forms of FLT3, CG'806 may become an effective therapy in this subset of acute myeloid leukemia (AML) patients. FLT3-ITD occurs in approximately 30% of patients with AML. Importantly, CG'806 targets other oncogenic kinases which may also be operative in FLT3-ITD AML, thereby potentially allowing the agent to become an important therapeutic option for a difficult-to-treat patient population.

The C481S mutation of BTK arises from therapy with covalent, irreversible BTK inhibitors that target the active site cysteine residue of BTK, thereby conferring resistance to other covalent BTK inhibitors. As a non-covalent, reversible inhibitor, CG'806 does not rely on the cysteine 481 residue (Cys481) for binding in the active site of BTK. Consequently, patients relapsed or refractory to other commercially approved or development stage BTK inhibitors with chronic lymphocytic leukemia (CLL) or mantle cell lymphoma (MCL) may continue to be sensitive to CG'806 therapy.

Role of BTK in B-cell signaling

BTK, a member of the TEC family kinase, is an essential element of B-cell receptor (BCR) signaling, which is required for B-cell maturation, survival and proliferation. It is an upstream activator of multiple pro-survival / anti-apoptotic pathways, including the NF-KB, mTOR-AKT and ERK pathways. BTK is overexpressed in malignant cells from patients with various B-cell malignancies, such as CLL, MCL, AML, and diffuse large b-cell lymphoma (DLBCL). Disruption of BCR signaling via inhibition of BTK, has been shown to lead to clinical remissions in these patients.

CG'806 as a Non-covalent, Reversible Kinase Inhibitor

Binding studies of CG'806 have confirmed non-covalent, reversible inhibition of BTK, FLT3-ITD and Aurora Kinase A. Commercially-approved, covalent BTK inhibitors possess a Michael acceptor to react with Cys481 in BTK and irreversibly inactivate the BTK enzyme. In contrast, CG'806 does not require reactivity with the Cys481 residue for inhibition of the BTK enzyme, thereby allowing CG'806 to inhibit the wild type and Cys481 mutant form of the BTK enzyme.

Preclinical In Vitro Evaluation of CG'806

CG'806 is a potent inhibitor of BTK and FLT3 wild types, as well as the BTK C481S and FLT3-ITD mutants, which represent major sources of therapy relapse or are negative prognostic signals in patients. In enzymatic assays, CG'806 has demonstrated best-in class potency against the BTK C481S mutant with an IC50 of 2.5 nM. CG'806 also has potent activity against the FLT-ITD mutation, occurring in 30-35% of AML patients, with an IC50 against the purified enzyme of 0.8 nM (800pM). Similarly, CG'806 demonstrated picomolar potency against Aurora A (IC50 0.4 nM). Notably, CG'806 is a potent inhibitor of interleukin-2-inducible T-cell kinase (ITK), at approximately 4 nM. ITK is speculated to play a role in suppressing activated T-cell function, hence inhibition of ITK alleviates this suppression, and provide for a potential immunomodulatory anti-tumor mechanism. Finally, CG'806 does not exhibit any inhibition of EGFR. EGFR inhibition has been speculated to contribute to the toxicity observed from the commercially approved BTK inhibitor.

BTK is overexpressed in the blast cells of approximately 80% of AML patients as compared to normal PBMCs in healthy subjects. Researchers have shown that BTK inhibition attenuates the proliferation and survival of FLT3-ITD primary AML blasts and AML cell lines, as well as inhibits the downstream activation FLT3-ITD-dependent Myc and STAT5 kinases. CG'806 is the only drug in development that inhibits both FLT3-ITD and BTK pathways reported to synergize to drive the proliferation and survival of AML.

CG'806 Xenograft Studies

In vivo subcutaneous AML tumor models of anti-cancer efficacy revealed CG'806 induced rapid and sustained tumor eradication (Figure 1). CG'806 was administered orally once daily, for 14 days. Moreover, CG'806 exhibited the sustained tumor elimination post therapy, while demonstrating no impact to murine body weight, no impacts to hematology cell counts or visible organ toxicities – necropsy and clinical pathology findings did not reveal any abnormal observations. A maximum tolerated dose has not yet been identified with murine xenograft studies, having been performed up to 450 mg/kg orally for 14 days (CrystalGenomics preliminary toxicity data).

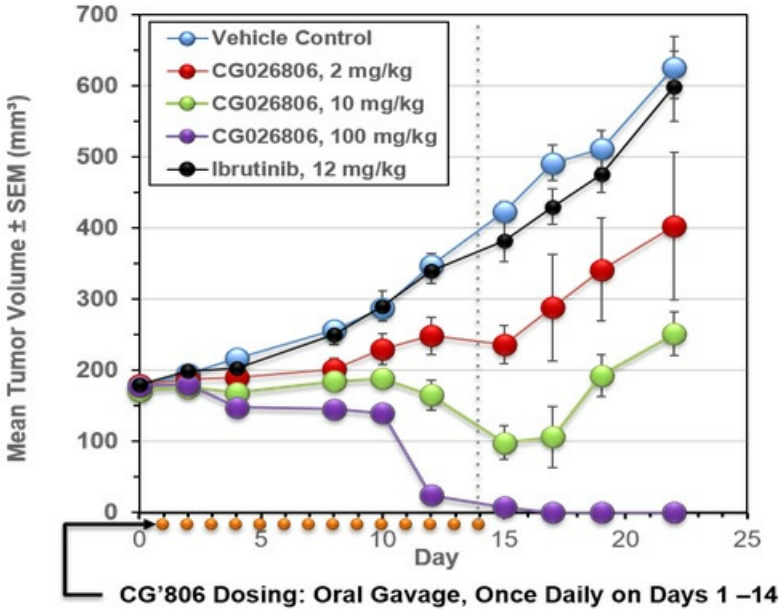


Figure 1. Efficacy of CG'806 in MV4-11 xenograft model.

MV4-11 tumor bearing mice were administered an oral suspension once daily for 14 days of CG'806 at 2 mg/kg (blue line), 10 mg/kg (green line) or 100 mg/kg (red line), Ibrutinib, 12 mg/kg (turquoise line), or vehicle (Control; black line) with 7-day post-treatment follow-up. Tumor volumes and body weights were measured 3 times weekly.

CG'806 Intellectual Property

A PCT application providing composition of matter and use protection for CG'806 was filed in late-2013, with a potential expiry in 2033 before extension opportunities, across all major geographies.

CG'806 Status

CG'806 is currently in IND-enabling studies and Aptose expects to file an IND for a first-in-human clinical trial by late-2017. CG'806 is being developed as a once-daily, oral therapeutic.

APTO-253

APTO-253 is a novel small molecule that inhibits expression of the c-Myc oncogene, leading to cell cycle arrest and programmed cell death (apoptosis) in human-derived solid tumor and hematologic cancer cells. Likewise, in nonclinical pharmacology studies APTO-253 demonstrates in vivo anti-tumor activity against xenograft models of solid tumors and hematologic cancers, with acute myeloid leukemia (AML) cells exhibiting a particular sensitivity to APTO-253. A Phase 1 study with APTO-253 was completed and demonstrated modest clinical activity in patients with advanced solid tumors, and APTO-253 is currently under evaluation in a Phase 1b trial in patients with acute leukemias (including AML) and high-risk MDS. The original formulation of APTO-253 led to filter-clogging in the Phase 1b trial, and since that time Aptose has developed an improved formulation speculated to avoid such events moving forward. Further, manufacturing delays of a clinical supply with the new drug product formulation led to delays in the Phase 1b clinical trial, and Aptose is now performing studies to determine the root cause and corrective action of the manufacturing delay. It is possible that these issues can be resolved during the second half of 2017 such that the clinical supply of APTO-253 can be manufactured with confidence and the program can be positioned for a return to the clinical trial and/or partnering.

Acute Myeloid Leukemia

AML is a rapidly progressing cancer of the blood and bone marrow characterized by the uncontrolled proliferation of dysfunctional myeloblasts that do not mature into healthy blood cells. It is the most common form of acute leukemia in adults. The American Cancer Society estimates there will be approximately 19,950 new cases of AML and approximately 10,430 deaths from AML in the U.S. in 2016. Standard induction therapy with chemotherapy is successful in many AML patients, but the majority of these patients will relapse with treatment refractory disease. The average age of a patient with AML is 67 years. Approximately 48% patients less than age 60, and 34% of patients greater than or equal to age 60, with residual disease after induction therapy will achieve a remission, as reported by Datamonitor.

Myelodysplastic Syndromes

MDS are a group of blood and bone marrow disorders. In MDS, stem cells do not mature normally, and the number of blasts (immature cells) and dysplastic (abnormally developed) cells increases. Also, the number of healthy mature cells decreases, meaning there are fewer normal red blood cells, white blood cells, and platelets. The numbers of blood cells are often called blood cell counts. Because of the decrease in healthy cells, people with MDS often have anemia (a lowered blood cell count), and may have neutropenia (a low white blood cell count) and thrombocytopenia (a low platelet count). Also, the chromosomes (long strands of genes) in the bone marrow cells may be abnormal. According to the American Cancer Society, there are approximately 13,000 new cases of MDS annually in the US. Additionally, Datamonitor Healthcare reports median survival in higher risk MDS patients may range between five months and two years. There are several subtypes of MDS, and some subtypes of MDS may eventually turn into AML.

Solid Tumors

Phase I data with APTO-253 in patients with solid tumors and preclinical data in solid tumor cells, including non-small cell lung cancer (**"NSCLC**"), identified an opportunity for APTO-253 in patients possessing cancers with reduced Klf4 Gene expression. Our prior Phase 1 study with APTO-253 also revealed a favorable safety profile for APTO-253. Various solid tumors have exhibited suppressed levels of Klf4 Gene in scientific publications, including colorectal, gastric, pancreatic, prostate and cervical cancers, as well as NSCLC. NSCLC is an indication that we consider to have a large market potential and important unmet need worldwide, in which the Klf4 Gene is a tumor suppressor that is present in case-matched normal cells but depressed in NSCLC tumor cells. Aptose may in the future evaluate the clinical utility of APTO-253 in additional studies in a subset of NSCLC patients that may be predisposed to a response with a therapeutically activating the Klf4 Gene.

In January 2011, Aptose announced the first patient enrolment in a Phase I dose-escalation study for APTO-253 in patients with advanced or metastatic solid tumors who are unresponsive to conventional therapy or for which no effective therapy is available. The study was initially being conducted at Memorial Sloan-Kettering Cancer Center in New York and later added MD Anderson Cancer Center in Houston as a second site. Objectives of the study included determination or characterization of the safety profile, maximum tolerated dose, and antitumor activity of APTO-253, as well as pharmacokinetics and a recommended Phase II dose for subsequent clinical trials.

In June 2012, Aptose announced the addition of MD Anderson Cancer Center as a second site in the then ongoing APTO-253 Phase I clinical trial, under the direction of Dr. Jennifer Wheler as the principal investigator. In addition, Aptose announced that the study had successfully completed the accelerated drug dose escalation stage (Stage 1), with further escalation under way in the non-accelerated dose escalation stage (Stage 2) for the purpose of determining the maximal tolerated dose level and recommended Phase II dose. The addition of a second site expanded patient availability for enrollment.

In January 2013, Aptose announced that Phase I clinical study of APTO-253 has successfully escalated to the target dose level based on predicted and observed clinical effects without limitation by toxicity. The success of this study allowed Aptose to initiate a biomarker clinical investigation to further explore the effects of the drug at relevant doses determined in the clinical trial.

In April 2013, Aptose announced the presentation of preclinical data at the 2013 Annual Meeting of the American Association for Cancer Research ("**AACR**"), held in Washington, DC from April 6, 2013 through April 10, 2013. The poster presentation titled "Utilization of KLF4 as a pharmacodynamic biomarker for in vivo anticancer activity of a novel small molecule drug APTO-253" covered data from preclinical studies on anticancer activity and tumor biomarker analysis for APTO-253 in animal models of human NSCLC. The studies demonstrate that APTO-253 has antitumor activity with a dose-response effect in NSCLC that is associated with a dose dependent increase of the KLF4 gene.

In July 2013, Aptose announced the results of the Phase 1 clinical trial of APTO-253. In this first-in-man, dose-escalation clinical study, APTO-253 demonstrated a favorable safety profile, as well as encouraging signs of antitumor activity. The design of this trial consisted of APTO-253 as a single agent in patients with advanced solid tumors resistant to multiple standard therapies. The study enrolled 27 patients, all of which had failed a median of four prior chemotherapies. Although this was primarily a dose-escalation safety study, efficacy and pharmacokinetics were also explored.

The clinical trial enrolled patients at seven dose levels ranging from 20 to 229 mg/m2. Of the 27 patients enrolled, 17 were evaluable for efficacy. Of these 17 patients, seven (41%) achieved stable disease by Response Evaluation Criteria In Solid Tumors ("**RECIST**"). This included patients with colorectal, lung, appendiceal, liver and uterine cancers. Dose related activity was demonstrated at the higher dose levels (176 and 229 mg/m2). At these two highest dose levels, four of five evaluable patients (80%) achieved sustained stable disease by RECIST ranging from 5.6 months to 8 months, representative of disease control. Of these, a patient with non-small cell lung cancer at the highest dose level additionally demonstrated non-index tumor shrinkage.

The safety assessment indicated that APTO-253 was well tolerated at all dose levels tested in this trial. The dose escalation was not limited by toxicity. The most common adverse event was Grade 1 or 2 fatigue seen in three patients. There was one Grade 3 toxicity, asymptomatic low blood phosphate level that was reversible by supplementation with phosphates. The pharmacokinetic profile was consistent with the predictive profile seen preclinically, and the elimination profile and half-life in patients were suggestive of a very rapid distribution phase and prolonged retention.

Multi-Targeting Bromodomain Program

In November 2015, Aptose entered into a definitive agreement with Moffitt Cancer Center for exclusive global rights to potent, multi-targeting, single-agent inhibitors for the treatment of hematologic and solid tumor cancers. These small molecule agents are inhibitors of the Bromodomain and Extra-Terminal motif (BET) protein family members, which simultaneously target specific kinase enzymes. The molecules developed by Moffitt exhibited potency against the BET family members and specific oncogenic kinases which, when inhibited, are synergistic with BET inhibition. Under the agreement, Aptose would gain access to the drug candidates developed by Moffitt and the underlying intellectual property covering the chemical modifications enabling potent bromodomain (BRD) inhibition on the chemical backbone of a kinase inhibitor.

In January 2017, Aptose terminated the collaboration with Moffitt Cancer Center for the development of the dual BRD4 / JAK2 inhibitor program.

Multi-Targeting Epigenetic Program

In November 2015, Aptose also announced an exclusive drug discovery partnership with Laxai Avanti Life Sciences (LALS) for their expertise in next generation epigenetic-based therapies. Under the agreement, LALS will be responsible for developing multiple clinical candidates, including optimizing candidates that exert dual BRD4 / kinase inhibitory activity. Based on available resources, Aptose halted further investment in the collaboration with LALS in late 2016. However, the program delivered novel IP and hit molecules for further optimization. As a consequence, Aptose may choose to out-license the program.

Discontinued Programs

In January 2016, Aptose provided notification of termination to Genentech for the intellectual property for IL-17E, and will cease further development activities for APTO-500 (MELK inhibitor), as the programs fall outside of the scope of Aptose's pipeline and vision.

Clinical Indications for Aptose Programs

Acute Myeloid Leukemia

AML is a rapidly progressing cancer of the blood and bone marrow characterized by the uncontrolled proliferation of dysfunctional myeloblasts that do not mature into healthy blood cells. It is the most common form of acute leukemia in adults. The American Cancer Society estimates there will be approximately 19,950 new cases of AML and approximately 10,430 deaths from AML in the U.S. in 2016. Standard induction therapy with chemotherapy is successful in many AML patients, but the majority of these patients will relapse with treatment refractory disease. The average age of a patient with AML is 67 years. Approximately 48% patients less than age 60, and 34% of patients greater than or equal to age 60, with residual disease after induction therapy will achieve a remission, as reported by Datamonitor.

Myelodysplastic Syndromes

MDS are a group of blood and bone marrow disorders. In MDS, stem cells do not mature normally, and the number of blasts (immature cells) and dysplastic (abnormally developed) cells increases. Also, the number of healthy mature cells decreases, meaning there are fewer normal red blood cells, white blood cells, and platelets. The numbers of blood cells are often called blood cell counts. Because of the decrease in healthy cells, people with MDS often have anemia (a lowered blood cell count), and may have neutropenia (a low white blood cell count) and thrombocytopenia (a low platelet count). Also, the chromosomes (long strands of genes) in the bone marrow cells may be abnormal. According to the American Cancer Society, there are approximately 13,000 new cases of MDS annually in the US. Additionally, Datamonitor Healthcare reports median survival in higher risk MDS patients may range between five months and two years. There are several subtypes of MDS, and some subtypes of MDS may eventually turn into AML.

BUSINESS OF THE COMPANY

NASDAQ listing

On October 21, 2014, Aptose announced that its Common Shares were approved for listing on NASDAQ under the symbol "APTO" and began trading on NASDAQ on October 23, 2014. Aptose has retained its listing on the TSX under the symbol "APS".

Reverse Stock Split

On October 1, 2014, Aptose filed articles of amendment to give effect to the reverse stock split (consolidation) of its Common Shares on the basis of one post-consolidation Common Share for each 12 pre-consolidation Common Shares (the "**Reverse Stock Split**"). The number of Common Shares outstanding as of the time of the announcement was 139,324,451. The number of Common Shares outstanding immediately following the Reverse Stock Split was 11,610,402.

Name and year end change

On September 2, 2014, we announced that we had changed our name to Aptose Biosciences Inc. from the previous name of Lorus Therapeutics Inc. The new name reflects our new focus and clinical-stage pipeline strategy, as an oncology research and development organization advancing new therapeutics and molecular diagnostics based on insights into the genetic profiles of certain cancers and patient populations. Our lead product candidate APTO-253 exerts its antitumor effects by activating a key apoptotic pathway in tumor cells. The term "apoptosis" represents the innate self-killing capacity of cells triggered upon the onset of cellular damage, and cancer cells employ various mechanisms to avoid apoptosis. For these reasons, "apoptosis" is the intuitive root of the name of "Aptose Biosciences." In addition, our stated goal with respect to the name change is to align the product portfolio and product development with the strategic course set by its new management team.

Effective July 17, 2014, we changed our fiscal year end from May 31 to December 31. As a result of that change the reference period for 2014 is for the seven months ended December 31, 2014 while the following periods are for the twelve months ended December 31, 2016 and 2015, respectively, and therefore not directly comparable to the seven month period.

Changes in Management

On October 28, 2013, William G. Rice, Ph.D., was appointed as Chief Executive Officer and Chairman of the Board while Dr. Aiping Young continued as President and Chief Operating Officer of the Company until she departed the Company on March 18, 2014. Aptose also appointed Daniel D. Von Hoff, M.D., to serve as a special advisor to fulfill the functions of the Company's Senior Vice President of Medical Affairs. Dr. Von Hoff is an independent contractor and advisor but is not an employee of Aptose. The Board, after receiving the recommendation of a special committee composed of independent directors formed in September 2013 to review strategic alternatives available to the Company, designed to secure the long-term financial and operational sustainability of the Company with a view to enhance shareholder value, unanimously approved the appointments. In doing so, the Board determined that such appointments were in the best interest of Aptose, as they were considered to enhance the management team and advisory team with the addition of two seasoned and experienced biotechnology executives bringing extensive clinical development and capital raising experience and improving the awareness and presence of the Company in the United States. On April 10, 2014, Dr. Rice was additionally appointed as President of the Company.

On October 29, 2013, Brian Druker, M.D., was appointed as the Chair of the Company's Scientific Advisory Board. Like Dr. Von Hoff, Dr. Druker is an independent contractor and advisor but not an employee of Aptose.

On December 2, 2013, Avanish Vellanki was appointed as Chief Business Officer of the Company, to manage global business development, licensing and corporate strategy, and Gregory K. Chow was appointed as Chief Financial Officer, with responsibility for corporate finance and accounting functions for the Company. On April 10, 2014, Messrs. Vellanki and Chow were additionally appointed as Senior Vice Presidents of the Company.

On September 8, 2014, Stephen B. Howell was appointed Chief Medical Officer of the Company.

Mr. Vellanki resigned from Aptose Biosciences Inc. effective March 24, 2017.

Financial Strategy

To meet our future financing requirements, we intend to finance our operations through some or all of the following methods: public or private equity financings, collaborative and licensing agreements. We intend to pursue financing opportunities as they arise. See "Item 3. Key Information—D. Risk Factors" above.

At-The-Market ("ATM") Facility

On April 2, 2015, we entered into an ATM equity facility with Cowen and Company, LLC, acting as sole agent. Under the terms of this facility, we may, from time to time, sell shares of our common stock having an aggregate offering value of up to US$20 million through Cowen and Company, LLC on the Nasdaq Capital Market. We determine, at our sole discretion, the timing and number of shares to be sold under this ATM facility. During the twelve months ended December 31, 2016, the Company issued 3,673,933Common Shares under the ATM at a price of US$1.65 per share for gross proceeds of approximately Cdn $7.97 million.

April 2014 Public Offering

In April 2014, we completed a public offering in Canada and a simultaneous private placement in the United States of Common Shares. Aptose issued 4,708,334 (56,500,000 pre-consolidation) Common Shares at a purchase price of $6.00 ($0.50 pre-consolidation) per Common Share including 541,667 (6,500,000 pre-consolidation) Common Shares pursuant to the partial exercise of an over-allotment option, for aggregate gross proceeds of $28,250,000. The total costs associated with the transaction were approximately $2,665,914 which includes a cash commission of $1,977,500 based on 7% of the gross proceeds received as part of the offering.

December 2013 Public Offering

In December 2013, Aptose completed a public offering of Common Shares. Aptose issued 1,060,833 (pre-consolidation 12,730,000) common shares at a price of $6.60 (pre-consolidation $0.55) per common share and an additional 159,125 (pre-consolidation 1,909,500) common shares upon the exercise of the overallotment option for aggregate gross proceeds of $8.1 million.

The total costs associated with the transaction were approximately $1.1 million which include a cash commission of $483 thousand based on 6% of the gross proceeds received as part of the offering, and the issuance of 73,198 (pre-consolidation 878,370) broker warrants with an estimated fair value of $350 thousand. The fair value of these warrants was determined using the Black Scholes model with a 24 month time to maturity, an assumed volatility of 130% and a risk free interest rate of 1.5%. Each broker warrant was exercisable into one common share of the Company at a price of $6.60 (pre-consolidation $0.55) for a period of twenty four months following closing of the offering.

June 2013 Promissory Notes and Warrants

In June 2013, we completed a private placement of units at a price of $1,000 per unit, for aggregate gross proceeds of $918,000. Each unit consisted of (i) a $1,000 principal amount of unsecured promissory note and (ii) 1,000 Common Share purchase warrants. The promissory notes bore interest at a rate of 10% per annum, payable monthly and were due June 19, 2014. Each warrant entitled the holder to purchase one Common Share of Aptose at a price per Common Share equal to $3.00 ($0.25 pre-consolidation) at any time until June 19, 2015. These notes and any interest accrued thereon were repaid in full in April 2014.

September 2013 Convertible Promissory Notes

In September 2013, we completed a private placement of convertible promissory notes for aggregate gross proceeds of $600,000. Each convertible promissory note consisted of a $1,000 principal amount of unsecured promissory note convertible into Common Shares of the Company at a price per share of $3.60 ($0.30 pre-consolidation). The promissory notes bore interest at a rate of 10% per annum, payable quarterly and were due September 26, 2015. At December 31, 2015, all of the convertible promissory notes had been converted into Common Shares of the Company.

September 2013 Loans payable

In September 2013, we entered into loan agreements for proceeds of $150,000. The loan agreements were unsecured, bore interest at a rate of 10% per annum payable quarterly and were due September 30, 2015. We repaid the loans and all accrued and unpaid interest thereon on April 25, 2014.]

Warrant Exercises

During the year ended December 31, 2015, 81,000 Common Share purchase warrants were exercised for proceeds of $348,000.

Warrants exercised during the year ended December 31, 2015:

(in thousands)	Number	Proceeds
August 2011 warrants (i)	16	$ 86
June 2013 private placement warrants (ii)	47	141
December 2013 broker warrants (iii)	18	121
Total	81	$ 348

In addition to the cash proceeds received, the original fair value related to these warrants of $155 thousand was transferred from warrants to share capital. This resulted in a total amount of $503 thousand credited to share capital.

During the seven months ended December 31, 2014, 1,231,000 Common Share purchase warrants were exercised for proceeds of $6,648,000.

Warrants exercised during the seven months ended December 31, 2014:

(in thousands)	Number	Proceeds
August 2011 warrants (i)	8	$ 48
June 2012 private placement warrants (iv)	1,223	6,600
Total	1,231	$ 6,648

During the year ended May 31, 2014, 868,000 Common Share purchase warrants were exercised for proceeds of $4,458,000.

Warrants exercised during the year ended May 31, 2014:

(in thousands)	Number	Proceeds
August 2011 warrants (i)	327	$ 1,764
June 2012 private placement warrants (iv)	409	2,210
June 2012 finder warrants	103	396
June 2013 private placement warrants (iii)	29	88
Total	868	$ 4,458

(i) August 2011 warrants are exercisable into Common Share of Aptose at a price per share of $5.40 ($0.45 pre-consolidation) and expired in August 2016.

(ii) June 2013 private placement warrants were exercisable into Common Shares of Aptose at a price per share of $3.00 ($0.25 pre-consolidation) and expired in June 2015.

(iii) December 2013 broker warrants were exercisable into Common Shares of Aptose at a price per share of $6.60 ($0.55 pre-consolidation) and expired in December 2015.

(iv) June 2012 warrants were exercisable into Common Shares of Aptose at a price per share of $5.40 ($0.45 pre-consolidation) and expired on June 8, 2014.

Agreements

Manufacturing Agreements

We currently rely upon subcontractors for the manufacture of our drug candidates. The subcontractors manufacture clinical material according to current Good Manufacturing Practices, or GMPs, at contract manufacturing organizations that have been approved by our quality assurance department staff, after having conducted audits to ensure such manufacturers meet the requirements of the relative regulatory authorities.

Manufactured product for clinical purposes is tested for conformance with product specifications prior to release by our quality assurance staff. GMP batches of our drug candidates are subjected to prospectively designed stability test protocols.

License Agreements

CrystalGenomics

In June 2016, Aptose entered into a definitive agreement with South Korean company, CrystalGenomics, Inc. (CG), granting Aptose an exclusive option to research, develop and commercialize CG026806 (CG’806) in all countries of the world except Korea and China, for all fields of use. CG’806 is a highly potent, non-covalent small molecule therapeutic agent, exhibiting single-digit nanomolar IC50’s against Bruton’s tyrosine kinase (BTK) and its C481S mutant (BTK-C481S) and a picomolar IC50 toward the FMS-like tyrosine kinase 3 with the Internal Tandem Duplication (FLT3-ITD).

Moffitt Cancer Center

In November 2015, Aptose entered into a definitive agreement with Moffitt Cancer Center for exclusive global rights to potent, multi-targeting, single-agent inhibitors for the treatment of hematologic and solid tumor cancers. Under the agreement, Aptose will gain access to the drug candidates developed by Moffitt and the underlying intellectual property covering the chemical modifications enabling potent bromodomain (BRD) inhibition on the chemical backbone of a kinase inhibitor. In January 2017, Aptose terminated the collaboration with Moffitt Cancer Center and halted further investment into the program.

Laxai Avanti Life Sciences (LALS)

In November 2015, Aptose also announced an exclusive drug discovery partnership with Laxai Avanti Life Sciences (LALS) for their expertise in next generation epigenetic-based therapies. Under the agreement, LALS would be responsible for developing multiple clinical candidates, including optimizing candidates derived from Aptose's relationship with the Moffitt Cancer Center. Aptose will own global rights to all newly discovered candidates characterized and optimized under the collaboration, including all generated intellectual property. Aptose halted further efforts with LALS in late 2016.

Other

From time to time, we enter into other research and technology agreements with third parties under which research is conducted and monies expended. These agreements outline the responsibilities of each participant and the appropriate arrangements in the event the research produces a product candidate.

Intellectual Property and Protection of Confidential Information and Technology

We believe that our issued patents and pending applications are important in establishing and maintaining a competitive position with respect to our products and technology.

APTO-253

We have been issued 21 patents and have 16 pending patents worldwide for our in-house small molecules. These patents cover APTO-253 composition of matter and methods of treating different cancers with APTO-253, including solid tumors and leukemia. Composition of matter patents expire in 2028 in the United States and 2026 in other countries. Our patents also include several compounds that are similar to APTO-253, which provide protection from competitors seeking to develop anticancer products that are related in chemical structure to APTO-253.

Regulatory Strategy

Our overall regulatory strategy is to work with the appropriate government departments which regulate the use and sale of therapeutic drug products. This includes Health Canada in Canada, the Food and Drug Administration in the United States, the European Medicines Agency in Europe, and other local regulatory agencies with oversight of preclinical studies, clinical trials and marketing of therapeutic products. Where possible, we intend to take advantage of opportunities for accelerated development of drugs designed to treat rare and serious or life-threatening diseases. We also intend to pursue priority evaluation of any application for marketing approval filed in Canada, the United States or the European Union and to file additional drug applications in other markets where commercial opportunities exist. We may not be able to pursue these opportunities successfully.

Revenues

The Company has not earned substantial revenues from its drug candidates and is therefore considered to be in the development stage.

Employees

The business of the Company requires personnel with specialized skills and knowledge in oncology. Researchers must be able to design and implement studies to assess the efficacy of anticancer drugs. Specialized knowledge and skills relating to chemistry and formulation process development are also needed. Such knowledge and skills are needed to develop product specific analytical methods and formulation processes. The Company's business also requires clinical and regulatory expertise and knowledge. The Company has trained scientists and personnel with broad experience in these fields.

As at December 31, 2016, we employed 21 full-time persons and 2 part-time persons in research and drug development and administration activities. Subsequent to December 31, 2016, and as a result of the Company's reprioritization of its pipeline, we executed a reduction in workforce bringing the total to 14 full-time persons and 3 part-time research persons in research and drug development and administrative activities. Four of our employees hold Ph.D.'s and numerous others hold degrees and designations such as MSc, BSc, CPA (CA), CPA (California) and MBA.

To encourage a focus on achieving long-term performance, employees and members of the Board have the ability to acquire an ownership interest in the Company through Aptose's share option and alternate compensation plans. See Item 6.B – Compensation.

None of our employees are unionized, and we consider our relations with our employees to be good.

Office Facilities

Our head office, which occupies 5,300 square feet, is located 5955 Airport Road Suite #228, Mississauga, Ontario. The leased premise is office space. Our current lease expires in April, 2020.

We have executive offices in San Diego and have entered into a lease agreement for office space, located at 12770 High Bluffs Drive, San Diego, California which occupies approximately 2,204 square feet. This leased premise is used for administrative purposes only. This lease expires January, 2020. In December 2016, we terminated the lease early, at no cost, on our administrative offices in San Francisco located at 3 Lagoon Drive, Redwood City, California. The original lease was to expire in June 2018. Finally, we have leased laboratory space in San Diego at 3550 General Atomics Court. The lease is for 1,386 square feet and the lease expires in February 2018.

Components and Raw Materials

Standard raw materials, component parts, and products required by the Company in pursuing its activities are supplied from reputable companies active in the biotechnology industry. Pricing is predictable as there are many alternatives of such supplies that are readily available.

Competition

The biotechnology and pharmaceutical industries are characterized by rapidly evolving technology and intense competition. There are numerous companies in these industries that are focusing their efforts on activities similar to ours. Some of these are companies with established positions in the pharmaceutical industry and may have substantially more financial and technical resources, more extensive research and development capabilities, and greater marketing, distribution, production and human resources than Aptose. In addition, we face competition from other companies for opportunities to enter into partnerships with biotechnology and pharmaceutical companies and academic institutions.

Competition with our potential products may include chemotherapeutic agents, monoclonal antibodies, antisense therapies, small molecules, immunotherapies, vaccines and other biologics with novel mechanisms of action. These drugs may kill cancer cells indiscriminately, or through a targeted approach, and some have the potential to be used in non-cancer indications. We also expect that we will experience competition from established and emerging pharmaceutical and biotechnology companies that have other forms of treatment for the cancers that we target, including drugs currently in development for the treatment of cancer that employ a number of novel approaches for attacking these cancer targets. Cancer is a complex disease with more than 100 indications requiring drugs for treatment. The drugs in competition with our potential drugs have specific targets for attacking the disease, targets which are not necessarily the same as ours. These competitive drugs, however, could potentially also be used together in combination therapies with our drugs to manage the disease. Other factors that could render our potential products less competitive may include the stage of development, where competitors' products may achieve earlier commercialization, as well as superior patent protection, better safety profiles, or a preferred cost-benefit profile.

Environmental Compliance

The Company's research and development activities involve the controlled use of hazardous and radioactive materials and, accordingly, the Company is subject to federal, provincial and local laws and regulations governing the use, manufacture, storage, handling and disposal of such materials and certain waste products. To the knowledge of the Company, compliance with such environmental laws and regulations does not and will not have any significant impact on its capital spending, profits or competitive position within the normal course of its operating activities. There can be no assurance, however, that the Company will not be required to incur significant costs to comply with environmental laws and regulations in the future or that its operations, business or assets will not be materially adversely affected by current or future environmental laws or regulations.

Government Regulation

Overview

Regulation(s) by government authorities in Canada, the United States, and the European Union are significant factors in guiding our current research and drug development activities. To clinically test, manufacture and market drug products for therapeutic use, we must be in compliance with guidance and regulations established by the regulatory agencies in the countries in which we currently operate or intend to operate.

The laws of most of these countries require the licensing of manufacturing facilities, carefully controlled research and the extensive testing of products. Biotechnology companies must establish the safety and efficacy of their new products in clinical trials; they must establish and comply with current GMP(s) for the manufacturing of the product and control over marketing activities before being allowed to market a product. The safety and efficacy of a new drug must be shown through human clinical trials of the drug carried out in accordance with the guidance and regulations established by local and federal regulatory agencies.

The process of completing clinical trials and obtaining regulatory approval for a new drug takes a number of years and requires the expenditure of substantial resources. Once a new drug or product license application is submitted, regulatory agencies may not review the application in a timely manner and may not approve the product. Even after an NDA submission has occurred and or approval has been obtained, further studies, including post-marketing studies, may be required to provide additional data on efficacy and safety necessary to confirm the approved indication or to gain approval for the use of the new drug as a treatment for clinical indications other than those for which the new drug was initially tested. Also, regulatory agencies require post-marketing surveillance programs to monitor a new drug's side effects, safety and long term effects of the product. A serious safety or effectiveness problem involving an approved new drug, may result in a regulatory agency mandating a withdrawal of the new drug from the market and possible civil action. It is possible that we could encounter such difficulties or excessive costs in our efforts to secure necessary approvals, which could delay or prevent us from manufacturing or marketing our products.

In addition to the regulatory product approval framework, biotechnology companies, including Aptose, are subject to regulation under local, provincial, state and federal law, including requirements regarding occupational safety, laboratory practices, environmental protection and hazardous substance control, and may be subject to other present and future local, provincial, state, federal and foreign regulation, including possible future regulation of the biotechnology industry.

Regulation in Canada

In Canada, the manufacture and sale of new drugs are controlled by Health Canada. New drugs must pass through a number of testing stages, including pre-clinical testing and human clinical trials. Pre-clinical testing involves testing the new drug's chemistry, pharmacology and toxicology *in vitro* and *in vivo*. Successful results (that is, potentially valuable pharmacological activity combined with an acceptable low level of toxicity) enable the developer of the new drug to file a clinical trial application to begin clinical trials involving humans.

To study a drug in Canadian patients, a clinical trial application submission must be filed with Health Canada. The clinical trial application submission must contain specified information, including the results of the pre-clinical tests completed at the time of the submission and any available information regarding use of the drug in humans. In addition, since the method of manufacture may affect the efficacy and safety of a new drug, information on manufacturing methods and standards and the stability of the drug substance and dosage form must be presented. Production methods and quality control procedures must be in place to ensure an acceptably pure product, essentially free of contamination, and to ensure uniformity with respect to all quality aspects.

In addition, all federally regulated trials must be approved and monitored by an independent committee of doctors, scientists, advocates and others to ensure safety and ethical standards. These committees are called Institutional Review Boards ("**IRBs**") or Ethics Review Boards ("**ERBs**"). The review boards study and approve all study-related documents before a clinical trial begins and also carefully monitor data to detect benefit or harm, and validity of results.

Provided Health Canada does not reject a clinical trial application submission and IRB or ERB approval has been obtained, clinical trials can begin. Clinical trials for product candidates in Canada, as in the U.S. generally are carried out in three phases. Phase I involves studies to evaluate toxicity and ideal dose levels in healthy humans. The new drug is administered to human patients who have met the clinical trial entry criteria to determine pharmacokinetics, human tolerance and prevalence of any adverse side effects. Phases II and III involve therapeutic studies. In Phase II, efficacy, dosage, side effects and safety are established in a small number of patients who have the disease or disorder that the new drug is intended to treat. In Phase III, there are controlled clinical trials in which the new drug is administered to a large number of patients who are likely to receive benefit from the new drug. In Phase III, the effectiveness of the new drug in patients is compared to that of standard accepted methods of treatment in order to provide sufficient data for the statistical proof of safety and efficacy for the new drug.

If clinical studies establish that a new drug has value, the manufacturer submits a new drug submission application to Health Canada for marketing approval. The new drug submission contains all information known about the new drug, including the results of pre-clinical testing and clinical trials. Information about a substance contained in new drug submission includes its proper name, its chemical name, and details on its method of manufacturing and purification, and its biological, pharmacological and toxicological properties. The new drug submission also provides information about the dosage form of the new drug, including a quantitative listing of all ingredients used in its formulation, its method of manufacture, manufacturing facility information, packaging and labelling, the results of stability tests, and its diagnostic or therapeutic claims and side effects, as well as details of the clinical trials to support the safety and efficacy of the new drug. Furthermore, for biological products, an on-site evaluation is completed to assess the production process and manufacturing facility. It is required prior to the issuance of a notice of compliance. All aspects of the new drug submission are critically reviewed by Health Canada. If a new drug submission is found satisfactory, a notice of compliance is issued permitting the new drug to be sold for the approved use. In Canada, an establishment license must be obtained prior to marketing the product.

Health Canada has a policy of priority evaluation of new drug submissions for all drugs intended for serious or life-threatening diseases for which no drug product has received regulatory approval in Canada and for which there is reasonable scientific evidence to indicate that the proposed new drug is safe and may provide effective treatment.

The monitoring of a new drug does not cease once it is on the market. For example, a manufacturer of a new drug must report any new information received concerning serious side effects, as well as the failure of the new drug to produce desired effects. If Health Canada determines it to be in the interest of public health, a notice of compliance for a new drug may be suspended and the new drug may be removed from the market.

A post surveillance program involves clinical trials conducted after a drug is marketed (referred to as Phase IV studies in the United States) and is an important source of information on as yet undetected adverse outcomes, especially in populations that may not have been involved in the premarketing trials (e.g., children, the elderly, pregnant women) and the drug's long-term morbidity and mortality profile. Regulatory authorities may require companies to conduct Phase IV studies as a condition of market approval. Companies often conduct post-marketing studies in the absence of a regulatory mandate.

An exception to the foregoing requirements relating to the manufacture and sale of a new drug is the limited authorization that may be available in respect of the sale of new drugs for emergency treatment. Under the special access program, Health Canada may authorize the sale of a quantity of a new drug for human use to a specific practitioner for the emergency treatment of a patient under the practitioner's care. Prior to authorization, the practitioner must supply Health Canada with information concerning the medical emergency for which the new drug is required, such data as is in the possession of the practitioner with respect to the use, safety and efficacy of the new drug, the names of the institutions at which the new drug is to be used and such other information as may be requested by Health Canada. In addition, the practitioner must agree to report to both the drug manufacturer and Health Canada the results of the new drug's use in the medical emergency, including information concerning adverse reactions, and must account to Health Canada for all quantities of the new drug made available.

The Canadian regulatory approval requirements for new drugs outlined above are similar to those of other major pharmaceutical markets. While the testing carried out in Canada is often acceptable for the purposes of regulatory submissions in other countries, individual regulatory authorities may request supplementary testing during their assessment of any submission. Therefore, the clinical testing conducted under Health Canada authorization or the approval of regulatory authorities of other countries may not be accepted by regulatory authorities outside Canada or other countries.

Regulation in the United States

In the United States, the FDA controls and investigates the investigation, manufacturing, and sale of new drugs. New drugs require FDA approval of a New Drug Application prior to commercial sale. In the case of certain biological products, a Biological License Application must be obtained prior to marketing and batch releasing. As in Canada, to obtain marketing approval, data from adequate and well-controlled human clinical trials, demonstrating to the FDA's satisfaction a new drug's safety and effectiveness for its intended use, are required. Data are generated in studies conducted pursuant to an IND submission, similar to that required for a clinical trial application in Canada. Clinical trials with human subjects are characterized as Phase I, Phase II and Phase III trials or a combination thereof. In a marketing application, the manufacturer must also demonstrate the identity, potency, quality and purity of the active ingredients of the new drug involved, and the stability of those ingredients. Further, the manufacturing facilities, equipment, processes and quality controls for the new drug must comply with the FDA's current Good Manufacturing Practice regulations for drugs or biological products both in a pre-licensing inspection before product licensing and in subsequent periodic inspections after licensing. An establishment license grants the sponsor permission to fabricate, package, label, distribute, import, wholesale or test of the newly approved drug.

Federally regulated trials must be approved and monitored by an independent committee of doctors, scientists, advocates and others to ensure safety and ethical standards. These committees are called Institutional Review Boards ("**IRBs**") or Ethics Review Boards ("**ERBs**"). The review boards study and approve all study-related documents before a clinical trial begins and also carefully monitor data to detect benefit or harm, and validity of results.

The above describes briefly what is necessary for a new drug to be approved for marketing in North America. The European Medicines Agency and Japanese Pharmaceuticals and Medical Devices Agency are also important regulatory authorities in drug development. Together with the FDA, they are the three International Conference on Harmonization parties which oversee the three largest markets for drug sales.

C. ***Organizational structure.***

Old Lorus was incorporated under the *Business Corporations Act* (Ontario) on September 5, 1986 under the name RML Medical Laboratories Inc. On October 28, 1991, RML Medical Laboratories Inc. amalgamated with Mint Gold Resources Ltd., resulting in Old Lorus becoming a reporting issuer (as defined under applicable securities law) in Ontario, on such date. On August 25, 1992 Old Lorus changed its name to IMUTEC Corporation. On November 27, 1996, Old Lorus changed its name to Imutec Pharma Inc., and on November 19, 1998, Old Lorus changed its name to Lorus Therapeutics Inc. On October 1, 2005, Old Lorus continued under the *Canada Business Corporations Act*.

On the Arrangement Date, Old Lorus completed a plan of arrangement and corporate reorganization with, among others, New Lorus, 6707157 Canada Inc. and Pinnacle International Lands, Inc. As a result of the plan of arrangement and reorganization, each Common Share of Old Lorus was exchanged for one Common Share of New Lorus. New Lorus continued the business of Old Lorus after the Arrangement Date with the same officers and employees and continued to be governed by the same board of directors as Old Lorus prior to the Arrangement Date.

On August 28, 2014, New Lorus changed its 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.

The address of the Company's head and registered office is 5955 Airport Road, Suite #228, Mississauga, Ontario, Canada, L4V 1R9 and our phone number is (647) 479-9828. Our corporate website is www.aptose.com. The contents of the website and items accessible through the website are specifically not incorporated in this Annual Report by reference.

Aptose has three subsidiaries: Aptose USA, a company incorporated under the laws of Delaware, USA, Aptose Suisse a company incorporated under the laws of Zug, Switzerland and NuChem, a company incorporated under the laws of Ontario, Canada. Aptose owns 100% of the issued and outstanding voting share capital of Aptose USA and Aptose Suisse and 80% of the issued and outstanding voting share capital of NuChem.

Our Common Shares are listed on the TSX under the symbol "APS" and on NASDAQ under the symbol "APTO."

D. ***Property, plant and equipment.***

Our head office, which occupies 5,300 square feet, is located 5955 Airport Road Suite #228, Mississauga, Ontario. The leased premise is office space. Our current lease expires in April, 2020.

We have executive offices in San Diego and have entered into a lease agreement for office space, located at 12770 High Bluffs Drive, San Diego, California that occupies approximately 2,204 square feet. This leased premise is used for administrative purposes only. This lease expires January, 2020. In December 2016, we terminated the lease early, at no cost, on our administrative offices in San Francisco located at 3 Lagoon Drive, Redwood City, California. The original lease was to expire in June 2018. Finally, we have leased laboratory space in San Diego at 3550 General Atomics Court. The lease is for 1,386 square feet and the lease expires in February 2018.

Item 4A. Unresolved Staff Comments

Not applicable.

Item 5. Operating and Financial Review and Prospects

A. ***Operating results.***

Please see our Management's Discussion and Analysis for the fiscal year ended December 31, 2016 in Exhibit 15.1, which is incorporated herein by reference.

B. ***Liquidity and capital resources.***

Please see our Management's Discussion and Analysis for the fiscal year ended December 31, 2016 in Exhibit 15.1, which is incorporated herein by reference.

C. ***Research and development, patents and licenses, etc.***

Certain information concerning research and development and intellectual property is set forth in Item 4, "Information on the Company".

D. ***Trend information.***

We have a history of operating losses and have not been profitable since our inception in 1986. We expect to continue to incur losses for at least the next several years as we and our collaborators and licensees pursue clinical trials and research and development efforts. See "Item 3. Key Information—D. Risk Factors" above.

E. ***Off-balance sheet arrangements.***

As at December 31, 2016, we had not entered into any off-balance sheet arrangements.

F. ***Tabular disclosure of contractual obligations.***

As December 31, 2016

(In thousands)	Payments due by period				
Contractual Obligations	**Total**	**Less than 1 year**	**1-3 years**	**3-5 years**	**More than 5 years**
Operating lease obligations	$ 1,066	$ 358	$ 649	$ 59	$ nil

The Company has entered into various contracts with service providers with respect to the clinical development of APTO-253 and for its CG'806 development program. As at December 31, 2016, these contracts will result in future payments of approximately $430 thousand.

The Company enters into research, development and license agreements in the ordinary course of business where the Company receives research services and rights to proprietary technologies. Milestone and royalty payments that may become due under various agreements are dependent on, among other factors, clinical trials, regulatory approvals and ultimately the successful development of a new drug, the outcome and timing of which is uncertain. Under its license agreement with CrystalGenomics, the Company has future contingent milestones payable totaling US$2.0 million relating to the filing of an IND, $16 million on the initiation of Phase II and Pivotal clinical trials, and regulatory milestones totaling $44 million. In addition, the Company also has a contingent future obligation to make royalty payments on future sales of the commercialized product. The Company does not anticipate making any payments under this license agreement in 2017.

G. Safe Harbor

Please see "Forward Looking Statements" beginning on page 1 above.

Item 6. Directors, Senior Management and Employees

A. ***Directors and senior management.***

The following table and notes thereto provide the name, province or state and country of residence, positions with the Company and term of office of each person who serves as a director or executive officer of Aptose as at the date hereof.

Each director has been elected or appointed to serve until the next annual meeting or until a successor is elected or appointed. We have an Audit Committee, a Corporate Governance and Nominating Committee and a Compensation Committee, the members of each such committee are shown below.

As at December 31, 2016, our directors and executive officers, as a group, beneficially owned, directly or indirectly, or exercised control over, approximately 57,699 Common Shares or approximately 0.4% of our outstanding Common Shares.

Name and Province/State and Country of Residence	**Position**	**Director or Officer Since**
Directors:		
Dr. Denis Burger[(1)(2)] Oregon, United States	Director	September 2007
Dr. Brad Thompson[(1)(2)(3)] Alberta, Canada	Director	June 2013
Dr. Mark Vincent[(3)] Ontario, Canada	Director	September 2007

Warren Whitehead[1] Ontario, Canada	Director	April 2011
Dr. William G. Rice California, USA	Chairman	October 2013
Dr. Erich Platzer[2] Switzerland	Director	December 2014
Officers:		
Dr. William Rice California, USA	President and Chief Executive Officer	October 2013
Gregory Chow California, USA	Senior Vice President and Chief Financial Officer	November 2013
Avanish Vellanki California, USA	Senior Vice President and Chief Business Officer	November 2013

(1) Member of Audit Committee.
(2) Member of the Compensation Committee.
(3) Member of the Corporate Governance and Nominating Committee.

The principal occupation and employment of each of the foregoing persons for the past five years is set forth below:

Dr. Denis Burger: Dr. Burger currently is the Chief Scientific Officer and member of the board of directors of Cytodyn Inc. (a biotechnology company) as well as Chairman of AMES Devices (a medical device company). Dr. Burger co-founded Trinity Biotech plc, based in Dublin, Ireland, in June 1992 and acted as Chairman from 1992 to 1995 and now serves on the board of directors of the company. Dr. Burger was the past Chairman, Chief Executive Officer and a director of AVI Biopharma Inc., an Oregon based biotechnology company, from 1992 to March 2007. Dr. Burger is also a partner in Sovereign Ventures, a healthcare consulting and funding firm based in Portland, Oregon. Dr. Burger received his MSc and Ph.D. in Microbiology and Immunology from the University of Arizona.

Dr. Erich Platzer: Dr. Platzer is a board certified physician in internal medicine, hematology and medical oncology. Previously, Dr. Platzer served as the business director of oncology, as well as the global strategic marketing and therapeutic area head of oncology at Roche, Basel. He was also the medical director in oncology and global development project leader and was responsible for various strategic corporate partnerships. Dr. Platzer is a director of Swiss Business Angel Groups, StartAngels and BioBAC, and has served as a pharmaceutical industry expert on the board of directors of multiple biotech companies in both the U.S. and Europe such as Probiodrug, AOT, Léman Micro Devices, Credentis, and Viroblock. Dr. Platzer co-founded HBM Healthcare Investments (formerly HBM BioVentures) a global leader in healthcare investing. He has over 12 years of experience in academic medicine and research and was a key member of the team at MSKCC that purified human G-CSF in 1983 (recombinant form: Neupogen®). He earned his M.D. from the Medical School and the Institute of Clinical Immunology and Rheumatology of the University of Erlangen, where he also received his “Dr. med. habil.” (M.D.,Ph.D.).

Dr. William G. Rice: Dr. Rice joined Aptose as Chairman and Chief Executive Officer in October 2013. Prior to joining Aptose, Dr. Rice served as the President, Chief Executive Officer and Chairman of the board of Cylene Pharmaceuticals, Inc., a private biotechnology company (“Cylene”). Prior to Cylene, Dr. Rice was the founder, President, Chief Executive Officer and Director of Achillion Pharmaceuticals, Inc. He also served as Senior Scientist and Head of the Drug Mechanism Laboratory at the National Cancer Institute-Frederick Cancer Research and Development Center, and served as a faculty member in the division of Pediatric Hematology and Oncology at Emory University School of Medicine. Dr. Rice received his Ph.D. from Emory University Department of Biochemistry. He continues to serve as the Chairman of the board of Cylene and is a member of the board of directors of Oncolytics Biotech Inc.

Dr. Brad Thompson:. Dr. Thompson is an experienced biotechnology professional who is CEO of Kickshaw Ventures Ltd. from December 2016. Prior to his role with Kickshaw, Dr. Thompson was Chairman of the Board, President and Chief Executive Officer of Oncolytics Biotech Inc. from April 1999 to November 2016 and Chief Executive Officer of Synsorb Biotech from 1994 to 1999. He received his Ph.D. from the University of Western Ontario in the Department of Microbiology and Immunology.

Dr. Mark Vincent: Dr. Mark Vincent is a Professor of Oncology at the University of Western Ontario and a staff medical oncologist at the London Regional Cancer Program, where he has been since 1990. Dr. Vincent is also the co-founder and Chief Executive Officer of Sarissa, Inc. since 2000.

Mr. Warren Whitehead: Mr. Whitehead is a CPA (CMA) who has held senior financial management positions in several biotechnology and pharmaceutical companies. Most recently Mr. Whitehead was the Chief Financial Officer of ProMIS Neurosciences Inc. (formerly Amorfix Life Sciences Ltd.). Prior to this, he served as Chief Financial Officer of ARIUS Research Inc., providing financial guidance and leadership during the acquisition of ARIUS by Roche in 2008. Prior to ARIUS, Mr. Whitehead was Chief Financial Officer at Labopharm Inc., where he completed a series of public equity financings and a listing on NASDAQ. He is currently the Chairman of the board of directors of PlantForm Corporation.

Gregory Chow: Mr. Chow joined Aptose as Chief Financial Officer in December 2013. Previously, Mr. Chow served as Managing Director, Director of Private Placements at Wedbush Securities, where he led the private placement capital activities within the Life Sciences Investment Banking Group. Prior to joining Wedbush, he was a Director in the Private Placements / Equity Capital Markets Group at RBC Capital Markets, where he led life science private capital activities. Previously, he led the Private Capital Group at Wells Fargo Securities and was a Senior Auditor at BDO Seidman, LLP in their Century City, CA office. Mr. Chow is a Certified Public Accountant (inactive) in the State of California. Mr. Chow received his MBA in Finance from The Wharton School at the University of Pennsylvania, and his BA in Business Economics with an emphasis in Accounting from the University of California, Santa Barbara.

Avanish Vellanki: Mr. Vellanki became Aptose's Chief Business Officer in December 2013 , having most recently served as Senior Vice President, Investment Banking at Wedbush Securities focusing on the biotechnology sector. Prior to Wedbush Securities, Mr. Vellanki held the position of Senior Director of Corporate Development at Proteolix, Inc. (acquired by Onyx Pharmaceuticals), a biotechnology company focused on the development of oncology therapeutics. Previously, Mr. Vellanki served as Vice President in the Global Healthcare Investment Banking team at Citigroup's Global Healthcare Investment Banking, where he focused on large cap global biopharma strategic and financial advisory. Mr. Vellanki began his career at Bear Stearns as an equity research analyst covering the small/mid-cap biotechnology sector, and held the title of Vice President as a publishing analyst. Mr. Vellanki holds a BA from Carleton College, an MBS in Biochemistry from the University of Minnesota and MBA from the Carlson School of Management at the University of Minnesota.

There are no family relationships among the persons named above and there are no arrangements or understanding with major shareholders, customers, suppliers or others pursuant to which any person was selected as a director or member of senior management.

B. ***Compensation*****.**

Summary of Executive Compensation

The following table details the compensation information for the fiscal year ended December 31, 2016 of the Company, for the Chairman, President and Chief Executive Officer, Senior Vice President and Chief Financial Officer and the Senior Vice President and Chief Business Officer (" **Named Executive Officers**"). The figures are in Canadian dollars.

Name and Principal Position	Year ended December 31	Salary ($)[1]	Share-based awards ($)	Option-based awards[2] ($)	Non-equity incentive plan compensation		Pension value ($)	All other compensation ($)	Total compensation ($)
					Annual incentive plans[3] [1] ($)	Long-term incentive plans ($)			
Dr. William G. Rice Chairman, President and Chief Executive Officer	2016	694,280	N/A	179,400	173,570	N/A	N/A	N/A	1,047,250
Mr. Gregory K. Chow Senior Vice President and Chief Financial Officer	2016	442,527	N/A	179,400	88,505	N/A	N/A	N/A	710,432
Mr. Avanish Vellanki Senior Vice President and Chief Business Officer	2016	442,527	N/A	179,400	88,505	N/A	N/A	N/A	710,432

(1) Dr. Rice, Mr. Chow and Mr. Vellanki are paid in US dollars. Amounts are shown in Canadian dollars translated from US dollars based on the exchange rates prevailing on the date of the transaction. The average exchange rate was $1USD = $1.3248CDN.

(2) In determining the fair value of these option-based awards, the Black-Scholes valuation methodology was used with the following assumptions: (i) expected life of five years; (ii) volatility 110%; (iii) risk free interest rate of 0.68%; and (iv) no dividend yield. The Company has decided to use the Black-Scholes valuation methodology because it is equivalent to the option value reported in the Company's consolidated financial statements.

(3) Annual incentive compensation relates to the period from January 1 to December 31, 2016.

Name and Principal Position	Year ended December 31	Salary ($)	Cash Bonus ($)	Other Annual Compensation ($)	Securities Under Options/SARs Granted (#)	All Other Compensation ($)
Dr. William G. Rice Chairman, President and Chief Executive Officer	2016	694,280	173,570	Nil	60,000	Nil
Mr. Gregory K. Chow Senior Vice President and Chief Financial Officer	2016	442,527	88,505	Nil	60,000	Nil
Mr. Avanish Vellanki Senior Vice President and Chief Business Officer	2016	442,527	88,505	Nil	60,000	Nil

Dr. Rice, Mr. Chow and Mr. Vellanki are paid in US dollars. Amounts are shown in Canadian dollars translated from US dollars based on the exchange rates prevailing on the date of the transaction. The average exchange rate was $1USD = $1.3248CDN.

Directors' Compensation

The following table details the compensation received by each director for the fiscal year ended December 31, 2016:

Name	Fees earned ($)[1]	Share-based awards ($)	Option-based awards ($)	Non-equity incentive plan compensation ($)	Pension value ($)	All other Compensation ($)	Total ($)
Dr. Denis Burger	100,685	nil	29,900	nil	nil	nil	130,585
Dr. Bradley Thompson	63,590	nil	29,900	nil	nil	nil	93,940
Dr. Mark Vincent	52,992	nil	29,900	nil	nil	nil	82,892
Mr. Warren Whitehead	52,592	nil	29,900	nil	nil	nil	82,892
Dr. Erich Platzer	47,693	nil	29,900	nil	nil	nil	77,593

(1) Directors are paid in US$. The conversion to Canadian dollars was done using an average rate of $1USD = $1.3248CDN.

Dr. Rice did not receive any compensation for his role as a director of the Company.

In January 2015, the Board approved certain changes related to the compensation of directors effective for the fiscal year 2015. As of January 1, 2015, directors were entitled to an annual fee of US$30,000 with no per meeting fees. The lead director will be entitled to an additional annual fee of US$30,000. The chair of each committee will be entitled to an annual fee of US$10,000 with each committee member receiving an annual fee of US$6,000 per committee. Upon appointment to the Board a director will be entitled to an option grant of 10,000 options and each year thereafter an additional grant of 6,000 options. Non-executive directors are reimbursed for any out-of-pocket travel expenses incurred in order to attend meetings. Executive directors are not entitled to directors' compensation.

In the year ended December 31, 2016, all directors received a grant of 10,000 options. The options vest 50% after one year, 16 2/3 for each of the second, third and fourth years.

Management Contracts

The employment agreements of Dr. Rice, Mr. Chow and Mr. Vellanki provide that if their employment is terminated by the Company other than for cause, each of Dr. Rice, Mr. Chow and Mr. Vellanki shall be entitled to a payment equivalent to 12 months of their respective annual base salaries at the time of termination (Dr. Rice's current annual base salary represents US$509,334, Mr. Chow's current annual base salary represents US$334,184 and Mr. Vellanki's current annual base salary represents US$334,184), plus an amount equal to the average bonus remuneration received from the Company during the last three years of employment completed prior to the termination date, prorated based on the number of days the executive worked during the year of the termination. In addition, the employment agreements of Dr. Rice, Mr. Chow and Mr. Vellanki provide that certain payments related to health benefits will continue to be made for a period of 12 months following termination of their employment.

If the employment agreements are terminated by the Company other than for cause, then all unexercised options then held by each are governed by the terms of the share option plan of the Company ("**Share Option Plan**").

The employment agreements of Dr. Rice, Mr. Chow and Mr. Vellanki provide that, in the event their employment with the Company is terminated within three months immediately preceding or 12 months immediately following the consummation of a change of control, each of Dr. Rice, Mr. Chow and Mr. Vellanki would be eligible, subject to certain conditions, to receive a payment equivalent to 18 months of their annual base salaries at the time of termination, plus an amount equal to 150% of the average bonus remuneration received from the Company during the last three years of employment completed prior to the termination date, prorated based on the number of days the executive worked during the year of the termination, as well as continuation of the payments related to health benefits for a period of 12 months following the termination following a change of control.

The following table sets out the amount that would have been payable to each Named Executive Officer had there been a change of control of the Company on December 31, 2016 and the severance payment that would have been payable to each Named Executive Officer had the Company terminated employment of the Named Executive Officer without cause on December 31, 2016:

Name	Termination Without Cause	Change of Control
Dr. William G. Rice	US$846,000(1)	US$1,228,000(2)
Mr. Gregory K. Chow	US$498,000(1)	US$732,000(2)
Mr. Avanish Vellanki	US$531,000(1)	US$764,000(2)

(1) This amount represents 12 months of annual base salary at the time of termination, plus an amount equal to the average bonus remuneration received from the Company during the last three years of employment completed prior to the termination date (assumed at 100%), prorated based on the number of days the executive worked during the year of the termination, as well as continuation of the payments related to health benefits for a period of 12 months following the termination.

(2) This amount represents 18 months of annual base salary at the time of termination, plus an amount equal to 150% of the average bonus remuneration received (assumed at 100%) from the Company during the last three years of employment completed prior to the termination date, prorated based on the number of days the executive worked during the year of the termination, as well as continuation of the payments related to health benefits for a period of 12 months following the termination.

Equity Compensation Plans

The following table sets forth certain details as at the end of the year ended December 31, 2016 with respect to compensation plans pursuant to which equity securities of the Company are authorized for issuance.

	Number of Shares to be issued upon exercise of outstanding options, warrants and rights (a)		Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of Shares remaining available for future issuance under the equity compensation plans (Excluding Shares reflected in Column (a)) (c)		Total options, warrants and rights outstanding and available for grant (a) + (c)	
Plan Category	Number	% of Shares outstanding		Number	% of Shares outstanding	Number	% of Shares outstanding
Equity compensation plans approved by Shareholders	2,004,465	12.7%	$ 5.79	746,777	4.8%	2,751,242	17.5%

Share Option Plan

The Share Option Plan was established to advance the interests of Aptose by:

- providing Eligible Persons (as defined below) with additional incentives;
- encouraging stock ownership by Eligible Persons;
- increasing the interest of Eligible Persons in the success of Aptose;
- encouraging Eligible Persons to remain loyal to Aptose; and
- attracting new Eligible Persons to Aptose.

The Compensation Committee, as authorized by the Board, administers the Share Option Plan. The maximum total number of Common Shares available for issuance from treasury under the Share Option Plan, together with the Stock Incentive Plan ("**SIP**") and any other security based compensation arrangement is 17.5% of the Company's issued and outstanding Common Shares at any given time. Any exercise of options pursuant to the Share Option Plan will make new option grants available under the Share Option Plan, provided that the maximum number of Common Shares reserved for issuance collectively under the Share Option Plan and the SIP may not exceed 17.5% of the Company's issued and outstanding Common Shares at any given time.

Under the Share Option Plan, options may be granted to any executive officer, employee, subsidiary of an executive officer or employee, or consultant or consultant entity ("**Eligible Persons**"). The exercise price of options granted under the Share Option Plan is established by the Board and will be equal to the closing market price of the Common Shares on the TSX on the last trading day preceding the date of grant. If there is no trading on that date, the exercise price will be the average of the bid and ask on the TSX on the last trading date preceding the date of grant. If not otherwise determined by the Board, an option granted under the Share Option Plan will vest as to 50% on the first anniversary of the date of grant of the option and 16.66% on the second, third and fourth anniversaries after the date of grant. The Board fixes the term of each option when granted, but such term may not be greater than 10 years from the date of grant. If the date on which an option expires pursuant to an option agreement occurs during, or within 10 days after the last day of, a black out period or other restriction period imposed on the trading of Common Shares by the Company, the expiry date for the option will be the last day of the 10-day period. Options are personal to the participant and a participant may not transfer an option except in accordance with the Share Option Plan.

The Board may, in its sole discretion, amend, suspend or terminate the Share Option Plan or any portion of it at any time in accordance with applicable legislation, without obtaining the approval of Shareholders. Any amendment to any provision of the Share Option Plan is subject to any required regulatory or Shareholder approval. The Company is, however, required to obtain the approval of the Shareholders for any amendment related to (i) the maximum number of Common Shares reserved for issuance under the Share Option Plan, and under any other security based compensation arrangements of the Company; (ii) a reduction in the exercise price for options held by insiders of the Company; and (iii) an extension to the term of options held by insiders of the Company.

If an option holder is terminated without cause, resigns or retires, each option that has vested will cease to be exercisable three months after the option holder's termination date. Any portion of an option that has not vested on or prior to the termination date will expire immediately. If an option holder is terminated for cause, each option that has vested will cease to be exercisable immediately upon the Company's notice of termination. Any portion of an option that has not vested on or prior to the termination date will expire immediately.

Stock Incentive Plan

The Company adopted the SIP following shareholder approval on June 10, 2015 pursuant to which the Board may grant stock-based awards comprised of restricted stock units (the "**Restricted Stock Units**") or dividend equivalents (the "**Dividend Equivalents"** and collectively with the Restricted Stock Units, the **"Awards**") to employees, officers, consultants, independent contractors, advisors and non-employee directors of the Company or any affiliate (the "**SIP Participants**").

The maximum total number of shares available for issuance under the SIP and any other security based compensation arrangement of the Company (including the Share Option Plan) is 17.5% of the number of issued and outstanding shares. Any issuance of shares covered by an award or to which an award relates will make new grants available under the SIP. Since the adoption of the SIP, no awards have been granted.

Under the SIP, the Board may also grant Dividend Equivalents to SIP Participants under which the Participant shall be entitled to receive payments (in cash, Shares, other securities, other Awards or other property as determined in the discretion of the Committee) equivalent to the amount of cash dividends paid by the company to holders of Shares with respect to a number of shares determined by the Board.

The SIP does not limit insider participation and does not provide a maximum number of Shares which may be issued to an individual under the SIP. However, no director of the company who is not also an employee of the company or an affiliate may be granted any awards that exceed in the aggregate $150,000 (such value computed as of the date of grant in accordance with applicable financial accounting principles) in any calendar year.

Subject to the express provisions of the SIP and to applicable law, the Board shall have full power and authority to: (i) designate SIP Participants; (ii) determine the type of Awards to be granted to each SIP Participant under the SIP and the number of Shares to be covered by each Award; (iii) determine the terms and conditions of any Award or Award Agreement, including any terms relating to the forfeiture of any Award and the forfeiture, recapture or disgorgement of any cash, Shares or other amounts payable with respect to any Award; (iv) amend the terms and conditions of any Award or Award Agreement, subject to the limitations under Section 7 of the SIP; and (v) accelerate the exercisability of any Award or the lapse of any restrictions relating to any Award, subject to the limitations in Section 7 of the SIP.

The Board may from time to time amend, suspend or terminate the SIP, and the Board may amend or alter any previously granted Award, as applicable, without obtaining the approval of Shareholders in order to: (i) correct any defect, supply any omission or reconcile any inconsistency in the SIP or in any Award or award agreement in the manner and to the extent it shall deem desirable to implement or maintain the effectiveness of the SIP; (ii) amend the eligibility for, and limitations or conditions imposed upon, participation in the SIP; (iii) make changes that are necessary or desirable to comply with applicable laws, rules, regulations and policies of any applicable governmental entity or stock exchange; (iv) amend any terms relating to the administration of the SIP, including the terms of any administrative guidelines or other rules related to the SIP; or (v) make any other amendment, whether fundamental or otherwise, not requiring Shareholders' approval under TSX Company Manual, the rules or regulations of the United States SEC or any other securities exchange that are applicable to the Company.

Prior approval of the shareholders shall be required for any amendment to the Plan or an Award that would: (i) require shareholder approval under the TSX Company Manual, the rules or regulations of the SEC or any other securities exchange that are applicable to the Company; (ii) increase the maximum number of shares authorized under the SIP; (iii) increase the annual limit on Awards granted to non-employee directors; or (iv) amend the amendment provision of the SIP.

Deferred Share Units Plan

The Company had a Deferred Share Unit Plan ("**DSU Plan**") which was terminated on June 10, 2015.

During the period from January 1, 2015 to June 10, 2015, nil deferred share units were outstanding under the DSU Plan. No units have been outstanding under the DSU Plan since April 2014.

Employee Share Purchase Plan

We have an Employee Share Purchase Plan ("**ESPP**"), the purpose of which is to assist the Company in retaining the services of its employees, securing and retaining the services of new employees and providing incentives for such persons to exert maximum efforts for the success of the Company. The ESPP provides a means by which employees of the Company and its affiliates may purchase Common Shares on the stock market at a 15% discount through accumulated payroll deductions. Eligible participants in the ESPP include all employees, including executive officers, who work at least 20 hours per week and are customarily employed by the Company or an affiliate of the Company for at least six months per calendar year. Generally, each offering is of three months' duration with purchases occurring every quarter. Participants may authorize payroll deductions of up to 15% of their base compensation for the purchase of Common Shares under the ESPP.

During the year ended December 31, 2016, under the ESPP, Named Executive Officers, as a group, and employees did not purchase any Common Shares pursuant to the ESPP. Since December 31, 2016, there have been no Common Shares purchased pursuant to the ESPP.

Option Grants During The Year Ended December 31, 2016

The following tables set forth the options granted to and exercised by each of the Named Executive Officers during the year ended December 31, 2016:

Option/SAR Grants During the Most Recently Completed Financial Year

Name and Principal Position	Securities Under Options/SARs Granted (#)	% of Total Options/SARs Granted to Employees in Financial Year (%)	Exercise or Base Price ($/Security)	Market Value of Securities Underlying Options/SARs on the Date of Grant ($/Security)	Expiration Date
Dr. William G. Rice Chairman, President and Chief Executive Officer	60,000	15.7%	$ 3.82	$ 3.82	March 31, 2026
Mr. Gregory K. Chow Senior Vice President and Chief Financial Officer	60,000	15.7%	$ 3.82	$ 3.82	March 31, 2026
Mr. Avanish Vellanki Senior Vice President and Chief Business Officer	60,000	15.7%	$ 3.82	$ 3.82	March 31, 2026

Incentive Compensation Plans

Outstanding Share-Based Awards and Option-Based Awards

The following table shows all awards outstanding to each Named Executive Officer as at December 31, 2016:

	Option-based Awards				Share-based Awards		
Name and Principal Position	Number of securities underlying unexercised options (#)	Option exercise price ($)	Option expiration date	Value of unexercised in-the-money options ($) (1)	Number of shares or units of shares that have not vested (#)	Market or payout value of share-based awards that have not vested ($)	Market or payout value of vested share-based awards not paid out or distributed ($)
Dr. William G. Rice Chairman, President and Chief Executive Officer	35,417	3.48	Oct 27, 2023	Nil	Nil	Nil	Nil
	65,136	7.32	Dec 10, 2023	Nil			
	5,281	6.96	Jan 29, 2024	Nil			
	140,000	6.00	Apr 10, 2024	Nil			
	396,129	5.70	June 16, 2024	Nil			
	120,000	6.96	June 9, 2025	Nil			
	60,000	3.82	March 31, 2026	Nil			
Mr. Gregory K. Chow Senior Vice President and Chief Financial Officer	35,417	9.36	Nov 4, 2023	Nil	Nil	Nil	Nil
	35,417	7.32	Dec 10, 2023	Nil			
	35,417	6.00	Apr 10, 2024	Nil			
	22,083	5.70	June 16, 2024	Nil			
	64,167	5.22	July 18, 2024	Nil			
	60,000	6.96	June 9, 2025	Nil			
	60,000	3.82	March 31,2026	Nil			
Mr. Avanish Vellanki Senior Vice President and Chief Business Officer	35,417	9.36	Nov 4, 2023	Nil	Nil	Nil	Nil
	35,417	7.32	Dec 10, 2023	Nil			
	35,417	6.00	Apr 10, 2024	Nil			
	22,083	5.70	June 16, 2024	Nil			
	64,167	5.22	July 18, 2024	Nil			
	60,000	6.96	June 9, 2025	Nil			
	60,000	3.82	March 31, 2026	Nil			

(1) These amounts are calculated based on the difference between the market value of the securities underlying the options on December 31, 2016 at the end of the fiscal year ($1.91), and the exercise price of the options.

Aggregated Option/SAR Exercises During the Year Ended December 31, 2016 and Financial Year-End Option/SAR Values

Name	Securities Acquired on Exercise (#)	Aggregate Value Realized ($)	Unexercised Options/SARs at December 31, 2016 (#) Exercisable/Unexercisable	Value of Unexercised in-the-Money Options/SARs at December 31, 2016 ($) Exercisable/Unexercisable
Dr. William G. Rice Chairman, President and Chief Executive Officer	nil	nil	567,931/254,032	0/0
Mr. Gregory K. Chow Senior Vice President and Chief Financial Officer	nil	nil	199,954/112,547	0/0
Mr. Avanish Vellanki Senior Vice President and Chief Business Officer	nil	nil	199,954/122,547	0/0

C. ***Board practices.***

Aptose is authorized to have a board of at least one director and no more than ten. Aptose currently has six directors. Directors are elected for a term of approximately one year, from annual meeting to annual meeting, or until an earlier resignation, death or removal. For the dates our current directors assumed their directorships, see Item 6.A. – "Directors and Senior Management" above.

Each officer serves at the discretion of the Board or until an earlier resignation or death. There are no family relationships among any of our directors or officers.

Our non-management directors have no service contracts with us or our subsidiaries that provide for benefits upon termination of employment. See "—Management Contracts" above for a summary of key employment agreements.

Committees of the Board of Directors

The Company has an Audit Committee, a Corporate Governance and Nominating Committee and a Compensation Committee.

The members of these committees during the year ended December 31, 2016, were as follows:

Audit Committee	Denis Burger, Bradley Thompson, Warren Whitehead
Corporate Governance and Nominating Committee:	Bradley Thompson, Mark Vincent
Compensation Committee:	Denis Burger, Erich Platzer, Bradley Thompson

On January 16, 2015, Bradley Thompson was appointed to the Audit Committee and Erich Platzer was appointed to the Compensation Committee.

Compensation Committee

Composition of the Compensation Committee

The Board, upon the advice of the Compensation Committee, determines executive compensation. The Compensation Committee is currently comprised of independent Board members Dr. Burger, Dr. Platzer and Dr. Thompson. Dr. Burger is chair of the Compensation Committee. The Compensation Committee met 4 times during the period from January 1, 2016, until December 31, 2016.

Members of the Compensation Committee each have direct experience relevant to compensation matters resulting from their respective current and past activities. The members of the Compensation Committee have experience dealing with compensation matters in comparable organizations, including public companies, as well as companies with a strong emphasis on governance in their current and former roles as principal executives.

Compensation Objectives and Philosophy

The Compensation Committee's mandate is to review and advise the Board on the recruitment, appointment, performance, compensation, benefits and termination of executive officers. The Compensation Committee also administers and reviews procedures and policies with respect to the Share Option Plan, the SIP, employee benefit programs, pay equity and employment equity and reviews executive compensation disclosure where it is publicly disclosed.

Aptose's executive compensation program is designed to:

- attract and retain qualified, motivated and achievement-oriented individuals by offering compensation that is competitive in the industry and marketplace;
- align executive interests with the interests of shareholders; and
- ensure that individuals continue to be compensated in accordance with their personal performance and responsibilities and their contribution to the overall objectives of the Company.

These objectives are achieved by offering executives and employees a compensation package that is competitive and rewards the achievement of both short-term and long-term objectives of the Company. As such, our compensation package consists of three key elements:

- base salary and initial share options;
- short-term compensation incentives to reward corporate and personal performance through potential annual cash bonuses; and
- long-term compensation incentives related to long-term increase in share value through participation in the Share Option and SIPs.

The Compensation Committee reviews each of these items on a stand-alone basis and also reviews compensation as a total package. Adjustments to compensation are made as appropriate following a review of the compensation package as a whole.

Base Salary — Initial Share Options

In establishing base salaries, the objective of the Compensation Committee is to establish levels that will enable Aptose to attract and retain executive officers that can effectively contribute to the long-term success of the Company. Base salary for each executive officer is determined by the individual's skills, abilities, experience, past performance and anticipated future contribution to the success of Aptose. The members of the Compensation Committee use their knowledge of the industry and of industry trends as well as independent third party consultants to assist with the determination of an appropriate compensation package for each executive officer. In certain cases, the Compensation Committee may recommend inclusion of automobile allowances, fitness allowances and the payment of certain professional dues as a component of an overall remuneration package for executives.

In certain cases, executive officers may be granted share options on the commencement of employment with Aptose in accordance with the responsibility delegated to each executive officer for achieving corporate objectives and enhancing shareholder value in accordance with those objectives.

Short-Term Compensation Incentives

The role of short-term compensation incentives at Aptose is to motivate our executive officers to achieve specified performance objectives for 2016 and to reward them for their achievement in the event that those objectives are met. Each year, the Compensation Committee approves the annual corporate objectives encompassing scientific, clinical, regulatory, business and corporate development and financial criteria. The annual cash bonus for the executive officers is based, at least in part, on the level of achievement of these annual objectives, assuming these objectives are still relevant at the time of evaluation.

All corporate and executive officer objectives are reviewed by the Compensation Committee and approved by the Board. The Compensation Committee recommends to the Board the awarding of bonuses, payable in cash, stock or share options, to reward extraordinary individual performance.

For each executive officer, during the year ended December 31, 2016, the annual cash bonuses ranged from 20% to 25% of base salary.

Cash bonuses are determined as soon as practicable after the end of the fiscal year and, for the Named Executive Officers (as defined hereinafter), are included in the Summary Compensation Table in the year in respect of which they are earned.

Long-Term Incentive Plan

The role of long-term compensation incentives at Aptose is to reward an executive's contribution to the attainment of Aptose's long-term objectives, align an executive's performance with the long-term performance of Aptose and to provide an additional incentive for an executive to enhance shareholder value. Long-term incentive compensation for directors, officers, employees and consultants is reviewed annually and is accomplished through the grant of share options under our Share Option Plan or SIP.

The number of options granted for certain executives of Aptose for the year ended December 31, 2016, was based on achievement of both corporate and executive officer objectives. The Compensation Committee approves the allocation of options and options are priced using the closing market price of the Common Shares on the TSX on the last trading day prior to the date of grant. Options to purchase Common Shares expire ten years from the date of grant and vest over a term determined by the Compensation Committee. The Compensation Committee takes into account previous grants of options when considering new grant of options.

The granting of options to Named Executive Officers is included in the Summary Compensation Table in the year in which they are earned.

Performance Metrics

The performance of the Named Executive Officers for the period ended December 31, 2016 was measured with respect to the following objectives:

1) Identification of new drug product formulation for APTO-25, submission of the Root Cause analysis for APTO-253 to the FDA, and return of APTO-253 to the clinic.

2) Expand pipeline with highly differentiated small molecule agent for hematologic malignancies

3) Analyze corporate structure, implement financing alternatives and consider Board composition

4) Other R&D goals related to pipeline assets

Each of the above objectives is weighted at 40%, 30%, 20% and 10% respectively in relation to assessment of satisfaction of overall corporate objectives and determination of any general corporate bonuses.

Hedge or Offset Instruments

Named Executive Officers or directors are not permitted to purchase financial instruments that are designed to hedge or offset a decrease in market value of equity securities granted as compensation or held, directly or indirectly, by Named Executive Officers or directors, including, for greater certainty, prepaid variable forward contracts, equity swaps, collars, or units of exchange funds.

Risk Assessment of Compensation

The implications of the risks associated with the Company's compensation practices were not considered by the Board or a committee of the Board.

Audit Committee

The charter of our Audit Committee is attached as Exhibit 11.2. The current members of the Audit Committee are Bradley Thompson, Denis Burger and Warren Whitehead. Mr. Warren Whitehead is the Chairman of the Audit Committee and has been considered to be the Financial Expert. Pursuant to Canadian securities laws, the Board has determined that Messrs. Thompson, Burger and Whitehead are financially literate as all have experience in reviewing and analyzing the financial reports and ascertaining the financial position of a corporation. Mr. Burger, in his previous position as Chairman and Chief Executive Officer of AVI Biopharma, is educated and experienced in reading and analyzing financial statements. Mr. Burger has also served on the audit committee of three other publicly listed biotechnology companies. Dr. Thompson has experience reading and interpreting financial statements through his former role as Chairman and CEO of a publicly listed biotechnology company as well as through his extensive experience serving on various company boards. Mr. Whitehead is a CPA (CMA) and has served as the Chief Financial Officer of Arius Research Inc. and Labopharm Inc. Additionally, we believe Mr. Thompson, Mr. Whitehead and Mr. Burger qualify as "independent" as that term is defined in the relevant securities laws relating to the composition of the audit committee.

Audit Committee Mandate

The Audit Committee's mandate is to assist the Board in fulfilling its oversight responsibilities. In particular, the Audit Committee:

(a) serves as an independent and objective party to monitor the integrity of our financial reporting process and systems of internal controls regarding finance, accounting, and legal compliance, including the review of our consolidated financial statements, MD&A and annual and interim results;

(b) identifies and monitors the management of the principal risks that could impact our financial reporting;

(c) monitors the independence and performance of our independent auditors, including the pre-approval of all audit fees and all permitted non-audit services;

(d) provides an avenue of communication among the independent auditors, management, and the Board and

(e) encourages continuous improvement of, and foster adherence to, our policies, procedures and practices at all levels.

The Audit Committee is also responsible for implementing and overseeing our whistle-blowing procedures.

D. ***Employees*****.**

As at December 31, 2016, we employed 21 full-time persons and 2 part-time persons in research and drug development and administration activities. Subsequent to December 31, 2016, and as a result of the Company's reprioritization of its pipeline, we executed a reduction in workforce bringing the total to 14 full-time persons and 3 part-time research persons in research and drug development and administrative activities. Of our employees four hold Ph.D.'s and numerous others hold degrees and designations such as MSc, BSc, CPA (CA), CPA (California) and MBA. To encourage a focus on achieving long-term performance, employees and members of the Board have the ability to acquire an ownership interest in the Company through Aptose's share option and alternate compensation plans. See Item 6.B – Compensation.

Our ability to develop commercial products and to establish and maintain our competitive position in light of technological developments will depend, in part, on our ability to attract and retain qualified personnel. There is a significant level of competition in the marketplace for such personnel. We believe that to date we have been successful in attracting and retaining the highly skilled personnel critical to our business. We have also chosen to outsource activities where skills are in short supply or where it is economically prudent to do so.

None of our employees are unionized, and we consider our relations with our employees to be good.

E. ***Share ownership*****.**

The following table sets forth information regarding beneficial ownership of our Common Shares as of December 31, 2016 with respect to our Named Executive Officers and also with respect to our executive officers and directors individually and as a group.

				Options to Purchase Common Shares		
	Number of Common Shares	**Total Number of Common Shares Beneficially Owned**	**Percentage of Common Shares Outstanding(+)**	**Number of Underlying Common Shares (#)**	**Exercise Price (Range) ($)**	**Expiry Date (Range-Year)**
Dr. William Rice	12,000	12,000	0.1%	821,963	$3.48-7.32	2023-2026
Mr. Gregory Chow	15,000	15,000	0.1%	312,501	$5.28-9.36	2023-2026
Mr. Avanish Vellanki	4,200	4,200	0.0%	312,501	$5.28-9.36	2023-2026
Dr. Denis Burger	13,499	13,499	0.1%	45,334	$2.16-6.77	2021-2026
Dr. Bradley Thompson	-	-	-	35,750	$6.00-6.77	2024-2026
Dr. Erich Platzer	8,500	8,500	0.1%	20,000	$3.82-6.77	2025-2026
Dr. Mark Vincent	1,500	1,500	0.0%	39,083	$2.16-6.77	2021-2026
Mr. Warren Whitehead	3,000	3,000	0.1%	37,500	$2.16-6.77	2021-2026
All directors and executive officers as a group	57,699	57,699	0.5%	1,624,632	$2.16-9.36	2021-2026

(+) calculated on a partially diluted basis excluding options.

See Item 6.B for a description of arrangements pursuant to which employees may become involved in the capital of Aptose.

Item 7. Major Shareholders and Related Party Transactions

A. ***Major shareholders.***

To the knowledge of our directors and officers, as of the date hereof, no person or company beneficially owns, directly or indirectly, or exercises control or direction over, 5% or more of the outstanding Common Shares, other than those discussed below.

As at February 28, 2017, approximately 67% of our ordinary Common Shares are held in Canada, and there are 286 record holders of our Common Shares in Canada and 84 record holders in the United States. All of our shareholders have equal voting rights.

The following table is based upon information supplied by officers, directors and principal Stockholders and Schedules 13D and 13G filed with the SEC.

Name of Beneficial Owner(s)	Amount and Nature of Beneficial Ownership	Percent of Class [1]
Franklin Resources Inc.	1,323,251[2]	8.4%
Cormorant Global Healthcare Master Fund LP	990,579[3]	6.3%
Herbert Abramson	1,450,388[4]	9.2%

(1) Based on 15,721,388 Common Shares outstanding as of December 31, 2016.

(2) This information is based solely on a Schedule 13G filed with the SEC on February 9, 2017.

(3) This information is based solely on a Schedule 13G filed with the SEC on February 14, 2017.

(4) This information is based solely on a Schedule 13G filed with the SEC on January 17, 2017

B. ***Related party transactions.***

In March 2015, the Company entered into an agreement with the Moores Cancer Center at the University of California San Diego (UCSD) to provide pharmacology lab services to the Company. Dr. Stephen Howell is the Acting Chief Medical Officer of Aptose and is also a Professor of Medicine at UCSD and will be overseeing the laboratory work. The research services will be provided from April 1, 2015 to March 31, 2017 and will be billed monthly for services rendered. The total amount for services provided under the agreement is not to exceed US$200 thousand.

There were no related party transactions in the seven month transition period ended December 31, 2014.

Certain related parties participated in the June 2013 private placement described above. Directors and officers, including former president and chief operating officer Dr. Aiping Young, former director Dr. Jim Wright and current director Dr. Mark Vincent, acquired an aggregate of $68,000 of the promissory notes. A company related to Mr. Hebert Abramson, a former director of the Company, acquired $250,000 of the promissory notes and Mr. Inwentash and his joint actors (“Mr. Inwentash”), a former related party of the Company by virtue of having exercised control or direction over more than 10% of the issued and outstanding Common Shares of the Company, acquired $100,000 of the promissory notes. These promissory notes were repaid by the Company in April 2014.

Executive Contracts

On October 25, 2013, the Company entered into an executive employment agreement with William G. Rice, Ph.D., in connection with his appointment as Chief Executive Officer and Chairman of the Board of the Company. On August 19, 2014, the Company entered into an amended executive employment agreement with William G. Rice, Ph.D.

On November 29, 2013, the Company entered into an executive employment agreement with each of Gregory K. Chow and Avanish Vellanki in connection with their appointments as Chief Financial Officer and Chief Business Officer, respectively, of the Company.

The employment agreements for each of Dr. Rice, Mr. Chow and Mr. Vellanki provide that if they are terminated by the Company other than for cause, each of Dr. Rice, Mr. Chow and Mr. Vellanki would be entitled under their respective agreements to a payment equivalent to 12 months of their respective annual base salaries at the time of termination. Dr. Rice's current annual base salary represents U.S. $524,064, Mr. Chow's current annual base salary represents U.S. $334,200, and Mr. Vellanki's current annual base salary represents U.S. $334,200. They are each additionally entitled to an amount equal to the average bonus remuneration received from the Company during the last three years of employment completed prior to the termination date, prorated based on the number of days the executive worked during the year of the termination. In addition, the employment agreements for each of Dr. Rice, Mr. Chow and Mr. Vellanki provide that certain payments related to health benefits continue to be made for a period of 12 months following termination of their employment.

The employment agreements of each of Dr. Rice, Mr. Chow and Mr. Vellanki also provide for the grant of options to purchase Common Shares of the Company, at an exercise price equal to the fair market value of the shares on the dates of grant. In connection with the execution of his executive employment agreement, Dr. Rice received an initial grant of a fully vested option to purchase 35,417 (425,000 pre-consolidation) Common Shares at an exercise price equal to the fair market value of the Common Shares on the date of grant. Pursuant to the terms of his executive employment agreement, upon satisfaction of the conditions in his agreement, Dr. Rice received additional grants of options to purchase 5,281 (63,367 pre-consolidation), 65,136 (781,633 pre-consolidation) and 140,000 (1,680,000 pre-consolidation) Common Shares on December 10, 2013, January 29, 2014 and April 10, 2014, respectively, at exercise prices equal to the fair market value of the Common Shares on the dates of grant. The options vest in accordance with the Company's standard three year vesting term, at a rate of 50% of the shares subject to the option vest on the one-year anniversary of the date of grant and 25% vest on each one-year anniversary thereafter.

In addition to the option grants to Mr. Chow and Mr. Vellanki described below, Mr. Chow and Mr. Vellanki each received two additional grants of options to purchase 35,417 (425,000 pre-consolidation) Common Shares pursuant to the terms of their respective executive employment agreements, on December 10, 2013 and April 10, 2014. Of the 35,417 (425,000 pre-consolidation) options granted on December 10, 2013 to Mr. Chow and Mr. Vellanki, 16,667 (200,000 pre-consolidation) vested immediately and the remaining 18,750 (225,000 pre-consolidation) options vest 50% after one year, 25% after two years and 25% after three years from the date of grant. The options granted in April 10, 2014 vest in equal monthly installments over 36 months from the date of grant.

The employment agreements of Dr. Rice, Mr. Chow and Mr. Vellanki also provide that, in the event of a change of control (as defined in the agreements), each of Mr. Chow and Mr. Vellanki would be eligible to receive a payment equivalent to 18 months of their respective annual base salaries at the time of termination, plus an amount equal to 150% of the average bonus remuneration received from the Company during the last three years of employment completed prior to the termination date, prorated based on the number of days the executive worked during the year of the termination, as well as continuation of the payments related to health benefits for a period of 12 months following the termination following a change of control.

Prior to the Company entering into the executive employment agreements with Mr. Chow and Mr. Vellanki, Aptose entered into a consulting agreement with each of Mr. Chow and Mr. Vellanki, on November 4, 2013. Pursuant to the consulting agreements, Mr. Chow provided services to the Company as acting Chief Financial Officer prior to the date of his executive employment agreement and Mr. Vellanki provided services as acting Chief Business Officer prior to the date of his executive employment agreement. Mr. Chow and Mr. Vellanki each were compensated at the monthly rate of $20,833 for their services and each were granted a fully vested option to purchase 35,417 (425,000 pre-consolidation) Common Shares at an exercise price equal to the fair market value of the shares on the date of grant.

C. ***Interests of experts and counsel.***

Not applicable.

Item 8. Financial Information

A. ***Consolidated statements and other financial information.***

See Item 18 for our consolidated financial statements and other financial information.

Dividends on our Common Shares are declared at the discretion of our board of directors. To date, we have not paid any dividends and do not expect to do so in the foreseeable future.

B. ***Significant changes.***

On March 31, 2016, 381,900 options were granted to Eligible Persons at an exercise price of CA$3.82.

Item 9. The Offer and Listing

Not applicable, except for Item 9.A.4. and Item 9.C.

A. ***Offer and listing details.***

Price Range of Common Stock and Trading Markets

Our Common Shares, without par value, are currently listed on the TSX under the symbol "APS" and NASDAQ under the symbol "APTO." The following table sets out the price ranges and trading volumes of our Common Shares on the TSX for the periods indicated below.

	TSX (CDN$ and adjusted for post-consolidation)		
Five most recent full fiscal years:	**High**	**Low**	**Volume**
Year ended December 31, 2016	5.13	1.12	8,103,000
Year ended December 31, 2015	8.73	3.06	4,909,034
Seven months ended December 31, 2014	9.14	4.80	4,856,934
Year ended May 31, 2014	12.48	2.04	6,125,433
Year ended May 31, 2013	7.68	2.28	614,114
Year ended December 31, 2016	5.13	1.12	8,103,000
Quarter ended December 31, 2016	4.02	1.12	4,657,000
Quarter ended September 30, 2016	3.65	2.51	1,121,100
Quarter ended June 30, 2016	5.13	2.80	1,150,200
Quarter ended March 31, 2016	4.21	2.74	1,439,800
Year ended December 31, 2015	8.73	3.06	4,909,034
Quarter ended December 31, 2015	8.33	3.06	1,843,402
Quarter ended September 30, 2015	7.50	5.66	1,142,997
Quarter ended June 30, 2015	8.32	6.40	905,688
Quarter ended March 31, 2015	8.73	5.00	1,016,947
7 months ended December 31, 2014	9.14	4.80	4,856,934
Three months ended December 31, 2014	9.14	5.20	1,715,174
Four months ended September 30, 2014	6.84	4.80	3,141,710

Most recent fourteen months:	High	Low	Volume
March 1, 2017 – March 27, 2017	1.82	1.46	710,300
February 2017	1.66	1.27	1,176,500
January 2017	1.93	1.23	3,213,100
December 2017	2.38	1.20	2,092,700
November 2017	1.55	1.12	985,900
October 2016	4.02	1.36	1,313,300
September 2016	3.00	2.51	265,100
August 2016	3.35	3.05	165,800
July 2016	3.65	3.01	266,700
June 2016	5.13	2.80	355,100
May 2016	3.73	3.05	165,800
April 2016	3.95	2.90	629,300
March 2016	4.16	2.74	746,900
February 2016	4.11	3.09	285,511
January 2016	4.21	2.74	404,851

The following table sets out the price ranges and trading volumes of our Common Shares on NASDAQ following the initial listing on October 23, 2014.

NASDAQ
(US$ and adjusted for post-consolidation)

	High	Low	Volume
Year ended December 31, 2016	**4.30**	**0.83**	27,830,070
Quarter ended December 31, 2016	3.20	0.83	21,991,462
Quarter ended September 30, 2016	2.82	1.92	2,084,043
Quarter ended June 30, 2016	4.30	2.12	2,933,991
Quarter ended March 31, 2016	3.41	1.93	820,574

	High	Low	Volume
Year ended December 31, 2015	6.81	2.17	6,375,129
Quarter ended December 31, 2015	6.40	2.17	2,282,712
Quarter ended September 30, 2015	5.72	4.09	944,753
Quarter ended June 30, 2015	6.63	5.01	1,266,220
Quarter ended March 31, 2015	6.81	4.01	1.881,444

Most recent six months	High	Low	Volume
February 2017	1.29	0.98	7,822,362
January 2017	2.07	0.91	9,878,125
December 2016	1.79	0.90	14,139,718
November 2016	1.15	0.83	3,863,770
October 2016	3.20	1.00	3,987,974
September 2016	2.27	1.92	642,101

Period	High	Low	Volume
October 23, 2014 to December 31, 2014	8.80	5.60	587,851

B. ***Plan of distribution.***

Not applicable.

C. ***Markets.***

See Item 9.A.

D. ***Selling shareholders.***

Not applicable.

E. ***Dilution.***

Not applicable.

F. ***Expense of the issue.***

Not applicable.

Item 10. Additional Information

A. ***Share capital.***

Not applicable.

B. ***Memorandum and articles of association.***

We are incorporated pursuant to the laws of Canada (Corporation Number: 6650309). Our articles of incorporation ("**Articles**") and by-laws provide no restrictions as to the nature of our business operations. Under Canadian law, a director must inform us, at a meeting of the Board, of any interest in a material contract or proposed material contract with us. Directors may not vote in respect of any such contracts made with us or in any such contract in which a director is interested, and such directors shall not be counted for purposes of determining a quorum. However, these provisions do not apply to (i) a contract relating primarily to their remuneration as a director, officer, employee or agent of the Company or affiliate, (ii) a contract for their indemnity or insurance as permitted under the *Canada Business Corporations Act*, or (iii) a contract with an affiliate.

We are authorized to issue an unlimited number of Common Shares. Our shareholders have no rights to share in our profits, are subject to no redemption or sinking fund provisions, have no liability for further capital calls and are not subject to any discrimination due to number of Common Shares owned. By not more than 50 days nor less than seven days in advance of a dividend, the Board may establish a record date for the determination of the persons entitled to such dividend.

The rights of holders of our Common Shares can be changed at any time in a shareholder meeting where the modifications are approved by 66 2/3% of the Common Shares represented by proxy or in person at a meeting at which a quorum exists.

All holders of our Common Shares are entitled to vote at annual or special meetings of shareholders, provided that they were shareholders as of the record date. The record date for shareholder meetings may precede the meeting date by no more than 50 days and not less than 21 days, provided that notice by way of advertisement is given to shareholders at least seven days before such record date. Notice of the time and place of meetings of shareholders may not be less than 21 nor greater than 50 days prior to the date of the meeting. There are no:

- limitations on share ownership;
- provisions of the Articles or by-laws that would have the effect of delaying, deferring or preventing a change of control of our company;
- by-law provisions that govern the ownership threshold above which shareholder ownership must be disclosed; and
- conditions imposed by the Articles or by-laws governing changes in capital, but Canadian corporate law requires any changes to the terms of share capital be approved by 66.66% of the Common Shares represented by proxy or in person at a shareholders' meeting convened for that purpose at which a quorum exists.

Common Shares

Each holder of record of Common Shares, without par value, is entitled to one vote for each share held on all matters properly submitted to the shareholders for their vote, except matters which are required to be voted on as a particular class or series of stock. Cumulative voting for directors is not permitted.

Holders of outstanding Common Shares are entitled to those dividends declared by the board of directors out of legally available funds. In the event of liquidation, dissolution or winding up our affairs, holders of Common Shares are entitled to receive, pro rata, our net assets available after provision has been made for the preferential rights of the holders of preferred stock, including any surplus available after such event of liquidation, dissolution or winding up of the affairs of the Company. Holders of outstanding Common Shares have no pre-emptive, conversion or redemption rights. All of the issued and outstanding Common Shares are, and all unissued Common Shares, when offered and sold will be, duly authorized, validly issued, fully paid and non-assessable. To the extent that additional Common Shares may be issued in the future, the relative interests of the then existing shareholders may be diluted. There were 15,721,388 Common Shares issued and outstanding at December 31, 2016.

Common Shares Eligible for Future Sale

Future sales of substantial amounts of our Common Shares in the public market or even the perception that such sales may occur, could adversely affect the market price for our Common Shares and could impair our future ability to raise capital through an offering of our equity securities.

As at March 28, 2017, the Company had 18,849,224 Common Shares issued and outstanding. In addition, as of March 28, 2017, there were 1,970,587 Common Shares issuable upon the exercise of outstanding options to purchase an equal number of Common Shares at a weighted average price per share of $5.79.

Indemnification of Executive Officers and Directors

We have agreed to indemnify our executive officers and directors for all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by them in respect of any civil, criminal or administrative action or proceeding to which they are made a party by reason of being or having been a director or officer, if (a) they acted honestly and in good faith with a view to our best interests, and (b) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, they had reasonable grounds for believing that their conduct was lawful.

C. ***Material contracts.***

Other than the agreements described below, we have not, in the two years preceding the date hereof, entered into any material agreements other than contracts in the ordinary course of business.

1. Executive Employment Agreement between the Company and Dr. William G. Rice, dated October 25, 2013 and the Amendment dated August 19, 2014.

2. Sales Agreement between the Company and Cowen and Company, LLC, dated April 2, 2015

3. License agreement with CrystalGenomics, Inc, dated June 1, 2016

Please refer to “Management Contracts” for further details on item 1 above.

D. ***Exchange controls.***

There is no law or governmental decree or regulation in Canada that restricts the export or import of capital, or affects the remittance of dividends, interest or other payments to non-resident holders of our voting Common Shares, other than withholding tax requirements.

There is no limitation imposed by Canadian law or by our Articles or our other charter documents on the right of a non-resident to hold or vote voting Common Shares, other than as provided by the *Investment Canada Act*, the *North American Free Trade Agreement Implementation Act* (Canada) and the *World Trade Organization Agreement Implementation Act*.

The *Investment Canada Act* requires notification and, in certain cases, advance review and approval by the government of Canada of the acquisition by a non-Canadian of control of a Canadian business, all as defined in the *Investment Canada Act.* Generally, the threshold for review will be higher in monetary terms for a member of the World Trade Organization or North American Free Trade Agreement.

E. ***Taxation.***

CERTAIN UNITED STATES FEDERAL INCOME TAX 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). 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. 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 our Common Shares, corporations that accumulate earnings to avoid U.S. federal income tax, partnerships and other pass-through entities, and investors in such pass-through entities). This discussion does not address any U.S. state or local or non-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 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, 2016 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, 2017 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 Internal Revenue Service (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, 2016 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 our non-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 the lower-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 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 advisers 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 controlled foreign corporations and QEF election 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 our 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 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.

CERTAIN CANADIAN FEDERAL INCOME TAX CONSIDERATIONS

The following is, as of the date hereof, a summary of the principal Canadian federal income tax considerations under the*Income Tax Act* (Canada) (the "**Tax Act**") generally applicable to a holder of Common Shares of the Company who, for purposes of the Tax Act and at all relevant times, is neither resident in Canada nor deemed to be resident in Canada for purposes of the Tax Act and any applicable income tax treaty or convention, and who does not use or hold (and is not deemed to use or hold) Common Shares in carrying on a business in Canada, deals at arm's length with and is not affiliated with the Company and holds Common Shares as capital property (a "**Holder**"). Generally, Common Shares will be considered to be capital property to a Holder thereof provided that the Holder does not hold Common Shares in the course of carrying on a business of buying and selling securities and such Holder has not acquired them in one or more transactions considered to be an adventure or concern in the nature of trade.

This summary does not apply to a Holder (i) that is a "financial institution" for purposes of the mark-to-market rules contained in the Tax Act; (ii) that is a "specified financial institution" as defined in the Tax Act; (iii) an interest in which is a "tax shelter investment" as defined in the Tax Act; or (iv) that has elected to report its tax results in a functional currency other than Canadian currency. Special rules, which are not discussed in this summary, may apply to a Holder that is an "authorized foreign bank" within the meaning of the Tax Act or an insurer carrying on business in Canada and elsewhere. Such Holders should consult their own tax advisors.

This summary is based upon the provisions of the Tax Act (including the regulations ("**Regulations**") thereunder) in force as of the date hereof and our understanding of the current 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. This summary does not otherwise take into account any changes in law or in the administrative policies or assessing practices of the CRA, whether by legislative, governmental or judicial decision or action. This summary is not exhaustive of all possible Canadian federal income tax considerations, and does not take into account other federal or any provincial, territorial or foreign income tax legislation or considerations, which may differ materially from those described in this summary.

This summary is of a general nature only and is not, and is not intended to be, and should not be construed to be, legal or tax advice to any particular Holder, and no representations concerning the tax consequences to any particular Holder are made. **Holders should consult their own tax advisors regarding the income tax considerations applicable to them having regard to their particular circumstances.**

Dividends

Dividends paid or credited (or deemed to be paid or credited) to a Holder by the Company are subject to Canadian withholding tax at the rate of 25% unless reduced by the terms of an applicable tax treaty. For example, under the Canada-United States Income Tax Convention (1980) (the "**US Treaty**"), as amended, the dividend withholding tax rate is generally reduced to 15% in respect of a dividend paid or credited to a Holder beneficially entitled to the dividend who is resident in the U.S. for purposes of the US Treaty and whose entitlement to the benefits of the US Treaty is not limited by the limitation of benefits provisions of the US Treaty. Holders are urged to consult their own tax advisors to determine their entitlement to relief under the US Treaty or any other applicable tax treaty as well as their ability to claim foreign tax credits with respect to any Canadian withholding tax, based on their particular circumstances.

Disposition of Common Shares

A 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 or is deemed to constitute "taxable Canadian property" to the Holder thereof for purposes of the Tax Act, and the gain is not exempt from tax pursuant to the terms of an applicable tax treaty or convention.

In general, provided the Common Shares are listed on a "designated stock exchange" (which currently includes the TSX) at the date of the disposition, the Common Shares will only constitute "taxable Canadian property" of a Holder if, at any time within the 60-month period preceding the disposition: (i) such Holder, persons with whom the Holder did not deal at arm's length, partnerships in which the Holder or a person with whom the Holder did not deal at arm's length holds a membership interest directly or indirectly through one or more partnerships, or any combination thereof, owned 25% or more of the issued shares of any class or series of the Company's capital stock, and (ii) more than 50% of the fair market value of the Common Shares was derived directly or indirectly from one or any combination of (A) real or immovable property situated in Canada, (B) Canadian resource properties, (C) timber resource properties, and (D) options in respect of, or interests in, or for civil law rights in, property described in any of subparagraphs (ii)(A) to (C), whether or not the property exists. However, and despite the foregoing, in certain circumstances the Common Shares may be deemed to be "taxable Canadian property" under the Tax Act.

Holders whose Common Shares may be "taxable Canadian property" should consult their own tax advisers.

F. ***Dividends and paying agents.***

The transfer agent and registrar for our common shares is Computershare Investor Services Inc. at its principal office in the City of Toronto.

G. ***Statement by experts.***

Not applicable.

H. ***Documents on display.***

We are subject to the information and reporting requirements of the Exchange Act, and file periodic reports and other information with the SEC. However, as a foreign private issuer, we are exempt from the rules and regulations under the Exchange Act prescribing the furnishing and content of proxy statements, and our officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act. Our reports and other information filed with the SEC may be inspected at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. Copies of these materials may be obtained at prescribed rates from the SEC at that address. Our reports and other information can also be inspected at no charge on the SEC's website at www.sec.gov.

We are also subject to the information and reporting requirements of the *Securities Act* (Ontario) and the *Canada Business Corporations Act*. Additional information, including directors' and officers' remuneration and indebtedness, principal holders of our securities, options and to purchase securities and interests of insiders in material transactions, if any, is contained in the management proxy circular of the Company. Such additional information can be inspected at no charge on the website www.sedar.com.

If you are a shareholder, you may request a copy of these filings at no cost by contacting us at:

Director of Finance
Aptose Biosciences Inc.
5955 Airport Road, Suite #228
Mississauga, Ontario L4V 1R9
Canada
Phone (647) 479-9828
Fax (905) 234-2120

I. ***Subsidiary information.***

Aptose has three subsidiaries: NuChem, a company incorporated under the laws of Ontario, Canada, Aptose USA, a company incorporated under the laws of Delaware, USA and Aptose Suisse GmbH a company incorporated under the laws of Zug, Switzerland. Aptose owns 80% of the issued and outstanding voting share capital of NuChem and 100% of the issued and outstanding voting share capital of Aptose USA and Aptose Suisse.

Item 11. Qualitative and Quantitative Disclosures About Market Risk

Refer to notes 4 and 8 to the consolidated financial statements contained in Item 18.

We are exposed to significant market risks as outlined below.

We do not utilize derivative financial instruments to hedge our interest rate or foreign currency rate risks.

Interest Rate Risk

The Company invests its cash resources in liquid government and corporate debt instruments. We do not believe that the results of operations or cash flows would be affected to any significant degree by a sudden change in market interest rates relative to interest rates on our investments, owing to the relative short-term nature of the investments.

Credit Risk

Financial instruments potentially exposing the Company to a concentration of credit risk consist principally of cash and cash equivalents and marketable securities. The Company manages this credit risk by maintaining bank accounts with Schedule I banks and investing only in highly rated Canadian securities that are traded on active markets and are capable of prompt liquidation.

Exchange Rate Sensitivity

The functional currency of the Company is the Canadian dollar. We are exposed to currency risk from employee costs as well as the purchase of goods and services primarily in the United States and on cash balances held in foreign currencies. Fluctuations in the US dollar exchange rate could have a significant impact on our results. Assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the US dollar would result in an increase or decrease in loss for the year and comprehensive loss of $638 thousand (December 31, 2015 - $576 thousand, December 31, 2014- $50 thousand). Balances in foreign currencies are as follows:

	US$ Balances		
(in thousands)	December 31, 2016	December 31, 2015	December 31, 2014
Cash and cash equivalents	$ 5,798	$ 5,000	$ 66
Accounts payable and accrued liabilities	(1,044)	(838)	(565)
Balance, end of period	$ 4,754	$ 4,162	$ (499)

We do not have any forward exchange contracts to hedge this risk.

Limitations

The above discussion includes only those exposures that exist as of December 31, 2016, and as a result, does not consider exposures or positions that could arise after that date. The Company's ultimate realized gain or loss with respect to interest rate and exchange rate fluctuations would depend on the exposures that arise during the period.

Risk Factors

See Item 3.D.

Item 12. Description of Securities Other Than Equity Securities

Not applicable.

PART II

Item 13. Defaults, Dividends Arrearages and Delinquencies

Not applicable.

Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds

Not applicable.

Item 15. Controls and Procedures

(a) Disclosure controls and procedures.

As of the end of the year ended December 31, 2016, an evaluation of the effectiveness of our "disclosure controls and procedures" (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), was carried out by our management under the supervision of and with the participation of the principal executive officer and principal financial officer. Based upon on that evaluation, our principal executive officer and principal financial officer have concluded that as of the end of that period, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in SEC rules and forms and (ii) accumulated and communicated to our management, including our principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure.

It should be noted that while our principal executive officer and principal financial officer believe that our disclosure controls and procedures are effective and provide a reasonable level of assurance, they do not expect that the disclosure controls and procedures or internal control over financial reporting will prevent all errors and fraud. A control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

(b) Management's annual report on internal control over financial reporting.

Management is responsible for establishing and maintaining adequate internal control over our financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). Our internal control system was designed to provide reasonable assurance that all transactions are accurately recorded, that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with IFRS as issued by the IASB, and that our assets are safeguarded.

Management has assessed the effectiveness of our internal control over financial reporting as at December 31, 2016. In management's opinion, our internal control over financial reporting is effective as at December 31, 2016. In making its assessment, management used the Committee of Sponsoring Organizations of the Treadway Commission framework in Internal Control – Integrated Framework of 2003 to evaluate the effectiveness of our internal control over financial reporting.

The design of any system of controls and procedures is based in part upon certain assumptions about the likelihood of future events. There can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions, regardless of how remote.

(c) Attestation report of the independent registered public accounting firm

Because we are a non-accelerated filer and an "emerging growth company" under the rules of the SEC, this Annual Report is not required to include, and does not include, an attestation report of our independent registered public accounting firm with respect to our internal control over financial reporting.

(d) Changes in internal control over financial reporting.

There has been no change in our internal control over financial reporting during the period covered by this Annual Report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 16. [Reserved]

Item 16A. Audit Committee Financial Expert

Our board of directors has determined that Mr. Warren Whitehead, a director of the Company and the chairman of the Audit Committee, possesses the attributes required of an "audit committee financial expert," and is "independent," within the meaning of applicable NASDAQ rules.

Item 16B. Code of Ethics

We have adopted a code of ethics, as such term is defined in Form 20-F, which applies to all of our officers, directors, employees and consultants. A copy of the code of ethics is available on our website at www.aptose.com or, without charge, upon written request from our Vice President of Finance at our offices located at 5955 Airport Road, Suite #228, Mississauga, Ontario L4V 1R9, Canada. There were no waivers granted under our code of ethics during the twelve months ended December 31, 2016.

Item 16C. Principal Accountant Fees and Services

KPMG LLP has served as our principal independent external auditor since October 1994. The total fees billed to us for professional services provided by KPMG LLP for the twelve months ended December 31, 2016 and 2015 are as follows:

	Twelve Months Ended December 31, 2016	Twelve Months Ended December 31, 2015
Audit Fees	$ 337,200	$ 274,800
Audit-Related Fees	$ -	$ -
Tax Fees	$ 62,150	$ 180,789
All Other Fees	$ -	$ -
Total	$ 399,310	$ 455,589

Audit fees consist of the fees paid with respect to the audit of our consolidated annual financial statements, quarterly reviews and 20-F filing with the SEC and for any other professional services that are normally provided by KPMG LLP in connection with statutory and regulatory filings or engagements. Tax fees related to tax planning advice provided with respect to intellectual property and US operations.

Pre-Approval Policies and Procedures

The Audit Committee of our board of directors has, pursuant to the Audit Committee charter, adopted specific responsibilities and duties regarding the provision of services by our external auditor, currently KPMG LLP. KPMG LLP is independent of the Company in accordance with the Rules of Professional Conduct of the Institute of Chartered Professional Accountants of Ontario.

Our charter requires Audit Committee pre-approval of all permitted audit, audit-related and tax services.

Subject to the charter, the Audit Committee may establish fee thresholds for a group of pre-approved services. The Audit Committee then recommends to the board of directors approval of the fees and other significant compensation to be paid to the independent auditors.

No services were provided by KPMG LLP under a *de minimus* exemption for the year ended December 31, 2016.

Item 16D. Exemptions from the Listing Standards for Audit Committees

Not applicable.

Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Not applicable.

Item 16F. Change in Registrant's Certifying Accountant

Not applicable.

Item 16G. Corporate Governance

On October 23, 2014, we listed our Common Shares for trading on NASDAQ. Section 5615(a)(3) of the NASDAQ Marketplace Rules permits NASDAQ to grant exemptions to a foreign private issuer for the provisions of the Rule 5600 series and Rule 5250 (d). We are organized under the laws of Canada and our Common Shares are listed for trading on the TSX. We comply with the laws of Canada and rules and regulations of the TSX, including rules related to corporate governance practices. A description of the significant ways in which our governance practices differ from those followed by domestic companies pursuant to the NASDAQ Marketplace Rules is as follows:

Shareholder Meeting Quorum Requirement: The NASDAQ minimum quorum requirement for a shareholder meeting under Section 5620(c) of the NASDAQ Marketplace Rules is one-third of the outstanding shares of common stock. In addition, a company listed on NASDAQ is required to state a quorum requirement in its bylaws. Our quorum requirement is set forth in our corporate bylaws. A quorum for our shareholder meeting is not less than 25% of the outstanding shares of the Company entitled to be voted at such meeting present or by means of a telephonic, electronic or other communication facility that permits all participants to communicate adequately with each other during the meeting and each entitled to vote at the meeting.

Compensation Committee Mandate: NASDAQ will require compliance with the revised Rule 5605(d) for all companies following the company's first annual meeting occurring after January 15, 2014, or October 31, 2014, whichever is earlier. In our case this was following our August 19, 2014 annual general and special meeting. The changes to the rule include requiring the mandate of the Compensation Committee to include accountability to external advisors. The Compensation Committee Mandate does not currently include such requirements.

The foregoing is consistent with the laws, customs and practices in Canada and the rules of the TSX.

Item 16H. Mine Safety Disclosure

Not applicable.

PART III

Item 17. Financial Statements

We have responded to Item 18 in lieu of responding to this Item.

Item 18. Financial Statements

The consolidated financial statements of Aptose Biosciences Inc. are attached as follows:

Item 19. Exhibits.

See the Exhibit Index hereto.

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this Annual Report on its behalf.

APTOSE BIOSCIENCES INC.

By: */s/ William G. Rice*
Name: William G. Rice, PhD
Title: Chairman and Chief Executive Officer

Date: March 29, 2017

By: */s/ Gregory K. Chow*
Name: Gregory K. Chow
Title: Chief Financial Officer

Date: March 29, 2017

EXHIBIT INDEX

Exhibit Number	Description
1.1	Articles of Incorporation, Arrangement and Amendment (incorporated herein by reference to Exhibit 99.3 to the Registrant's Current Report on Form 6-K filed with the SEC on June 12, 2015)
1.2	By-law #2 of the Company (incorporated herein by reference to Exhibit 99.2 to the Registrant's Current Report on Form 6-K filed with the SEC on June 12, 2015)
2.1	Indemnification Agreement dated July 10, 2007 between Old Lorus and the Company (incorporated herein by reference to Exhibit 99.10 to the Registrant's Current Report on Form 6-K filed with the SEC on September 4, 2007)
2.2	Form of Promissory note and Warrant issued June 19, 2013 (incorporated herein by reference to Exhibit 2.25 to the Registrant's Annual Report on Form 20-F filed with the SEC on May 16, 2014)
2.3	Form of Convertible Promissory note issued September 26, 2013 (incorporated herein by reference to Exhibit 2.26 to the Registrant's Annual Report on Form 20-F filed with the SEC on May 16, 2014)
2.4	Underwriting Agreement dated November 22, 2013 in connection with the December 2013 public offering (incorporated herein by reference to Exhibit 2.27 to the Registrant's Annual Report on Form 20-F filed with the SEC on May 16, 2014)
2.5	Underwriting Agreement dated March 27, 2014 in connection with the April 2014 public offering (incorporated herein by reference to Exhibit 2.28 to the Registrant's Annual Report on Form 20-F filed with the SEC on May 16, 2014)
4.1	Share Option Plan as amended May 5, 2015 (incorporated herein by reference to Exhibit 99.2 to the Registrant's Current Report on Form 6-K filed with the SEC on June 12, 2015)
4.2	Stock Incentive Plan as adopted May 5, 2015 (incorporated herein by reference to Exhibit 99.1 to the Registrant's Current Report on Form 6-K filed with the SEC on June 12, 2015)
4.2	Form of Officer and Director Indemnity Agreement (incorporated herein by reference to Exhibit 4.2 to the Registrant's Annual Report on Form 20-F filed with the SEC on November 21, 2006)
4.3	Amalgamation Agreement dated August 23, 1991, among the Company, Mint Gold Resources Ltd., Harry J. Hodge and Wayne Beach(incorporated herein by reference from the Registration Statement on Form 20-FR filed with the SEC on March 4, 1992)
4.4	Executive Employment Agreement between the Company and Dr. William G. Rice, dated October 25, 2013(incorporated herein by reference to Exhibit 4.9 to the Registrant's Annual Report on Form 20-F filed with the SEC on May 16, 2014)
4.5	Amendment to the Employment agreement between the Company and Dr. William G. Rice dated August 19, 2014. (incorporated herein by reference to Exhibit 4.9A to the Registrant's Annual Report on Form 20-F filed with the SEC on March 4, 2015)
4.6	Executive Employment Agreement between the Company and Gregory K. Chow, dated November 29, 2013 (incorporated herein by reference to Exhibit 4.9.1 to the Registrant's Annual Report on Form 20-F filed with the SEC on May 16, 2014)
4.7	Executive Employment Agreement between the Company and Avanish Vellanki, dated November 29, 2013 (incorporated herein by reference to Exhibit 4.9.2 to the Registrant's Annual Report on Form 20-F filed with the SEC on May 16, 2014)
4.8	Sales Agreement between the Company and Cowen and Company, LLC, dated April 2, 2015 (incorporated herein by reference to Exhibit 1.1 to the Registrant's Current Report on Form 6-K filed with the SEC on April 6, 2015)
4.9	Option and License agreement and related amendments between the Company and CrystalGenomics, Inc., dated March 19, May 13, May 19 and June 1, 2016 (incorporated herein by reference to Exhibit 1.1 to the Registrant's Current Report on Form 6-K filed with the SEC on June 8, 2016)
8.1	List of subsidiaries
11.1	Code of Business Conduct and Ethics (incorporated herein by reference to Exhibit 11.1 to the Registrant's Annual Report on Form 20-F filed with the SEC on March 4, 2015)
11.2	Audit Committee Charter (incorporated herein by reference to Exhibit 11.2 to the Registrant's Annual Report on Form 20-F filed with the SEC on March 4, 2015)
12.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act

12.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act
13.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act
13.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act
15.1	Management Discussion and Analysis for the twelve months ended December 31, 2016

Consolidated Financial Statements of

APTOSE BIOSCIENCES INC.

Years ended December 31, 2016 and 2015,
Seven month period ended December 31, 2014

Management's Responsibility for Financial Reporting

The accompanying consolidated financial statements of Aptose Biosciences Inc. and other financial information contained in this annual report are the responsibility of Management and have been approved by the Board of the Company.

The consolidated financial statements have been prepared in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board, using Management's best estimates and judgments where appropriate. In the opinion of Management, these consolidated financial statements reflect fairly the financial position and the results of operations and cash flows of the Company within reasonable limits of materiality. The financial information contained elsewhere in this annual report has been reviewed to ensure consistency with that in the consolidated financial statements. The integrity and objectivity of data in the financial statements and elsewhere in this annual report are the responsibility of Management.

In discharging its responsibility for the integrity and fairness of the financial statements, management maintains a system of internal controls designed to provide reasonable assurance, at appropriate cost, that transactions are authorized, assets are safeguarded and proper records are maintained. Management believes that the internal controls provide reasonable assurance that financial records are reliable and form a proper basis for the preparation of the consolidated financial statements, and that assets are properly accounted for and safeguarded. The internal control process includes management's communication to employees of policies that govern ethical business conduct.

The Board, through an Audit Committee, oversees management's responsibilities for financial reporting. This committee, which consists of three independent directors, reviews the audited consolidated financial statements and recommends the financial statements to the Board for approval. Other key responsibilities of the Audit Committee include reviewing the adequacy of the Company's existing internal controls, audit process and financial reporting with management and the external auditors.

The consolidated financial statements have been audited by KPMG LLP, Chartered Professional Accountants, who are independent auditors appointed by the shareholders of the Company upon the recommendation of the Audit Committee. Their report follows. The independent auditors have free and full access to the Audit Committee.

/s/ William G. Rice/

William G. Rice
Chairman, President and
Chief Executive Officer

/s/ Gregory Chow

Gregory Chow
Senior Vice President and
Chief Financial Officer

KPMG LLP
100 New Park Place
Suite 1400
Vaughan ON L4K 0J3

Telephone (905) 265-5900
Fax (905) 265-6390
www.kpmg.ca

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Aptose Biosciences Inc.

We have audited the accompanying consolidated statements of financial position of Aptose Biosciences Inc. as of December 31, 2016 and December 31, 2015 and the related consolidated statements of loss and comprehensive loss, changes in shareholders' equity and cash flows for each of the years in the two-year period ended December 31, 2016 and the seven-month period ended December 31, 2014. These consolidated financial statements are the responsibility of Aptose Biosciences Inc.'s management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Aptose Biosciences Inc. as of December 31, 2016 and December 31, 2015, and its consolidated financial performance and its consolidated cash flows for each of the years in the two-year period ended December 31, 2016 and the seven-month period ended December 31, 2014 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board**.**

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants
March 28, 2017
Toronto, Canada

APTOSE BIOSCIENCES INC.

Consolidated Statements of Financial Position
(Expressed in thousands of Canadian dollars)

	December 31, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents (note 4(a))	$ 10,662	$ 11,503
Investments (note 4(b))	-	8,245
Prepaid expenses and other assets	663	1,067
Total current assets	11,325	20,815
Non-current assets:		
Equipment and intangibles (note 5)	285	434
Total non-current assets	285	434
Total assets	$ 11,610	$ 21,249
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable and accrued liabilities (note 17)	$ 1,770	$ 2,356
Total current liabilities	1,770	2,356
Shareholders' equity:		
Share capital (note 9):		
Common shares	230,976	223,425
Stock options (notes 9(e) and 10)	8,133	6,256
Contributed surplus (note 9(d))	22,267	22,037
Warrants (note 9(c))	-	84
Deficit	(251,536)	(232,909)
Total shareholders' equity	9,840	18,893
Total liabilities and shareholders' equity	$ 11,610	$ 21,249

See accompanying notes to consolidated financial statements.

Commitments, contingencies and guarantees (Note 15)
Subsequent event (Note 18)

On behalf of the Board:

"Warren Whitehead" Director

"William Rice" Director

APTOSE BIOSCIENCES INC.

Consolidated Statements of Loss and Comprehensive Loss
(Expressed in thousands of Canadian dollars, except for per common share data)

Years ended December 31, 2016, 2015, and 7 months period ended December 31, 2014

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
			(note 17)
Revenue	$ -	$ -	$ -
Expenses:			
Research and development (notes 11)	10,322	6,254	2,404
General and administrative (note 12)	8,344	9,845	5,542
Operating expenses	18,666	16,099	7,946
Finance expense (note 13)	66	43	104
Finance income (note 13)	(105)	(1,516)	(279)
Net finance (income) expense	(39)	(1,473)	(175)
Net loss and total comprehensive loss for the period	$ (18,627)	$ (14,626)	$ (7,771)
Basic and diluted loss per common share	$ (1.46)	$ (1.23)	$ (0.67)
Weighted average number of common shares outstanding used in the calculation of (in thousands) (note 9(f)):			
Basic and diluted loss per common share	12,743	11,906	11,605

See accompanying notes to consolidated financial statements.

APTOSE BIOSCIENCES INC.

Consolidated Statements of Changes in Shareholders' Equity
(Expressed in thousands of Canadian dollars)

Years ended December 31, 2016, 2015, and 7 months period ended December 31, 2014

	Share capital	Stock options	Warrants	Contributed surplus	Equity portion of debt	Deficit	Total
Balance, December 31, 2015	$ 223,425	$ 6,256	$ 84	$ 22,037	$ -	$ (232,909)	$ 18,893
Common shares issued under the ATM (note 9(b))	7,551	-	-	-	-	-	7,551
Expiry of warrants (note 9 (c))	-	-	(84)	84	-	-	-
Stock-based compensation (note 10)	-	2,023	-	-	-	-	2,023
Expiry of stock options	-	(146)	-	146	-	-	-
Net loss for the period	-	-	-	-	-	(18,627)	(18,627)
Balance, December 31, 2016	$ 230,976	$ 8,133	$ -	$ 22,267	$ -	$ (251,536)	$ 9,840
Balance, December 31, 2014	$ 221,259	$ 4,078	$ 501	$ 21,653	$ 64	$ (218,283)	$ 29,272
Exercise of warrants (note 9(c))	503	-	(155)	-	-	-	348
Exercise of stock options	1,215	(566)	-	-	-	-	649
Conversion of promissory notes (note 7)	438	-	-	54	(64)	-	428
Common shares issued under the ATM (note 9(b))	10	-	-	-	-	-	10
Expiry of warrants (note 9 (c))	-	-	(262)	262	-	-	-
Stock-based compensation (note 10)	-	2,812	-	-	-	-	2,812
Expiry of stock options	-	(68)	-	68	-	-	-
Net loss for the period	-	-	-	-	-	(14,626)	(14,626)
Balance, December 31, 2015	$ 223,425	$ 6,256	$ 84	$ 22,037	$ -	$ (232,909)	$ 18,893
Balance, May 31, 2014	$ 212,938	$ 2,658	$ 1,857	$ 21,410	$ 88	$ (210,512)	$ 28,439
Exercise of warrants (note 9(c))	7,814	-	(1,166)	-	-	-	6,648
Exercise of stock options	345	(162)	-	-	-	-	183
Conversion of promissory notes (note 7)	162	-	-	8	(24)	-	146
Expiry of warrants (note 9 (c))	-	-	(190)	190	-	-	-
Stock-based compensation (note 10)	-	1,627	-	-	-	-	1,627
Expiry of stock options	-	(45)		45		-	-
Net loss for the seven month period	-	-	-	-	-	(7,771)	(7,771)
Balance, December 31, 2014	$ 221,259	$ 4,078	$ 501	$ 21,653	$ 64	$ (218,283)	$ 29,272

See accompanying notes to consolidated financial statements.

APTOSE BIOSCIENCES INC.

Consolidated Statements of Cash Flows
(Expressed in thousands of Canadian dollars)

Years ended December 31, 2016, 2015, and 7 months period ended December 31, 2014

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
Cash flows from operating activities:			
Net loss for the year	$ (18,627)	$ (14,626)	$ (7,771)
Items not involving cash:			
Stock-based compensation	2,023	2,812	1,627
Depreciation and amortization	154	96	22
Interest income	(105)	(286)	(279)
Unrealized foreign exchange loss (gain)	305	(929)	-
Interest and accretion expense	-	43	58
Change in non-cash operating working capital (note 6)	(182)	226	(374)
Cash used in operating activities	(16,432)	(12,664)	(6,717)
Cash flows from financing activities:			
Issuance of common shares under the ATM, net of issuance costs (note 9(b))	7,551	10	-
Exercise of warrants, options and DSU's (note 9)	-	997	6,831
Interest paid on notes and loans	-	(25)	(30)
Cash provided by financing activities	7,551	982	6,801
Cash flows from investing activities:			
Maturity (acquisition) of investments	8,245	7,935	(5,161)
Purchase of equipment	(5)	(330)	(204)
Interest received	105	286	279
Cash provided by (used in) investing activities	8,345	7,891	(5,086)
Effect of exchange rate fluctuations on cash and cash equivalents held	(305)	929	-
Increase (Decrease) in cash and cash equivalents	(536)	(2,862)	(5,002)
Cash and cash equivalents, beginning of year	11,503	14,365	19,367
Cash and cash equivalents, end of year	$ 10,662	$ 11,503	$ 14,365

Supplemental cash flow information (note 6)

See accompanying notes to consolidated financial statements.

1. Reporting entity:

Aptose Biosciences Inc. ("Aptose" or the "Company") is a clinical-stage biotechnology company committed to discovering and developing personalized therapies addressing unmet medical needs in oncology. Aptose is a publicly listed company incorporated under the laws of Canada. The Company's shares are listed on the Nasdaq Capital Markets and the Toronto Stock Exchange. The head office, principal address and records of the Company are located at 5955 Airport Road, Mississauga, Ontario, Canada, L4V 1R9.

Aptose changed its name from Lorus Therapeutics Inc. effective August 28, 2014.

The current reporting fiscal period is for the year ended December 31, 2016, while the prior comparative periods are for the year ended December 31, 2015 and for the seven months ended December 31, 2014. On July 17, 2014, the Company changed its fiscal year end from May 31 to December 31. As a result of that change, the prior period of the seven months ended December 31, 2014 is not directly comparable to the twelve months periods ended December 31, 2016 and 2015.

2. Basis of presentation:

(a) Statement of compliance:

These consolidated financial statements of the Company and its subsidiaries are prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). The consolidated financial statements of the Company were approved and authorized for issue by the Board of Directors on March 28, 2017.

(b) Functional and presentation currency:

The functional and presentation currency of the Company is the Canadian dollar.

(c) Significant accounting judgments, estimates and assumptions:

The preparation of these consolidated financial statements in accordance with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and reported amounts of assets and liabilities at the date of the consolidated financial statements and reported amounts of revenue and expenses during the reporting period. Actual outcomes could differ from those estimates. The consolidated financial statements include estimates, which, by their nature, are uncertain.

2. Basis of presentation (continued):

Management's assessment of the Company's ability to continue as a going concern involves making a judgment, at a particular point in time, about inherently uncertain future outcomes and events or conditions. Please see note 8 (b) (ii) for a discussion of the factors considered by management in arriving at its assessment.

The impacts of such estimates are pervasive throughout the consolidated financial statements and may require accounting adjustments based on future occurrences.

The estimates and underlying assumptions are reviewed on a regular basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised and in any future periods affected.

The key assumptions concerning the future and other key sources of estimation uncertainty as of the date of the statement of financial position that have a significant risk of causing material adjustment to the carrying amounts of assets and liabilities within the next fiscal year include:

(i) Valuation of contingent liabilities:

The Company utilizes considerable judgment in the measurement and recognition of provisions and the Company's exposure to contingent liabilities. Judgment is required to assess and determine the likelihood that any potential or pending litigation or any and all potential claims against the Company may be successful. The Company must estimate if an obligation is probable as well as quantify the possible economic cost of any claim or contingent liability. Such judgments and assumptions are inherently uncertain. The increase or decrease of one of these assumptions could materially increase or decrease the fair value of the liability and the associated expense.

(ii) Valuation of tax accounts:

The Company has deductible temporary differences which create a deferred tax asset. Deferred tax assets are recognized for all deductible temporary differences to the extent that it is probable that future taxable profit will be available against which the deductible temporary differences can be utilized. Management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable profits.. To date, the Company has determined that none of its deferred tax assets should be recognized. The Company's deferred tax assets are mainly comprised of its net operating losses from prior years and prior years' research and development expenses not yet deducted for income tax purposes. The generation of future taxable income could result in the recognition of some portion or all of the remaining benefits, which could result in an improvement in the Company's results of operations through the recovery of future income taxes.

2. Basis of presentation (continued):

(iii) Valuation of share-based compensation and share purchase warrants:

Management measures the costs for share-based payments and share purchase warrants using market-based option valuation techniques. Assumptions are made and judgment is used in applying valuation techniques. These assumptions and judgments include estimating the future volatility of the share price, expected dividend yield, and employee turnover rates. Such judgments and assumptions are inherently uncertain. The increase or decrease of one of these assumptions could materially increase or decrease the fair value of share-based payments and share purchase warrants issued and the associated expense.

3. Significant accounting policies:

(a) Basis of consolidation:

The consolidated financial statements include the accounts of the Company its 80% owned subsidiary, NuChem Pharmaceuticals Inc. ("NuChem"), its 100% owned subsidiaries Aptose Biosciences Inc. USA ("Aptose USA") and Aptose Suisse GmbH ("Aptose Suisse"). A subsidiary is
an entity over which the Company has control, being the power to govern the financial and operating policies of the investee entity so as to obtain benefits from its activities. Accounting policies of the subsidiaries are consistent with the Company's accounting policies. All intra-group transactions, balances, revenue and expenses are eliminated on consolidation.

(b) Foreign currency translation:

Foreign currency transactions are translated into Canadian dollars at rates prevailing on the transaction dates. At the end of each reporting period, monetary assets and liabilities denominated in foreign currencies are translated into Canadian dollars at the rates in effect at that date. Gains or losses resulting from the translation to Canadian dollars are presented in the statement of loss and comprehensive loss for the period within finance income or expense.

(c) Derecognition of financial assets and liabilities:

A financial asset is derecognized when the right to receive cash flows from the asset have expired or when the Company has transferred its rights to receive cash flows from the asset.

A financial liability is derecognized when its contractual obligations are discharged, cancelled or expire.

3. Significant accounting policies (continued):

(d) Financial assets and liabilities:

Financial assets within the scope of IAS 39, *Financial Instruments - Recognition and Measurement* ("IAS 39"), are classified as either financial assets at fair value through profit or loss, loans and receivables, held-to-maturity investments or available-for-sale financial assets, as appropriate. When financial assets are recognized initially, they are measured at fair value, plus, in the case of financial assets not at fair value through profit or loss, directly attributable transaction costs. The Company determines the classification of its financial assets at initial recognition and, where allowed and appropriate, re-evaluates this designation at each financial year end.

The Company's financial instruments are comprised of the following:

Financial assets	Classification	Measurement
Cash and cash equivalents	Loans and receivables	Amortized cost

Financial liabilities	Classification	Measurement
Accounts payable, accrued liabilities	Other liabilities	Amortized cost

The Company considers unrestricted cash on hand and guaranteed investment certificates held by Canadian Schedule A banks with original maturities of three months or less as cash and cash equivalents.

Fair value:

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy establishes three levels to classify the inputs to valuation techniques used to measure fair value.

- Level 1 - inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 - inputs are quoted prices in markets that are not active, quoted prices for similar assets or liabilities in active markets, inputs other than quoted prices that are observable for the asset or liability, or inputs that are derived principally from or corroborated by observable market data or other means; and

3. Significant accounting policies (continued):

- Level 3 - inputs are unobservable (supported by little or no market activity). The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest priority to Level 3 inputs.

(e) Equipment:

Equipment is measured at cost less accumulated depreciation and accumulated impairment losses. Cost includes expenditures that are directly attributable to the acquisition of the asset. The Company records depreciation at rates that charge operations with the cost of the assets over their estimated useful lives on a straight-line basis as follows:

Furniture	3 years
Laboratory Equipment	5 years
Computer hardware	3 years
Leasehold improvements	Life of lease

The assets' residual value, useful life and methods of depreciation are reviewed at each reporting period and adjusted prospectively if appropriate.

(f) Intangible assets:

Intangible assets are recorded at cost less accumulated amortization and accumulated impairment losses. The Company's intangible assets consist of computer application software that is not an integral part of the related hardware. Subsequent expenditures that increase application software functionality are recognized in the carrying amount of intangible assets if they embody future economic benefit to the Company. All other costs including the costs of day-to-day servicing of intangible assets are expensed as incurred. Amortization is recognized in expense on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use, since this most closely reflects the expected pattern of consumption of the future economic benefits embodied in the assets.

(g) Research and development:

Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in profit or loss as incurred.

Development activities involve a plan or design for the production of new or substantially improved products or processes. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Company intends to and has sufficient resources to complete development and to use or sell the asset.

3. Significant accounting policies (continued):

The Company has not capitalized any development costs to date.

(h) Investment tax credits:

Research and development investment tax credits, which are earned as a result of incurring qualifying research and development expenditures, are recorded as a reduction of the related expense or cost of the asset acquired when there is reasonable assurance that they will be realized.

The Company's claim for scientific research and experimental development ("SR&ED") deductions and related investment tax credits for income tax purposes are based on management's interpretation of the applicable legislation in the Income Tax Act (Canada). These amounts are subject to review and acceptance by the Canada Revenue Agency prior to collection.

(i) Employee benefits:

(i) Short-term employee benefits:

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid in short-term cash bonuses if the Company expects to pay these amounts as approved by the Board of Directors as a result of past services provided by the employee and the obligation can be estimated reliably.

(ii) Stock-based compensation:

The Company has a stock-based compensation plan (the "Plan") available to officers, directors, employees and consultants with grants under the Plan approved by the Company's Board of Directors. Under the Plan, the exercise price of each option equals the closing trading price of the Company's stock on the day prior to the grant if the grant is made during the trading day or the closing trading price on the day of grant if the grant is issued after markets have closed. Vesting is provided for at the discretion of the Board of Directors and the expiration of options is to be no greater than 10 years from the date of grant.

The Company uses the fair value based method of accounting for employee awards granted under the Plan. The Company calculates the fair value of each stock option grant using the Black-Scholes option pricing model at the grant date. The stock-based compensation cost of the options is recognized as stock-based compensation expense over the relevant vesting period of the stock options using an estimate of the number of options that will eventually vest.

3. Significant accounting policies (continued):

Stock options awarded to non-employees are accounted for at the fair value of the goods received or the services rendered. The fair value is measured at the date the Company obtains the goods or the date the counterparty renders the service. If the fair value of the goods or services cannot be reliably measured, the fair value of the options granted will be used.

(j) Loss per share:

Basic loss per share is computed by dividing the net loss available to common shareholders by the weighted average number of shares outstanding during the year. Diluted loss per share is computed similarly to basic loss per share except that the weighted average shares outstanding is increased to include additional shares for the assumed exercise of stock options and warrants, if dilutive. The number of additional shares is calculated by assuming that outstanding stock options and warrants were exercised and that the proceeds from such exercises were used to acquire common stock at the average market price during the year. The inclusion of the Company's stock options and warrants in the computation of diluted loss per share has an anti-dilutive effect on the loss per share and, therefore, they have been excluded from the calculation of diluted loss per share.

(k) Income taxes:

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes.

Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date. A deferred tax asset is recognized for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilized.

(l) Provisions:

A provision is recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as a finance cost.

3. Significant accounting policies (continued):

(m) Finance income and finance costs:

Finance income comprises interest income on funds invested. Interest income is recognized as it accrues in profit or loss using the effective interest method.

Finance costs comprise interest expense on borrowings and are recognized in profit or loss using the effective interest method.

(n) Standards and interpretations adopted in the year ended December 31, 2016:

Effective January 1, 2016, the Company adopted the amendments to IAS1*Presentation of Financial Statements* issued by the IASB in December 2014. The impact of adoption of these amendments did not to have a material impact on the financial statements.

(o) Recent accounting pronouncements:

(i) IFRS 9, *Financial Instruments* ("IFRS 9"):

IFRS 9 (2014) introduces new requirements for the classification and measurement of financial assets. Under IFRS 9 (2014), financial assets are classified and measured based on the business model in which they are held and the characteristics of their contractual cash flows. The standard introduces additional changes relating to financial liabilities and also amends the impairment model by introducing a new 'expected credit loss' model for calculating impairment. IFRS 9 (2014) also includes a new general hedge accounting standard which aligns hedge accounting more closely with risk management. The Company intends to adopt IFRS 9 (2014) in its consolidated financial statements for the annual period beginning on January 1, 2018. The extent of the impact of adoption of the standard has not yet been determined.

(ii) IFRS 16, *Leases* ("IFRS 16")

On January 13, 2016, the IASB issued IFRS 16*Leases*. The new standard is effective for annual periods beginning on or after January 1, 2019. Earlier application is permitted for entities that apply IFRS 15 *Revenue from Contracts with Customers* at or before the date of initial adoption of IFRS 16. IFRS 16 will replace IAS 17 Leases. This standard introduces a single lessee accounting model and requires a lessee to recognize assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. The extent of the impact of adoption of the standard has not yet been determined.

(iii) Recognition of Deferred Tax Assets for Unrealized Losses (Amendments to IAS 12)

3. Significant accounting policies (continued):

On January 19, 2016 the IASB issued Recognition of Deferred Tax Assets for Unrealized Losses (Amendments to IAS 12). The amendments apply retrospectively for annual periods beginning on or after January 1, 2017. Earlier application is permitted. The extent of the impact of adoption of the standard has not yet been determined.

4. Capital disclosures:

The Company's objectives when managing capital are to:

- Maintain its ability to continue as a going concern;
- Maintain a flexible capital structure which optimizes the cost of capital at acceptable risk; and
- Ensure sufficient cash resources to fund its research and development activity, to pursue partnership and collaboration opportunities and to maintain ongoing operations.

The capital structure of the Company consists of equity comprised of share capital, stock options, contributed surplus and deficit. The Company manages its capital structure and makes adjustments to it in light of economic conditions. The Company, upon approval from its Board of Directors, will balance its overall capital structure through new share issuances, acquiring or disposing of assets, adjusting the amount of cash balances or by undertaking other activities as deemed appropriate under the specific circumstances.

In December 2014, Aptose filed a short form base shelf prospectus (the “Base Shelf”) that qualifies for the distribution of up to US$100,000,000 of common shares, warrants, or units comprising any combination of common shares and warrants (“Securities”). The distribution of Securities may be effected from time to time in one or more transactions at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, or at prices related to such prevailing market prices to be negotiated with purchasers and as set forth in an accompanying prospectus supplement, including transactions that are deemed to be “at-the-market” distributions. The Base Shelf provides the Company with additional flexibility when managing cash resources as, under certain circumstances, it shortens the time period required to close a financing and is expected to increase the number of potential investors that may be prepared to invest in our Company. Funds received from a Prospectus Supplement will be used in line with our Board approved budget and multi-year plan. The Base Shelf expires in December, 2017. The Base Shelf allowed the Company to enter into an “At-The-Market” Facility (“ATM”) equity distribution agreement (see Note 9). Aptose intends to use this equity arrangement as an additional option to assist in achieving the Company’s capital objectives. The ATM provides the Company with the opportunity to regularly raise capital on the Nasdaq Capital Market, at prevailing market prices, at its sole discretion providing the ability to better manage cash resources.

(Tabular amounts in thousands of Canadian dollars, except per share amounts)

4. Capital disclosures (continued):

The Company is not subject to externally imposed capital requirements, and the Company's overall strategy with respect to capital risk management remains unchanged from the year ended December 31, 2015.

(a) Cash and cash equivalents:

Cash and cash equivalents consists of cash of $3.951 million (December 31, 2015 - $761 thousand) and funds deposited into high interest savings accounts totalling $6.711 million (December 31, 2015 - $10.742 million). The current interest rate earned on these deposits is between 0.45% and 0.75% (December 31, 2015 – 0.2%-0.75%).

(b) Investments:

As at December 31, 2016, there were no investments outstanding. As at December 31, 2015, investments consist of guaranteed investment certificates with Canadian financial institutions having high credit ratings including investments six investments with maturity dates from April 22, 2016 to June 19, 2016, bearing an interest rate from 1.80% to 2.10% per annum.

5. Equipment and intangible assets:

Equipment:

December 31, 2016	Cost	Accumulated depreciation	Net book value
Equipment	$ 232	$ 80	$ 152
Computer hardware	45	33	12
Office furniture	47	16	31
Leasehold improvements	92	35	57
	$ 416	$ 164	$ 252

December 31, 2015	Cost	Accumulated depreciation	Net book value
Equipment	$ 229	$ 34	$ 195
Computer hardware	49	20	29
Office furniture	61	9	52
Leasehold improvements	110	18	92
	$ 449	$ 81	$ 368

During the year ended December 31, 2016, the Company terminated an office lease which resulted in the disposal of office furniture with a net book value of $10K and a write down of leasehold improvements with a net book value of $9K.

5. Equipment and intangible assets (continued):

During the year ended December 31, 2015, the Company disposed of $476 thousand in fully depreciated equipment, $12 thousand in fully depreciated computer hardware and $37 thousand in fully depreciated furniture no longer in use.

Intangible assets:

December 31, 2016	Cost	Accumulated amortization	Net book value
Computer software	$ 107	$ 74	$ 33
	$ 107	$ 74	$ 33

December 31, 2015	Cost	Accumulated amortization	Net book value
Computer software	$ 105	$ 39	$ 66
	$ 105	$ 39	$ 66

6. Additional cash flow disclosures:

Net change in non-cash operating working capital is summarized as follows:

(in thousands)	Year ended December 31, 2016	Year ended Dec 31, 2015	7 months ended Dec 31, 2014
Prepaid expenses and other assets	$ 404	$ (212)	$ (360)
Accounts payable and accrued liabilities	(586)	438	(14)
Balance, end of period	$ (182)	$ 226	$ (374)

The Company did not incur any interest expense in the year ended December 31, 2016.

During the year ended December 31, 2015, the Company incurred and paid interest on the convertible promissory notes described in note 7 of $25 thousand. In addition the Company recorded accretion expense of $18 thousand as described in note 7. The notes were all converted by September 30, 2015.

During the seven months ended December 31, 2014, the Company incurred interest on the convertible promissory notes described in note 7 of $30 thousand of which $3 thousand was accrued and unpaid at December 31, 2014. The interest accrues at a rate of 10% per annum and is paid quarterly. In addition the Company recorded accretion expense of $28 thousand as described in note 7.

(Tabular amounts in thousands of Canadian dollars, except per share amounts)

7. Convertible promissory notes payable:

In September 2013, the Company completed a private placement of convertible promissory notes for aggregate gross proceeds of $600 thousand. Each convertible promissory note consisted of a $1 thousand principal amount of unsecured promissory note convertible into common shares of the Company at a price per share of $3.60. The promissory notes bore interest at a rate of 10% per annum, payable quarterly and were due September 26, 2015.

The promissory notes were a compound financial instrument containing a liability component and an equity component represented by the conversion feature. The fair value of the liability component upon issuance was estimated by discounting the future cash flows associated with the debt at a discounted rate of approximately 19% which represented the estimated borrowing cost to the Company for similar promissory notes with no conversion feature. The residual value of $88 thousand was allocated to the conversion feature.

Subsequent to initial recognition, the promissory notes were accounted for at amortized cost using the effective interest rate method. The Company incurred costs associated with the financing of $17 thousand. These costs along with the adjustment for the conversion feature were being accreted using the effective interest rate method over the 24 month life of the notes.

During the year ended December 31, 2015, all of the outstanding promissory notes were converted into common shares of the Company.

8. Financial instruments:

(a) Financial instruments:

The Company has classified its financial instruments as follows:

	December 31, 2016	2015
Financial assets:		
Cash and cash equivalents, consisting of high interest savings account, measured at amortized cost	$ 10,662	$ 11,503
Investments, consisting of guaranteed investment certificates, measured at amortized cost	–	8,245
Financial liabilities:		
Accounts payable and accrued liabilities, measured at amortized cost	1,770	2,356

At December 31, 2016, there are no significant differences between the carrying values of these amounts and their estimated market values due to their short-term nature.

8. Financial instruments (continued):

(b) Financial risk management:

The Company has exposure to credit risk, liquidity risk, foreign currency risk and market risk. The Company's Board of Directors has the overall responsibility for the oversight of these risks and reviews the Company's policies on an ongoing basis to ensure that these risks are appropriately managed.

(i) Credit risk:

Credit risk is the risk of financial loss to the Company if a customer, partner or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Company's cash and cash equivalents. The carrying amount of the financial assets represents the maximum credit exposure.

The Company manages credit risk associated with its cash and cash equivalents by maintaining minimum standards of R1-low or A-low investments and the Company invests only in highly rated Canadian corporations which are capable of prompt liquidation.

(ii) Liquidity risk:

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they come due. To the extent that the Company does not believe it has sufficient liquidity to meet its current obligations, management and the Board consider securing additional funds through equity, debt or partnering transactions. The Company manages its liquidity risk by continuously monitoring forecasts and actual cash flows. All of the Company's financial liabilities are due within the current operating period.

In managing its liquidity risk, the Company has considered its available cash and cash equivalents and has reprioritized its resources towards the development of CG 806. This reprioritization has resulted in reduced expected cash outflows for the year ending December 31, 2017 relative to what was forecast as of September 30, 2016. The Company has also considered additional cash raised through its At-The-Market (“ATM”) facility of $US 3.7M since December 31, 2016 (see note 18) and its ability to continue to raise funds under this facility in 2017 in assessing whether it will have sufficient resources to fund research and development operations through to at least the year ending December 31, 2017.

After considering the above factors, management have concluded that there are no material uncertainties related to events or conditions that may cast substantial doubt upon the Company’s ability to continue as a going concern. However, the estimates made by management in reaching this conclusion are based on information available as of the date these financial statements were authorized for issuance. Accordingly, actual experience will differ from those estimates and the variation may be material.

8. Financial instruments (continued):

(iii) Market risk:

Market risk is the risk that changes in market prices, such as interest rates, foreign exchange rates and equity prices will affect the Company's income or the value of its financial instruments.

The Company is subject to interest rate risk on its cash and cash equivalents and investments. The Company does not believe that the results of operations or cash flows would be affected to any significant degree by a sudden change in market interest rates relative to interest rates on the investments, owing to the relative short-term nature of the investments. The Company does not have any interest bearing liabilities subject to interest rate fluctuations.

(iv) Currency risk:

Currency risk is the risk that future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. We are exposed to currency risk from employee costs as well as the purchase of goods and services primarily in the United States and the cash balances held in foreign currencies. Fluctuations in the US dollar exchange rate could have a significant impact on the Company's results. Assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the US dollar would result in an increase or decrease in loss for the year and comprehensive loss of $638 thousand (December 31, 2015 - $576 thousand, December 31, 2014 - $50 thousand). Balances in foreign currencies are as follows:

	US$ Balances		
(in thousands) 2016	December 31, 2016	December 31, 2015	December 31, 2014
Cash and cash equivalents	$ 5,798	$ 5,000	$ 66
Accounts payable and accrued liabilities	(1,044)	(838)	(565)
Balance, end of period	$ 4,754	$ 4,162	$ (499)

The Company does not have any forward exchange contracts to hedge this risk.

The Company does not invest in equity instruments of other corporations.

9. Share capital (continued):

Share consolidation:

In accordance with the authority granted by shareholders at the Company's annual and special meeting on August 19, 2014 to permit it to implement a consolidation of the Company's outstanding common shares in a ratio of between 1-for-5 and 1-for-15, the Company's Board of Directors approved a 1-for-12 share consolidation which became effective October 1, 2014. The share consolidation affected all of the Company's common shares, stock options and warrants outstanding at the effective time. Fractional shares were not issued. Prior to consolidation the Company had approximately 139 million shares outstanding. Following the share consolidation, the Company has approximately 11.6 million common shares outstanding. Similarly, prior to consolidation, the Company had approximately 17.1 million stock options and 2.6 million warrants to purchase common shares outstanding. Following the share consolidation, the Company had approximately 1.4 million stock options and 218 thousand warrants to purchase common shares outstanding. In these consolidated financial statements, all references to number of shares, stock options and warrants in the current and past periods have been adjusted to reflect the impact of the share consolidation. All amounts based on the number of shares, stock options or warrants, unless otherwise specified, such as earnings (loss) per share and weighted average issuance price in the case of stock options have been adjusted to reflect the impact of 1-for-12 share consolidation.

(a) Continuity of common shares and warrants:

	Common shares		Warrants	
	Number	Amount	Number	Amount
	(In thousands)		(In thousands)	
Balance, May 31, 2014	**10,388**	**$ 212,938**	**1,630**	**$ 1,857**
Warrant exercises	1,231	7,814	(1,231)	(1,166)
Warrant expiry	–	–	(190)	(190)
Option exercises	36	345	–	–
Promissory note conversion	45	162	–	–
Balance, December 31, 2014	**11,700**	**$ 221,259**	**209**	**$ 501**
Warrant exercises	81	503	(81)	(155)
Warrant expiry	–	–	(55)	(262)
Option exercises	143	1,215	–	–
Common shares under the ATM(b)	2	10	–	–
Promissory note conversion	122	438	–	–
Balance, December 31, 2015	**12,048**	**$ 223,425**	**73**	**$ 84**
Common shares under the ATM(b)	3,674	7,551	–	–
Warrant expiry (c)(i)	–	–	(73)	(84)
Balance, December 31, 2016	**15,722**	**$ 230,976**	**–**	**$ –**

9. Share capital (continued):

(b) Equity issuances:

At-The-Market ("ATM") Facility

On April 2, 2015, Aptose entered into an ATM equity facility with Cowen and Company, LLC, acting as sole agent. Under the terms of this facility, Aptose may, from time to time, sell shares of our common stock having an aggregate offering value of up to US$20 million through Cowen and Company, LLC on the Nasdaq Capital Market. The Company determines, at our sole discretion, the timing and number of shares to be sold under this ATM facility.

During the year ended December 31, 2016, the Company issued 3,673,933 common shares under the ATM at a price of US$1.65 per share for gross proceeds of USD$6.06 million or CDN$7.97 million. Costs associated with the proceeds included a 3% cash commission as well as legal and accounting fees. The net proceeds raised year to date total USD$5.69 million or CDN$7.55 million.

(c) Warrants:

There were no warrants exercised during the year ended December 31, 2016. During the year ended December 31, 2016, 73 thousand warrants with an original fair value of $84 thousand expired unexercised. The original fair value amount was transferred from warrants to contributed surplus.

Warrants exercised during the twelve months ended December 31, 2015:

(in thousands)	Number		Proceeds
August 2011 warrants (i)	16	$	86
June 2013 private placement warrants (ii)	47		141
December 2013 broker warrants (iii)	18		121
Total	81	$	348

In addition to the cash proceeds received, the original fair value related to these warrants of $155 thousand was transferred from warrants to share capital. This resulted in a total amount of $503 thousand credited to share capital.

Warrants exercised during the seven months ended December 31, 2014:

(in thousands)	Number		Proceeds
August 2011 warrants (i)	8	$	48
June 2012 private placement warrants (iv)	1,223		6,600
Total	1,231	$	6,648

In addition to the cash proceeds received the original fair value related to these warrants of $1.2 million was transferred from warrants to share capital. This resulted in a total amount of $7.8 million credited to share capital.

(i) August 2011 warrants were exercisable into common shares of Aptose at a price per share of $5.40 and expired in August 2016.

(ii) June 2013 private placement warrants were exercisable into common shares of Aptose at a price per share of $3.00 and expired in June 2015.

9. Share capital (continued):

(iii) December 2013 broker warrants were exercisable into common shares of Aptose at a price per share of $6.60 and expired in December 2015.

(iv) June 2012 private placement warrants were exercisable into common shares of Aptose at a price per share of $5.40 ($0.45 pre-consolidation) and expired on June 8, 2014.

(d) Contributed surplus:

Contributed surplus is comprised of the cumulative grant date fair value of expired share purchase warrants and expired stock options as well as the cumulative amount of previously expensed and unexercised equity settled share-based payment transactions. The balance as at December 31, 2016 is $22,267 (2015 - $22, 037, 2014 - $21,653).

(f) Loss per share:

Loss per common share is calculated using the weighted average number of common shares outstanding for the year ended December 31, 2016 of 12.743 million, the year ended December 31, 2015 of 11.906 million and the seven months ending December 31, 2014 of 11.605 million, calculated as follows:

(in thousands)	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
Issued common shares beginning of period	12,048	11,700	10,388
Effect of ATM issuances	695	–	–
Effect of warrant exercises	–	49	1,200
Effect of option and DSU exercises	–	103	4
Effect of promissory note conversions	–	54	13
Balance, end of period	12,743	11,906	11,605

The effect of any potential exercise of the Company's stock options and warrants outstanding during the year has been excluded from the calculation of diluted loss per common share as it would be anti-dilutive.

10. Stock-based compensation:

Under the Company's stock option plan, options, rights and other entitlements may be granted to directors, officers, employees and consultants of the Company to purchase up to a maximum of 17.5% of the total number of outstanding common shares, estimated at 2,751,000 options, rights and other entitlements as at December 31, 2016. Options are granted at the fair market value of the common shares on the closing trading price of the Company's stock on the day prior to the grant if the grant is made during the trading day or the closing trading price on the day of grant if the grant is issued after markets have closed. Options vest at various rates (immediate to four years) and have a term of 10 years. Stock option transactions for the year ended December 31, 2016, the year ended December 31, 2015, and the seven months period ended December 31, 2014 are summarized as follows:

(Tabular amounts in thousands of Canadian dollars, except per share amounts)

10. Stock-based compensation (continued):

Option numbers are in (000's)

	Year ended December 31, 2016	
	Options	Weighted average exercise price
Outstanding, beginning of period	1,689	$ 6.31
Granted	382	3.82
Exercised	–	–
Expired	(12)	16.15
Forfeited	(54)	5.53
Outstanding, end of the period	2,005	5.79

Option numbers are in (000's)

	Year ended December 31, 2015		7 months ended December 31, 2014	
	Options	Weighted average exercise price	Options	Weighted average exercise price
Outstanding, beginning of year	1,374	$ 5.95	824	$ 6.22
Granted	478	6.92	604	5.57
Exercised	(143)	4.53	(36)	5.14
Forfeited	(20)	9.85	(18)	6.96
Outstanding, end of year	1,689	6.31	1,374	5.95

The following table summarizes information about stock options outstanding at December 31, 2016:

Option numbers are in (000's)

	Options outstanding			Options exercisable	
Range of exercise prices	Options	Weighted average contractual life (years)	Weighted average exercise price	Options	Weighted average exercise price
$2.16 - $ 4.49	468	8.0	$ 3.59	109	$ 2.81
$4.50 - $ 5.49	153	7.6	5.26	115	5.26
$5.50 - $ 5.85	471	7.2	5.70	361	5.70
$5.86 - $ 6.87	348	7.5	6.24	249	6.17
$6.88 - $79.20	565	7.8	7.57	404	7.80
	2,005	7.6	5.79	1,238	6.19

(Tabular amounts in thousands of Canadian dollars, except per share amounts)

10. Stock-based compensation (continued):

The following assumptions were used in the Black-Scholes option pricing model to determine the fair value of stock options granted during the period:

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
Exercise price	$ 3.82	$ 6.77-7.14	$ 5.16-5.70
Grant date share price	3.82	6.77-7.14	5.16-5.70
Risk-free interest rate	0.68%	0.75-1.5%	1.5%
Expected dividend yield	–	–	–
Expected volatility	110%	103-113%	53-122%
Expected life of options	5 years	5 years	3 months-5 years
Weighted average fair value of options granted or modified during the period	$ 2.99	$ 5.34	$ 4.56

The Company uses historical data to estimate the expected dividend yield and expected volatility of its common shares in determining the fair value of stock options. The expected life of the options represents the estimated length of time the options are expected to remain outstanding.

Stock options granted by the Company during the twelve months ended December 31, 2016, consist of 381,900 options that vest 50% after one year and 16.67% on each of the next three anniversaries.

Stock options granted by the Company during the twelve months ended December 31, 2015, consist of 128,000 options that vest 50%, 25% and 25% on each of the next three anniversaries and 350,000 options that vest 50% on the first anniversary and 16.67% on each of the next three anniversaries (total four year vesting).

Stock options granted by the Company during the seven months ended December 31, 2014 vest 50% upon the first anniversary and 25% on each of the second and third anniversaries.

Refer to note 11 and 12 for a breakdown of stock option expense by function.

(Tabular amounts in thousands of Canadian dollars, except per share amounts)

11. Research and Development:

Components of research and development expenses are as follows:

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
Research and Development excluding salaries	$ 6,442	$ 4,046	$ 1,352
Crystal Genomics Option Fee (a)	1,294	-	-
Salaries	2,246	1,969	1,019
Stock-based compensation	293	210	29
Depreciation of equipment	47	29	4
	$ 10,322	$ 6,254	$ 2,404

(a) During the year ended December 31, 2016, the Company paid US$1.0 million ($1.3 million) to CrystalGenomics for an option fee related to the CG'806 technology.

12. General and Administrative:

Components of general and administrative expenses:

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
General and administrative excluding salaries	$ 3,412	$ 4,317	$ 2,421
Salaries	3,095	2,859	1,505
Stock-based compensation	1,730	2,602	1,598
Depreciation of equipment and amortization	107	67	18
	$ 8,344	$ 9,845	$ 5,542

13. Finance income and expense:

Components of finance income:

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
Interest income	$ 105	$ 286	$ 279
Foreign exchange gain on cash and cash equivalents	–	1,230	–
	$ 105	$ 1,516	$ 279

(Tabular amounts in thousands of Canadian dollars, except per share amounts)

13. Finance income and expense (continued):

Components of finance expense:

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014 (note 17)
Interest expense	$ -	$ 25	$ 30
Accretion expense	-	18	28
Foreign exchange loss on cash and cash equivalents	66	-	46
	$ 66	$ 43	$ 104

14. Related party transactions:

In March 2015, the Company entered into an agreement with the Moores Cancer Center at the University of California San Diego (UCSD) to provide pharmacology lab services to the Company. Dr. Stephen Howell is the Acting Chief Medical Officer of Aptose and is also a Professor of Medicine at UCSD and will be overseeing the laboratory work. The research services will be provided from April 1, 2015 to March 31, 2017 and will be billed monthly for services rendered. The total amount for services provided under the agreement is not to exceed US$200 thousand.

This transaction is in the normal course of business and will be measured at the amount of consideration established and agreed to by the related parties. During year ended December 31, 2016, the Company recorded US$168 thousand related to the agreement.

Compensation of key management personnel:

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the Company's activities as a whole. The Company has determined that key management personnel consist of the members of the Board of Directors along with the officers of the Company. For the years ended December 31, 2016 and 2015, and for the seven month period ended December 31, 2014, the officers were the Chairman, President and Chief Executive Officer, the Senior Vice President and Chief Financial Officer as well as the Senior Vice President and Chief Business Officer.

(Tabular amounts in thousands of Canadian dollars, except per share amounts)

14. Related party transactions (continued):

Officer compensation:

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
Salaries and short-term employee benefits	$ 2,046	$ 1,863	$ 1,029
Stock-based compensation	1,413	2,101	1,452
	$ 3,459	$ 3,964	$ 2,481

Director compensation:

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
Directors' fees	$ 317	$ 328	$ 118
Stock-based compensation	209	307	117
	$ 526	$ 635	$ 235

The amounts disclosed in the table above have been recognized as an expense during the reporting period related to key management personnel. Included in accounts payable and accrued liabilities, is $351 thousand (2015 - $13 thousand, 2014 – $29 thousand) owing to directors and officers of the Company relating to unpaid compensation, directors' fees and reimbursable expenses.

15. Commitments, contingencies and guarantees:

(a) Operating lease commitments:

The Company has entered into operating leases for premises and equipment under which it is obligated to make minimum annual payments as described below:

	Less than 1 year	1 - 3 years	3 - 5 years	Total
Operating leases	$ 358	$ 649	$ 59	$ 1,066

15. Commitments, contingencies and guarantees (continued):

(b) Other contractual commitments:

The Company has entered into various contracts with service providers with respect to the clinical development of APTO-253 and for its research program for its new program CG'806. These contracts will result in future payments commitments of up to $430 thousand.

The Company enters into research, development and license agreements in the ordinary course of business where the Company receives research services and rights to proprietary technologies. Milestone and royalty payments that may become due under various agreements are dependent on, among other factors, clinical trials, regulatory approvals and ultimately the successful development of a new drug, the outcome and timing of which is uncertain. Under the license agreement with CrystalGenomics, the Company has future contingent milestones obligations relating to filing of an Investigational New Drug ("IND") of US$2.0 million, development milestones on the initiation of Phase 2 and pivotal clinical trial of US$16 million, and regulatory milestones totalling US$44 million. In addition, the Company also has an obligation to pay royalty payments on sales of commercialized product. The company does not anticipate making any payments under this license agreement in 2017.

(c) Guarantees:

The Company entered into various contracts, whereby contractors perform certain services for the Company. The Company indemnifies the contractors against costs, charges and expenses in respect of legal actions or proceedings against the contractors in their capacity of servicing the Company. The maximum amounts payable from these guarantees cannot be reasonably estimated. Historically, the Company has not made significant payments related to these guarantees.

The Company indemnifies its directors and officers against any and all claims or losses reasonably incurred in the performance of their service to the Company to the extent permitted by law. The Company has acquired and maintains liability insurance for its directors and officers. The fair value of this indemnification is not determinable.

(Tabular amounts in thousands of Canadian dollars, except per share amounts)

16. Income taxes:

Deferred tax assets have not been recognized in respect of the following items:

	December 31, 2015	December 31, 2016
Net operating losses carried forward	$ 15,767	$ 11,209
Research and development expenditures	6,845	6,845
Equipment book over tax depreciation	494	490
Intangible asset	3,097	3,097
Undeducted financing costs	362	389
Ontario Research and Development Tax Credit	535	537
Cumulative eligible capital	358	398
Unrecognized deferred tax asset	$ 27,458	$ 22,965

The Company has available research and development expenditures for income tax purposes, totaling $25.8 million that can be carried forward indefinitely to reduce future years' taxable income. The Company also has non-refundable federal investment tax credits of approximately $5.4 million which are available to reduce future federal taxes payable and begin to expire in 2017, as well as non-refundable Ontario research and development tax credits of approximately $535 thousand which are available to reduce future Ontario taxes payable and begin to expire in 2028.

In addition, the Company has non-capital loss carryforwards of $59.2 million. To the extent that the non-capital loss carryforwards are not used, they expire as follows:

2026	$ 11
2027	4,349
2028	3,744
2029	657
2030	2,907
2031	2,581
2032	3,479
2033	7,513
2034	5,745
2035	11,303
2036	16,966
	$ 59,255

(Tabular amounts in thousands of Canadian dollars, except per share amounts)

16. Income taxes (continued):

Provision for income taxes:

Major items causing the Company's income tax rate to differ from the statutory rate are as follows:

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
Loss before income taxes	$ (18,627)	$ (14,626)	$ (7,771)
Statutory Canadian corporate tax rate	26.5%	26.5%	26.5%
Anticipated tax recovery	$ (4,936)	$ (3,876)	$ (2,059)
Non-deductible permanent differences	539	754	441
Change in deferred tax benefits deemed not probable to be recovered	4,493	3,255	1,643
Other	(96)	(133)	(25)
	$ -	$ –	$ –

17. Comparative figures:

Certain comparative figures in the year ended December 31, 2015 have been reclassified in order to conform to the presentation in the current year.

In the seven months ended December 31, 2014, $46 thousand was deducted from general and administrative expense and reclassified to finance expense. This $46 thousand related to foreign exchange losses on cash and cash equivalent balances.

As at December 31, 2015, Accounts Payable and Accrued Liabilities were previously presented as separate line items within the Statement of Financial Position. The line items have been combined to conform with the presentation adopted as of December 31, 2016.

18. Subsequent Event

Subsequent to the year end, the Company issued 3,127,836 common shares under the ATM for gross proceeds of US$3.7 million. These transactions will be accounted for in the three months ended March 31, 2017.

Exhibit 8.1

LIST OF SUBSIDIARIES

Name	**Jurisdiction**
Aptose Biosciences U.S. Inc.	Delaware
Aptose Suisse GmbH	Zug, Switzerland
Nuchem Pharmaceuticals Inc.	Canada

Exhibit 12.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANTTO
SECURITIES AND EXCHANGE COMMISSION RULE 13a-14(a)

I, William G. Rice, certify that:

1. I have reviewed this annual report on Form 20-F of Aptose Biosciences Inc. for the year ended December 31, 2016;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: March 29, 2017

/s/ William G. Rice
William G. Rice
Chairman, President and Chief Executive Officer

Exhibit 12.2

CERTIFICATION OF CHIEF FINANCIALOFFICER PURSUANTTO SECURITIES AND EXCHANGE COMMISSION RULE 13a-14(a)

I, Gregory K. Chow, certify that:

1. I have reviewed this annual report on Form 20-F of Aptose Biosciences Inc. for the year ended December 31, 2016;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: March 29, 2017

/s/ Gregory K. Chow
Gregory K. Chow
Senior Vice President and CFO

Exhibit 13.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. §1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Aptose Biosciences Inc. (the "Company") on Form 20-F for the year ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, William G. Rice, Ph.D., Chairman, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"); and

2. The information contained in the Report fairly presents, in all material respects, the financial condition of the Company as of the end of the period covered by the Report and the results of operations of the Company for the period covered by the Report.

Date: March 29, 2017

/s/ William G. Rice
William G. Rice, Ph.D.
Chairman, President and Chief Executive Officer

This certification shall not be deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject to the liability of Section 18 of the Exchange Act. Such certification shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent that the Company specifically incorporates it by reference.

Exhibit 13.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. §1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Aptose Biosciences Inc. (the "Company") on Form 20-F for the year ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Gregory Chow, Senior Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"); and

2. The information contained in the Report fairly presents, in all material respects, the financial condition of the Company as of the end of the period covered by the Report and the results of operations of the Company for the period covered by the Report.

Date: March 29, 2017

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

This certification shall not be deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject to the liability of Section 18 of the Exchange Act. Such certification shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent that the Company specifically incorporates it by reference.

MANAGEMENT DISCUSSION AND ANALYSIS

DECEMBER 31, 2016

MANAGEMENT'S DISCUSSION AND ANALYSIS

March 28, 2017

This management's discussion and analysis of Aptose Biosciences Inc. ("Aptose", the "Company", "we", "our", "us" and similar expressions) should be read in conjunction with the Company's annual audited financial statements for the year ended December 31, 2016 and the annual report on form 20-F of the Company for the year ended December 31, 2016 which can be found on SEDAR at www.sedar.com and EDGAR at *www.sec.gov/edgar.shtml.*

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

This management's discussion and analysis may contain forward-looking statements within the meaning of securities laws. Such statements include, but are not limited to, statements relating to:

- *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 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 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, 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 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 ability to obtain the substantial capital we require to fund research and operations;*
- *our lack of product revenues and 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 drug candidates require time-consuming and costly preclinical and clinical testing and regulatory approvals before commercialization;*
- *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 delay our ability to generate revenue;*
- *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;*
- *the regulatory approval process;*
- *our ability to recruit patients for clinical trials;*
- *the progress of our clinical trials;*
- *our ability to find and enter into agreements with potential partners;*
- *our ability to attract and retain key personnel;*
- *our ability to obtain and maintain patent protection;*
- *our ability to protect our intellectual property rights and not infringe on the intellectual property rights of others;*
- *our ability to comply with applicable governmental regulations and standards;*
- *development or commercialization of similar products by our competitors, many of which are more established and have or have access to greater financial resources than us;*
- *commercialization limitations imposed by intellectual property rights owned or controlled by third parties;*
- *potential product liability and other claims;*
- *our ability to maintain adequate insurance at acceptable costs;*
- *further equity financing, which may substantially dilute the interests of our existing shareholders;*
- *changing market conditions; 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 United States Securities and Exchange Commission, and those which are discussed under the heading "Risk Factors" in this document.*

Should one or more of these risks or uncertainties materialize, or should the assumptions set out in the section entitled "Risk Factors" underlying those forward-looking statements prove incorrect, actual results may vary materially from those described herein. These forward-looking statements are made as of the date of this management's discussion and analysis or, in the case of documents incorporated by reference herein, as of the date of such documents, and we do not intend, and do not assume any obligation, to update these forward-looking statements, except as required by law. We cannot assure you that such statements will prove to be accurate as actual results and future events could differ materially from those anticipated in such statements. Investors are cautioned that forward-looking statements

are not guarantees of future performance and accordingly investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

CORPORATE UPDATE

The following items highlight our corporate activities during the year ended December 31, 2016 and anysubsequent development up until the date hereof.

PROGRAM UPDATES

APTO-253

Phase Ib Trial

APTO-253 is being evaluated by Aptose in a Phase 1b clinical trial in patients with relapsed / refractory hematologic malignancies. For the study, a modified dose schedule was selected, such that APTO-253 is being administered on the first two days of each 7-day dosing period of a 28-day cycle (i.e., days 1, 2, 8, 9, 15, 16, 22, 23). This resulted in lower per-administration dose levels to provide the same overall exposure per cycle achieved in the prior Phase 1 solid tumor study, and to more consistently achieve the minimum exposure levels at the end of each dosing period that may be important for efficacy.

The Phase 1b study was originally designed for approximately 15 patients to be enrolled in each of two arms of the dose escalation phase of the study: arm (A) was to include patients with acute leukemias (including acute myeloid leukemia ("AML")) and high-risk myelodysplastic syndromes ("MDS"); arm (B) was to include patients with lymphomas (Hodgkin's and non-Hodgkin's Lymphoma) and multiple myeloma, followed by enrollment of an additional fifteen (15) patients in each of two separate disease-specific expansion cohorts, for a total estimated enrollment of 60 patients.

Aptose modified the clinical trial design for the Phase 1b study, pending submission and review from regulatory authorities (Institutional Review Boards ("IRB") & the Food and Drug Administration ("FDA"), in order to focus all resources on the patient population most likely to benefit from APTO-253. Under the proposed modification, arm B of the dose-escalation phase of the study, as described above, will be discontinued. Arm A of the study, focused on patients with acute leukemias (particularly AML) and MDS remains unchanged.

Upon completion of the dose-escalation stage of the study and determination of the appropriate dose, the study would enroll hematologic cancer indications selected from the groups that will be studied in the dose-escalation phase, for enrollment in up to two planned disease-specific single-agent expansion cohorts.

For future development, upon selection of a lead hematologic indication from this Phase 1b study, combination of APTO-253 with a standard therapy would be considered.

Clinical Hold and Current Status

We announced in November 2015 that the FDA, following a voluntary suspension of dosing by Aptose and discussions with us, placed our Phase Ib clinical trial of APTO-253 in patients with hematologic cancers on clinical hold. This hold was intended to evaluate the administration methods within the trial and to ensure manufacturing and dosing procedures are consistent with FDA guidance and the Code of Federal Regulations.

The voluntary suspension of dosing by Aptose, followed by a clinical hold by the FDA, was initiated to evaluate manufacturing processes and procedures upon the report of an operational difficulty with an IV infusion pump at a clinical site. During dosing of a patient with 100 mg/m^2 dose, the clinical site experienced an infusion pump stoppage, caused by backflow pressure as a result of clogging of the in-line filter used during the infusion. A safety review of the relevant safety data had been completed prior to initial discovery of the manufacturing irregularities, and there have been no drug-related serious adverse events ("SAEs") reported. The observed pharmacokinetic levels in the patients treated were within the expected range. Thus, the clinical hold is based solely on the operation of the administration of the subject infusion at the clinical site which is related to a product chemistry issue and has not shown to be related to safety, efficacy or pharmacokinetic profile of the molecule.

We have worked with a chemistry-focused Contract Manufacturing Organization ("CMO") and determined that the root cause of the filter clogging event with the prior drug product was chemistry-based. Likewise, we guided a qualified CMO to introduce new methodologies to formulate APTO-253 into a drug product that is safe and stable, and which should not result in filter clogging events in the future. Good Manufacturing Practice ("GMP") batches of the Active Pharmaceutical Ingredient ("API") have been manufactured to provide material for formulation studies and to supply the clinical drug product into the future. Based on numerous formulation studies conducted by a CMO with expertise in formulation development, a new soluble and stable formulation for the drug product has been selected. In parallel with these studies, mock infusion studies using the newly formulated prototype drug product demonstrated no filter clogging, and supplementary mock infusion studies were performed at multiple CROs to ensure the durability and solubility of the new formulation to be used in the infusion process/filter clogging that caused the clinical hold. In order to respond to the FDA's inquiry on the filter clogging issue which could result in the clinical hold being removed, Aptose must articulate the root cause of the filter clogging incident to the FDA and demonstrate to the FDA that a newly manufactured batch of GMP-grade APTO-253 drug substance and drug product has been formulated and should not cause such incidents in the future. On September 12, 2016, we submitted a formal response to the FDA regarding the clinical hold of our Phase 1b clinical trial of APTO-253 in patients with hematologic cancers.

On October 12, 2016, we received a response from the FDA informing us that the clinical hold would remain in place until Aptose provides to the FDA the standard chemistry, manufacturing and control ("CMC") information on the final GMP drug substance and drug product that will be manufactured for the clinic. Data provided to the FDA in our response to the clinical hold questions were collected using prototype batches of API and drug product. As the drug substance was changed from a salt to a free base, and the proportions of the original excipients were modified in the drug product formulation, the FDA has requested additional information on the GMP-grade drug substance and drug product that is will be manufactured for use in the clinic prior to making a decision on the hold and approval for the re-initiation of the clinical trial.

We believe we have now developed a drug product that does not cause filter clogging or pump stoppage during simulated infusion studies. The new formulation of APTO-253 offers the potential for improved handling characteristics for administration by infusion and the potential for creating new intellectual property. However there can be no assurance that the FDA will remove the clinical, hold which could cause additional development costs to the Company.

On December 29, 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, we also announced that we would have to repeat the production of the fourth batch, a 40L batch that was the intended clinical supply because of a potential engineering design incompatibility that occurred during the filling process. At that time, we believed that the root cause of the drug product stability failure and a corrective action ("CAPA") could be determined rapidly and that another manufacturing campaign to produce a GMP grade clinical supply could be initiated in January 2017.

On January 23, 2017, we announced that the root cause and CAPA 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 recent manufacturing setbacks related to the intravenous formulation of APTO-253 with the intention of restoring the molecule to a state supporting clinical development and partnering.

CG'806

In June 2016, Aptose announced a definitive agreement with South Korean company CrystalGenomics, Inc. ("CG"), granting Aptose an exclusive option to research, develop and commercialize CG026806 ("CG'806") in all countries of the world except Korea and China, for all fields of use. CG'806 is a highly potent, non-covalent small molecule therapeutic agent. This multi-kinase inhibitor exhibits a picomolar IC50 toward the FMS-like tyrosine kinase 3 with the Internal Tandem Duplication ("FLT3-ITD") and potency against a host of mutant forms of FLT3, as well as single-digit nanomolar IC50's against Bruton's tyrosine kinase ("BTK") and its C481S mutant ("BTK-C481S"). Further, CG'806 is a multi-targeted BTK / FLT3-ITD inhibitor, as it impacts other relevant oncogenic targets, including the Aurora kinases (AURK), RET, MET, DDR2, and SRC kinases.

Aptose paid US$1.0 million (CA$1.294 million) (the "Option Grant Fee") to CG to acquire the option. Should we elect to exercise the option prior to the earlier of (i) filing of an Investigational New Drug ("IND") application with the FDA, (ii) first dosage of a human in a clinical trial, (iii) payment of the Option Exercise Fee or (iii) twenty-four (24) months after the payment of the Option Grant Fee, we would pay an additional US$2.0 million (the "Option Exercise Fee") in cash or combination of cash and common shares, and would receive full development and commercial rights for the program in all territories outside of the Republic of Korea and China. The agreement can only be terminated by Aptose without cause or by both parties in the event of a material breach.

As a potent inhibitor of FLT3-ITD, CG'806 may become an effective therapy in this subset of AML patients, as the FLT3-ITD mutation occurs in approximately 30% of patients with AML. Importantly, CG'806 targets other oncogenic kinases which may also be operative in FLT3-ITD AML, including RET and SRC family kinases, thereby potentially allowing the agent to become an important therapeutic option for this difficult-to-treat patient population.

The C481S mutation of BTK arises from therapy with covalent, irreversible BTK inhibitors that target the active site Cysteine ("Cys") residue of BTK, thereby conferring resistance to other covalent BTK inhibitors. As a non-covalent, reversible inhibitor, CG'806 does not rely on the Cysteine 481 residue for inhibition of the BTK enzyme. Consequently, patients relapsed, refractory or intolerant to other commercially approved or development stage BTK inhibitors with chronic lymphocytic leukemia ("CLL") or mantle cell lymphoma ("MCL") may continue to be sensitive to CG'806 therapy.

CG'806 is currently in route scouting studies to select an appropriate synthetic pathway to manufacture the molecule, in formulation development studies, and in various preclinical biological pathway and animal efficacy studies. Provided the studies continue on the anticipated timeline, Aptose expects to file an IND application for a first-in-human clinical trial in late 2017 or early 2018. CG'806 is being developed with the intent to deliver the agent as a once-daily, oral therapeutic.

Multi-Targeting Bromodomain Program

In November 2015, Aptose entered into a definitive agreement with Moffitt Cancer Center for exclusive global rights to potent, dual-targeting, single-agent inhibitors for the treatment of hematologic and solid tumor cancers. These small molecule agents are highly differentiated inhibitors of the Bromodomain and Extra-Terminal motif ("BET") protein family members, which simultaneously target specific kinase enzymes. The molecules developed by Moffitt were reported to exhibit potency against the BET family members, including bromodomain 4 ("BRD4"), and specific oncogenic kinases which, when inhibited, are synergistic with BET inhibition. Under the agreement, Aptose has access to the drug candidates developed by Moffitt and the underlying intellectual property covering certain chemical modifications enabling bromodomain ("BRD") inhibition on the chemical backbone of a kinase inhibitor.

In January 2017, Aptose terminated the collaboration with Moffitt Cancer Center for the development of the dual BRD4 / JAK2 inhibitor program.

Multi-Targeting Epigenetic Program

In November 2015, Aptose also announced an exclusive drug discovery partnership with Laxai Avanti Life Sciences ("LALS") for the development of next generation epigenetic-based therapies. Under the agreement, LALS is responsible for optimizing candidates derived from Aptose's relationship with the Moffitt Cancer Center. Aptose will own global rights to all newly discovered candidates characterized and optimized under the collaboration, including all generated intellectual property. As of November 2016, Aptose and LALS have generated novel compounds that inhibit both the bromodomain proteins and oncogenic kinases, while improving pharmaceutical properties that could serve as a basis for further optimization towards a lead preclinical candidate. However, due to a prioritization of development efforts, Aptose and LALS have suspended work on the program, and the collaboration with LALS has been terminated. However, the program delivered novel IP and hit molecules for further optimization. As a consequence, Aptose may choose to out-license the program**.**

FINANCING ACTIVITIES

At-The-Market ("ATM") Facility

On April 2, 2015, Aptose entered into an at-the-market equity facility ("ATM Facility") with Cowen and Company, LLC, acting as sole agent. Under the terms of this facility, Aptose may, from time to time, sell common shares having an aggregate offering value of up to US$20 million through Cowan and Company, LLC. The Company determines, at its sole discretion, the timing and number of shares to be sold under the ATM Facility.

During the year ended December 31, 2016, the Company issued 3,673,933 common shares through the ATM raising net proceeds of USD$5.69 million or CDN$7.55 million. Costs associated with the proceeds included a 3% cash commission as well as legal and accounting fees.

Subsequent to the year end, we issued an additional3,127,836 common shares under the ATM Facility for gross proceeds of US$3.707million.

April 2014

In April 2014, we completed a public offering of common shares. Aptose issued 4,708,334 (56,500,000 pre-consolidation) common shares at a purchase price of $6.00 ($0.50 pre-consolidation) per common share, including 541,667 (6,500,000 pre-consolidation) common shares pursuant to the partial exercise of an over-allotment option, for aggregate gross proceeds of $28.3 million. The total costs associated with the transaction were approximately $2.7 million which includes a cash commission of $2.0 million based on 7% of the gross proceeds received as part of the offering.

December 2013

In December 2013, Aptose completed a public offering of common shares. Aptose issued 1,060,833 (pre-consolidation 12,730,000) common shares at a price of $6.60 (pre-consolidation $0.55) per common share and an additional 159,125 (pre-consolidation 1,909,500) common shares upon the exercise of the overallotment option for aggregate gross proceeds of $8.1 million.

The total costs associated with the transaction were approximately $1.1 million which include a cash commission of $483 thousand based on 6% of the gross proceeds received as part of the offering, and the issuance of 73,198 (pre-consolidation 878,370) broker warrants with an estimated fair value of $350 thousand. The fair value of these warrants was determined using the Black Scholes model with a 24 month time to maturity, an assumed volatility of 130% and a risk free interest rate of 1.5%. Each broker warrant was exercisable into one common share of the Company at a price of $6.60 (pre-consolidation $0.55) for a period of twenty four months following closing of the offering.

WARRANT EXERCISES

During the year ended December 31, 2015, 81,000 Common Share purchase warrants were exercised for proceeds of $348,000. During the seven months ended December 31, 2014, 1,231,000 Common Share purchase warrants were exercised for proceeds of $6,648,000. During the year ended December 31, 2016 the remaining warrants from a 2011 financing expired. As at December 31, 2016 there are no outstanding warrants.

LIQUIDITY AND CAPITAL RESOURCES

Since its inception, Aptose has financed its operations and technology acquisitions primarily from equity and debt financing, proceeds from the exercise of warrants and stock options, and interest income on funds held for future investment.

We currently do not earn any revenues from our drug candidates and are therefore considered to be in the development stage. The continuation of our research and development activities and the commercialization of the targeted therapeutic products are dependent upon our ability to successfully finance and complete our research and development programs through a combination of equity financing and payments from strategic partners. We have no current sources of significant payments from strategic partners.

In managing its liquidity risk, the Company has considered its available cash and cash equivalents and has reprioritized its resources towards the development of CG 806. This reprioritization has resulted in reduced expected cash outflows for the year ending December 31, 2017 relative to what was forecast as of September 30, 2016. The Company has also considered additional cash raised through its At-The-Market ("ATM") facility of $US 3.7M since December 31, 2016 and its ability to continue to raise funds under this facility in 2017 in assessing whether it will have sufficient resources to fund research and development operations through to at least the year ending December 31, 2017.

After considering the above factors, management have concluded that there are no material uncertainties related to events or conditions that may cast substantial doubt upon the Company's ability to continue as a going concern. However, the estimates made by management in reaching this conclusion are based on information available as of the date this report was authorized for issuance. Accordingly, actual experience will differ from those estimates and the variation may be material.

CASH POSITION

At December 31, 2016, we had cash and cash equivalents of $10.7 million compared to cash and cash equivalents and investments of $19.7 million at December 31, 2015. We generally invest our cash in excess of current operational requirements in highly rated and liquid instruments. Investment decisions are made in accordance with an established investment policy administered by senior management and overseen by our Audit Committee and Board of Directors. As at December 31, 2016, our cash and cash equivalents consisted of cash of $3.9 million (December 31, 2015 - $761 thousand) and in funds deposited into high interest savings accounts in both Canadian and US funds totaling $6.7 million (December 31, 2015 - $10.7 million). Working capital (representing primarily cash, cash equivalents, investments and other current assets less current liabilities) at December 31, 2016 was $9.6 million (December 31, 2015 –$18.5 million). Total assets as of December 31, 2016 total $11.6 million (December 31, 2015 - $21.2 million).

We do not expect to generate positive cash flow from operations for the foreseeable future due to additional research and development costs, including costs related to drug discovery, preclinical testing, clinical trials, manufacturing costs and operating expenses associated with supporting these activities. It is expected that negative cash flow will continue until such time, if ever, that we receive regulatory approval to commercialize any of our products under development and/or royalty or milestone revenue from any such products exceeds expenses.

RESULTS OF OPERATIONS

Our net loss for the year ended December 31, 2016 was $18.6 million ($1.46 per share) compared with $14.6 million ($1.23 per share) during the year ended December 31, 2015 and with a loss of $7.8 million ($0.67 per share) in the seven months ended December 31, 2014.

The increase in net loss during the year ended December 31, 2016 compared with the year ended December 31, 2015 is primarily due to higher research and development activities related to the $1.294 million option fee for CG'806, costs associated with APTO-253 and the new Moffitt/LALS program as well as additional headcount in the research and clinical departments to support these activities. In addition, the lower Canadian dollar resulted in an increase in our US dollar denominated costs in comparison with the prior year. Additionally, we recognized net finance income of $1.5 million in the prior year period mostly due to gains on our US dollar denominated cash and cash equivalents compared with a net finance income of $39 thousand in the current year period due to interest income net of foreign exchange losses on our US dollar denominated cash and cash equivalents.

The increase in net loss and comprehensive loss in the year ended December 31, 2015 compared with the seven months ended December 31, 2014 is due to a twelve month period compared with a seven month period as well as increased research and development costs associated with the APTO-253 Phase Ib clinical trial described above for which the first patient was enrolled in January 2015. The increased research and development costs were offset by a higher finance income related to foreign currency gains on our USD cash and cash equivalents balances due to the devaluation of the Canadian dollar.

We utilized cash of $16.4 million in our operating activities in the year ended December 31, 2016 compared with $12.7 million in the year ended December 31, 2015 and $6.7 million in the seven months ended December 31, 2014. The increase in cash utilized in the current year is predominantly due to increased research and development activities

At December 31, 2016, we had cash and cash equivalents of $10.7 million compared to cash and cash equivalents and investments of $19.7 million at December 31, 2015.

SELECTED ANNUAL FINANCIAL DATA

The following selected consolidated financial data have been derived from, and should be read in conjunction with, the accompanying audited consolidated financial statements for the year ended December 31, 2016 (the "Financial Statements") which are prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board.

Consolidated Statements of Loss and Comprehensive Loss

(amounts in Canadian thousands except for per common share data)		Year ended December 31, 2016		Year ended December 31, 2015		7 months ended December 31 2014
REVENUE	**$**	**—**	$	—	$	—
EXPENSES						
Research and development		**10,322**		**6,254**		**2,404**
General and administrative		**8,344**		**9,845**		**5,542**
Operating expenses		**18,666**		**16,099**		**7,946**
Finance expense		**66**		**43**		**104**
Finance income		**(105)**		**(1,516)**		**(279)**
Net finance expense (income)		**(39)**		**(1,473)**		**(175)**
Net loss and total comprehensive loss for the period		**18,627**		**14,626**		**7,771**
Basic and diluted loss per common share	**$**	**1.46**	**$**	**1.23**	**$**	**0.67**
Weighted average number of common shares outstanding used in the calculation of:						
Basic and diluted loss per share		**12,743**		**11,906**		**11,605**
Total Assets		**11,610**	**$**	**21,249**	**$**	**31,600**
Total Long-term liabilities	**$**	**—**	$	—	$	—

Research and Development

Research and development expenses totaled $10.3 million in the year ended December 31, 2016 compared with $6.3 million in the year ended December 31, 2015 and totaled $2.4 million for the seven months ended December 31, 2014. Research and development costs consist of the following:

Components of research and development expenses:

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
Research and Development costs	$ 6,442	$ 4,046	$ 1,352
Crystal Genomics Option Fee (a)	1,294	-	-
Salaries	2,246	1,969	1,019
Stock-based compensation	293	210	29
Depreciation of equipment	47	29	4
	$ 10,322	$ 6,254	$ 2,404

Expenditures for the year ended December 31, 2016 increased significantly over the year ended December 31, 2015 due to the following reasons:

- Research and development activities related to the option fee for CG'806;
- Costs associated with the LALS/Moffitt collaboration developing epigenetic single molecule inhibitors of multiple targets, including the BET proteins, and other kinases for which no comparable expenses existed in the prior year periods;
- Increased research and clinical operations headcount and related costs;
- Formulation and manufacturing costs associated with APTO-253 and the root cause analysis of the filter clogging identified in November 2015; and
- Increased Contract Research Organization costs related to consultants and advisors as we work towards returning APTO-253 to the clinic.

During the year ended December 31, 2016, we paid US$1.0 million (CA$1.294 million) to CG for an option fee related to the CG'806 technology. Should we elect to exercise the option prior to filing of an IND application with the FDA, we would pay an additional US$2.0 million in cash or combination of cash and common shares, and would receive full development and commercial rights for the program in all territories outside of Korea and China. No comparable expense existed in the same period in the prior year.

Expenditures for the year ended December 31, 2015 increased significantly over the seven months ended December 31, 2014 (on an annualized basis) due to the following:

- Costs associated with the Phase 1b clinical trial of APTO-253 in patients with relapsed or refractory hematologic malignancies including clinical site costs, patient costs, contract research organization and consulting charges. The first patient in the trial was enrolled in January 2015;
- Development costs related to the Moffitt/LALS programs which were initiated in the fourth quarter of 2015;
- Formulation, manufacturing and compliance costs related to the development of APTO-253 including costs related to the clinical hold described above;
- Additional payroll related costs in the clinical department due to restructuring to support ongoing activities; and
- The increased cost of US dollar denominated expenditures due to the devaluation of the CDN dollar in 2015.

Stock-based compensation costs allocated to research and development increased in the year ended December 31, 2016 compared with the year ended December 31, 2015 to reflect option grants to new employees hired in the second half of 2015 as the expense related to those grants was amortized 50% in the first 12 months.

Stock-based compensation expense increased in the year ended December 31, 2015 compared with the seven months ended December 31, 2014 primarily due to option grants to new employees and advisors during the year.

General and Administrative

General and administrative expenses totaled $8.3 million in the year ended December 31, 2016 compared to $9.8 million in the year ended December 31, 2015 and $5.5 million in the seven months ended December 31, 2014.

Components of general and administrative expenses:

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014 (note 17)
General and administrative excluding salaries	$ 3,412	$ 4,317	$ 2,421
Salaries	3,095	2,859	1,505
Stock-based compensation	1,730	2,602	1,598
Depreciation of equipment and amortisation	107	67	18
	$ 8,344	$ 9,845	$ 5,542

General and administrative expenses excluding salaries, decreased in the year ended December 31, 2016 compared with the year ended December 31, 2015. The decrease is the result of lower travel, consulting and legal costs in the current year related to transactions completed in the prior year as well as lower press release and filing costs associated with a lower cost service provider in the current year periods.

Salary charges in the year ended December 31, 2016 increased in comparison with the year ended December 31, 2015 due to additional headcount in the first half of 2016 compared with the first half of 2015 as well as a higher average CA/US exchange rate which increased the cost of our US denominated salaries in the first six months of 2016 in comparison with the prior year, and higher bonus expense recognized in the current period.

Stock-based compensation decreased in the year ended December 31, 2016 compared with the year ended December 31, 2015 due to large option grants in April, June and July 2014 which vested 50% during the first year and therefore contribute to higher stock-based compensation expense during the first twelve month period captured in the prior year period.

Stock-based compensation expense increased in the year ended December 31, 2015 compared with the seven months ended December 31, 2014 primarily due to option grants to new employees and advisors during the year.

Finance Expense

For the year ended December 31, 2016, finance expense totaled $66 thousand compared with $43 thousand for the same period in the prior year. Finance expense includes the following items:

	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
Interest expense	$ -	$ 25	$ 30
Accretion expense	-	18	28
Foreign exchange loss on cash and cash equivalents	66	-	46
	$ 66	$ 43	$ 104

Interest and accretion expense incurred in the year ended December 31, 2015 and the seven months ended December 31, 2014 relates to the 10% convertible promissory notes described above. There were no interest-bearing liabilities outstanding at December 31, 2015. Foreign exchange loss is the result of the fluctuation of exchange rates between US and Canadian dollars and the impact on our US dollar denominated cash balances.

Finance Income

Finance income totaled $105 thousand in the year ended December 31, 2016 compared to $1.5 million in the year ended December 31, 2015.

Finance income includes the following items:

(in thousands)	Year ended December 31, 2016	Year ended December 31, 2015	7 months ended December 31, 2014
Interest income	$ 105	$ 286	$ 279
Foreign exchange gain on cash and cash equivalents	–	1,230	–
	$ 105	$ 1,516	$ 279

Interest income represents interest earned on our cash and cash equivalent and investment balances. Foreign exchange gains are the result of an increase in the value of US dollar denominated cash and cash equivalents balances during such periods due to a depreciation of the Canadian dollar compared to the US dollar.

Net loss and total comprehensive loss for the year

For the reasons discussed above, our net loss for the year ended December 31, 2016 increased to $18.6 million ($1.46 per share) compared to $14.6 million ($1.23 per share) in the year ended December 31, 2015.

QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

The selected financial information provided below is derived from our unaudited quarterly financial statements for each of the last eight quarters.

(Amounts in 000's except for per common share data)	**Q4 Dec 31, 2016**	**Q3 Sept 30, 2016**	**Q2 June 30, 2016**	**Q1 Mar 31, 2016**	**Q4 Dec 31, 2015**	**Q3 Sept 30, 2015**	**Q2 June 30, 2015**	**Q1 Mar 31, 2015**
Revenue	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Research and development expense	2,550	2,164	3,293	2,315	2,340	1,722	1,308	884
General and administrative expense	1,461	1,932	2,343	2,608	2,364	2,248	2,504	2,729
Net loss	(3,926)	(4,017)	(5,612)	(5,072)	(4,431)	(3,261)	(3,365)	(3,569)
Basic and diluted net loss per share	$ (0.26)	$ (0.31)	$ (0.46)	$ (0.42)	$ (0.38)	$ (0.27)	$ (0.28)	$ (0.30)
Cash (used in) operating activities	$ (3,984)	$ (3,277)	$ (4,648)	$ (4,523)	$ (3,619)	$ (2,567)	$ (4,296)	$ (2,182)

Research and development expenditures increased in the three months ended June 30, 2016 due to the $1.294 million option fee paid to CG as previously described herein. Research and development expenses increased in the quarters ended December 31, 2016, September 30, 2016, March 31, 2016 and December 31, 2015 in comparison to the prior year quarters due to the Phase 1b clinical trial of APTO-253 for which the first patient was enrolled in January 2015 and was subsequently placed on hold in November 2015, and the costs associated with the quality, manufacturing and formulation work including the clinical hold previously described herein as well as costs related to the collaboration agreement with Moffitt and LALS.

General and administrative costs increased in the three months ended March 31, 2016 due to our US dollar expenses and payroll costs which were more costly due to the devaluation of the Canadian dollar over that time period. The decrease in general and administrative costs in the three months ended September 30, 2016 and December 31, 2016 is primarily due to lower stock based compensation expense and the completion of certain projects.

Cash used in operating activities fluctuates significantly due primarily to timing of payments and increases and decreases in the accounts payables and accrued liabilities balances.

THREE MONTHS ENDED DECEMBER 31, 2016 AND 2015 (UNAUDITED)

(Amounts in 000's except for per common share data)		Dec 31, 2016		Dec 31, 2015
Revenue	$	—	$	—
Research and development expense		2,550		2,340
General and administrative expense		1,461		2,364
Operating expenses		**4,011**		**4,794**
Finance expense		—		—
Finance income		(85)		(273)
Net financing income		(85)		(273)
Net loss		**3,926**		**(4,431)**
Basic and diluted net loss per share	**$**	**(0.26)**	**$**	**(0.38)**

Our net loss for the three months ended December 31, 2016 was $3.9 million ($0.26 per share) compared with $4.4 million ($0.38 per share) in the same period in the prior year.

Research and development costs increased to $2.6 million in the three months ended December 31, 2016 compared with $2.3 million incurred in the three months ended December 2015. The Company incurred higher costs for formulation studies and manufacturing costs for the APTO-253 product in the three months ended December 31, 2016 than in the comparable period, and these were offset by lower expenses for the contract research organization costs to manage the study. In addition, in the current period the Company was conducting studies related to its CG'806 program following the licensing of the technology in June 2016.

General and administrative expenses decreased to $1.5 million in the three months ended December 31, 2016 compared with $2.4 million in the three months ended December 31, 2015. The decrease despite the increased cost of our US dollar expenditures due to the devaluation of the Canadian dollar is related to lower stock option compensation and lower consulting fees related to projects that were active and completed in the prior quarter.

USE OF PROCEEDS

The following table provides an update on the anticipated use of proceeds raised in the December 2013 and April 2014 equity offerings along with amounts actually expended.

As of December 31, 2016 the following expenditures have been incurred:

(in thousands)		Previously disclosed		Spent to Date		Remaining to be spent (note 1)
Phase 1b clinical trial	$	3,350	$	2,964	$	260
Depending on the Phase 1b clinical trial of APTO-253 results, fund single agent expansion and drug combination focused Phase 2 Trials in both AML and MDS patients	$	7,800	$	nil	$	nil
APTO-253 manufacturing program, including root cause and CAPA studies	$	2,250	$	2,811	$	1,000
Research and development programs	$	2,000	$	3,155	$	1,771
General and corporate purposes	$	15,869	$	17,008	$	2,300
	$	**31,269**	**$**	**25,938**	**$**	**5,331**

Note 1: these amounts reflect the expected allocation of the remaining $5.3 million in proceeds from the December 2013 and April 2014 equity offerings. In accordance with our recent decision to prioritize our resources toward the development of CG'806 and to temporarily delay clinical activities with APTO-253, we have decided to reallocate such remaining amount to the following CG'806 development plans: to determine root cause analysis of manufacturing concerns for APTO-253 and for general corporate purposes.

The Company has other cash available to fund future operations as a result of other capital raises for which no allocation was stipulated.

CRITICAL ACCOUNTING POLICIES

Critical Accounting Policies and Estimates

We periodically review our financial reporting and disclosure practices and accounting policies to ensure that they provide accurate and transparent information relative to the current economic and business environment. As part of this process, Aptose has reviewed its selection, application and communication of critical accounting policies and financial disclosures. Management has discussed the development and selection of the critical accounting policies with the Audit Committee of the Board of Directors and the Audit Committee has reviewed the disclosure relating to critical accounting policies in this MD&A. Other important accounting policies are described in note 3 of the audited financial statements.

Management's assessment of the Company's ability to continue as a going concern involves making a judgment, at a particular point in time, about inherently uncertain future outcomes and events or conditions. Please see the "*Liquidity and Capital Resources*" section in this document for a discussion of the factors considered by management in arriving at its assessment.

(a) Valuation of stock-based compensation and share purchase warrants:

Management measures the costs for stock-based payments and share purchase warrants using market-based option valuation techniques. Assumptions are made and judgment is used in applying valuation techniques. These assumptions and judgments include estimating the future volatility of the share price, expected dividend yield, future employee turnover rates and future share option and share purchase warrant behaviors and corporate performance. Such judgments and assumptions are inherently uncertain. The increase or decrease of one of these assumptions could materially increase or decrease the fair value of share-based compensation and share purchase warrants issued and the associated expense.

(b) Valuation of tax accounts:

Uncertainties exist with respect to the interpretation of complex tax regulations and the amount and timing of future taxable income. Currently, we have deductible temporary differences which would create a deferred tax asset. Deferred tax assets are recognized for all deductible temporary differences to the extent that it is probable that future taxable profit will be available against which the deductible temporary differences can be utilized. Management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable profits together with future tax planning strategies. To date, we have determined that none of our deferred tax assets should be recognized. Our deferred tax assets are mainly comprised of our net operating losses from prior years and prior year research and development expenses. These tax pools relate to entities that have a history of losses, have varying expiry dates, and may not be used to offset taxable income. As well, there are no taxable temporary differences or any tax planning opportunities available that could partly support the recognition of these losses as deferred tax assets. The generation of future taxable income could result in the recognition of some portion or all of the remaining benefits, which could result in an improvement in our results of operations through the recovery of future income taxes.

(c) Valuation of contingent liabilities:

We utilize considerable judgment in the measurement and recognition of provisions and Aptose's exposure to contingent liabilities. Judgment is required to assess and determine the likelihood that any potential or pending litigation or any and all potential claims against us may be successful. We must estimate if an obligation is probable as well as quantify the possible economic cost of any claim or contingent liability. Such judgments and assumptions are inherently uncertain. The increase or decrease of one of these assumptions could materially increase or decrease the fair value of the liability and the associated expense.

ACCOUNTING PRONOUNCEMENTS ADOPTED DURING THE YEAR

Amendments to IAS 1

Effective January 1, 2016, the Company adopted the amendments to IAS1*Presentation of Financial Statements* issued by the IASB in December 2014. The impact of adoption of these amendments did not to have a material impact on the financial statements.

RECENT ACCOUNTING PRONOUNCEMENTS NOT YET ADOPTED

IFRS 9, Financial Instruments ("IFRS 9"):

IFRS 9 (2014) introduces new requirements for the classification and measurement of financial assets. Under IFRS 9 (2014), financial assets are classified and measured based on the business model in which they are held and the characteristics of their contractual cash flows. The standard introduces additional changes relating to financial liabilities and also amends the impairment model by introducing a new 'expected credit loss' model for calculating impairment. IFRS 9 (2014) also includes a new general hedge accounting standard which aligns hedge accounting more closely with risk management. The Company intends to adopt IFRS 9 (2014) in its consolidated financial statements for the annual period beginning on January 1, 2018. The extent of the impact of adoption of the standard has not yet been determined.

IFRS 16, Leases ("IFRS 16")
On January 13, 2016, the IASB issued IFRS 16 Leases. The new standard is effective for annual periods beginning on or after January 1, 2019. Earlier application is permitted for entities that apply IFRS 15 Revenue from Contracts with Customers at or before the date of initial adoption of IFRS 16. IFRS 16 will replace IAS 17 Leases. This standard introduces a single lessee accounting model and requires a lessee to recognize assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. The extent of the impact of adoption of the standard has not yet been determined.

Recognition of Deferred Tax Assets for Unrealized Losses (Amendments to IAS 12)
On January 19, 2016 the IASB issued Recognition of Deferred Tax Assets for Unrealized Losse (Amendments to IAS 12). The amendments apply retrospectively for annual periods beginning on or after January 1, 2017. Earlier application is permitted. The extent of the impact of adoption of the standard has not yet been determined.

RELATED PARTY TRANSACTIONS

In March 2015, the Company entered into an agreement with the Moores Cancer Center at the University of California San Diego (UCSD) to provide pharmacology lab services to the Company. Dr. Stephen Howell is the Acting Chief Medical Officer of Aptose and is also a Professor of Medicine at UCSD and will be overseeing the laboratory work. The research services will be provided from April 1, 2015 to March 31, 2016 for an annual fee of US$154,456 to be paid to UCSD in monthly installments. This research services agreement was approved by the Aptose Board of Directors on February 23, 2016 for an additional 12 month period beginning April 1, 2016 and for an annual fee of up to US$200,000. This transaction is in the normal course of business and will be measured at the amount of consideration established and agreed to by the related parties.

See note 14 to the audited financial statements for disclosures of key management personnel compensation and directors' compensation.

Contractual Obligations and Off-Balance Sheet Financing

At December 31, 2016, we had contractual obligations requiring annual payments as follows:

	Less than 1 year	1 - 3 years	3 - 5 years	Total
Operating leases	$ 358	$ 649	$ 59	$ 1,066

The Company has entered into various contracts with service providers with respect to the clinical development of APTO-253 and for its CG'806 development program. These contracts will result in future payments commitments of up to $430 thousand.

As at December 31, 2016, we have not entered into any off-balance sheet arrangements other than the operating leases for our offices and labs and certain office equipment.

FINANCIAL INSTRUMENTS

(a) Financial instruments

(in thousands)	2015	2014
Financial assets:		
Cash and cash equivalents, consisting of high interest savings accounts, measured at amortized cost	$ 10,662	$ 11,503
Investments, consisting of guaranteed investment certificates, measured at amortized cost.	-	8,245
Financial liabilities:		
Accounts payable and accrued liabilities, measured at amortized cost	1,770	2,356

At December 31, 2016, there are no significant differences between the carrying values of these amounts and their estimated market values due to their short-term nature.

(b) Financial risk management

We have exposure to credit risk, liquidity risk and market risk. Our Board of Directors has the overall responsibility for the oversight of these risks and reviews our policies on an ongoing basis to ensure that these risks are appropriately managed.

(i) Credit risk

Credit risk is the risk of financial loss to us if a customer, partner or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from our cash and cash equivalents and investments. The carrying amount of the financial assets represents the maximum credit exposure.

We manage credit risk for our cash and cash equivalents and investments by maintaining minimum standards of R1-low or A-low investments and we invest only in highly rated Canadian corporations with debt securities that are traded on active markets and are capable of prompt liquidation.

(ii) Liquidity risk

Liquidity risk is the risk that we will not be able to meet our financial obligations as they come due. To the extent that we do not believe we have sufficient liquidity to meet our current obligations, the Board considers securing additional funds through equity or debt transactions. We manage our liquidity risk by continuously monitoring forecasts and actual cash flows. All of our financial liabilities are due within the current operating period.

(iii) Market risk

Market risk is the risk that changes in market prices, such as interest rates, foreign exchange rates and equity prices will affect our income or the value of our financial instruments.

We are subject to interest rate risk on our cash and cash equivalents however we do not believe that the results of operations or cash flows would be affected to any significant degree by a sudden change in market interest rates relative to interest rates on the investments, owing to the relative short-term nature of the investments. We do not have any material interest bearing liabilities subject to interest rate fluctuations.

Currency risk is the risk that future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. We are exposed to currency risk from employee costs as well as the purchase of goods and services primarily in the United States and the cash balances held in foreign currencies. Fluctuations in the US dollar exchange rate could potentially have a significant impact on the Company's results. Assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the US dollar would result in an increase or decrease in loss for the year and comprehensive loss of $638 thousand (December 31, 2015- $576 thousand, December 31, 2014 - $50 thousand). Balances in foreign currencies at December 30, 2016 are as follows:

	US$ Balances		
(in thousands)	**December 31, 2016**	**December 31, 2015**	**December 31, 2014**
Cash and cash equivalents	$ 5,798	$ 5,000	$ 66
Accounts payable and accrued liabilities	(1,044)	(838)	(565)
Balance, end of period	$ 4,754	$ 4,162	$ (499)

The Company does not have any forward exchange contracts to hedge this risk.

The Company does not invest in equity instruments of other corporations.

(c) Capital management

Our primary objective when managing capital is to ensure that we have sufficient cash resources to fund our development activities and to maintain our ongoing operations. To secure the additional capital necessary to pursue these plans, we may attempt to raise additional funds through the issuance of equity or by securing strategic partners.

We include cash and cash equivalents and investments in the definition of capital.

We are not subject to externally imposed capital requirements and there has been no change with respect to the overall capital risk management strategy during the year ended December 31, 2016.

OUTLOOK

Until one of our drug candidates receives regulatory approval and is successfully commercialized, Aptose will continue to incur operating losses. The magnitude of these operating losses will be largely affected by the timing and scope of future research and development, clinical trials and the Company's ability to raise additional and ongoing working capital and/or establish effective partnerships to share the costs of development and clinical trials.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision with respect to our common shares, you should carefully consider the following risk factors, in addition to the other information included or incorporated by reference into the most recently filed annual information form, as well as our historical consolidated financial statements and related notes. Management has reviewed the operations of the Company in conjunction with the Board of Directors and identified the following risk factors which are monitored on a bi-annual basis and reviewed with the Board of Directors. The risks set out below are not the only risks we face. If any of the following risks occur, our business, financial condition, prospects or results of operations and cash flows would likely suffer. In that case, the trading price of our common shares could decline and you may lose all or part of the money you paid to buy our common shares

We have a history of operating losses. We expect to incur net losses and we may never achieve or maintain profitability.

We have not been profitable since our inception in 1986. We reported net losses of $18.6 million in the fiscal year ended December 31, 2016, $14.6 million in the fiscal year ended December 31, 2015, and $7.8 million in the 7 months ended December 31, 2014, and as of December 31, 2016, we had an accumulated deficit of $251.5 million.

We have not generated any significant revenue to date and it is possible that we will never have sufficient product sales revenue (if any) to achieve profitability. 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 our current product candidates CG'806 or APTO-253 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.

We are an early stage development company.

We are at an early stage of development. In the past five years, none of our potential products has obtained regulatory approval for commercial use and sale in any country and as such, no significant revenues have resulted from product sales. Significant additional investment will be necessary to complete the development of any of our product candidates. Preclinical and clinical trial work must be completed before our potential products could be ready for use within the markets that we have identified. We may fail to develop any products, obtain regulatory approvals, enter clinical trials or commercialize any products. We do not know whether any of our potential product development efforts will prove to be effective, meet applicable regulatory standards, obtain the requisite regulatory approvals, be capable of being manufactured at a reasonable cost or be accepted in the marketplace. We also do not know whether sales, license fees or related royalties will allow us to recoup any investment we make in the commercialization of our products.

The product candidates we are currently developing are not expected to be commercially viable for at least the next several years and we may encounter unforeseen difficulties or delays in commercializing our product candidates. In addition, our potential products may not be effective or may cause undesirable side effects.

Our product candidates require significant funding to reach regulatory approval assuming positive clinical results. For example, our product candidate APTO-253 began enrolment in a Phase I clinical trial in patients with relapsed or refractory hematologic malignancies and was placed on clinical hold by the United States Food and Drug Administration ("**FDA**") following a voluntary suspension of dosing by us. We are currently delaying the development of APTO-253 but significant additional funding or a partnership will be necessary to complete, if required, Phase II or Phase III clinical trials. Such funding may be very difficult, or impossible to raise in the public or private markets or through partnerships. If funding or partnerships are not attainable, the development of these product candidates may be significantly delayed or stopped altogether. The announcement of a delay or discontinuation of development would likely have a negative impact on our share price.

We need to raise additional capital.

We have an ongoing need to raise additional capital. To obtain the necessary capital, we must rely on some or all of the following: additional share issues, debt issuances (including promissory notes), collaboration agreements or corporate partnerships and grants and tax credits to provide full or partial funding for our activities. Additional funding may not be available on terms that are acceptable to us or in amounts that will enable us to carry out our business plan.

Our need for capital may require us to:

- engage in equity financings that could result in significant dilution to existing investors;
- delay or reduce the scope of or eliminate one or more of our development programs;
- obtain funds through arrangements with collaborators or others that may require us to relinquish rights to technologies, product candidates or products that we would otherwise seek to develop or commercialize ourselves; or
- license rights to technologies, product candidates or products on terms that are less favourable to us than might otherwise be available;
- considerably reduce operations; or
- cease our 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 commencement and completion of clinical trials for our products, including the APTO-253 phase I clinical trial, 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 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 IRBs, 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 IRBs 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 IRBs 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, or 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 have contracted with multiple CMOs for the manufacture of APTO-253 to supply both the API as well as to perform formulation and optimization studies with the intent of supplying drug product acceptable to the FDA for our phase I clinical trial. The formulation and manufacture of APTO-253 is a complex process with many variables involved. We believe these pre-qualified CMOs have the capacity, the systems and the experience to supply APTO-253 for our phase I clinical trial and future clinical trials. We have qualified the manufacturing facilities and the FDA has also performed site audits for our selected CMOs. Any manufacturing failures, delays or compliance issues could cause further delays in the re-initiation of the phase I clinical trial. If we are able to re-initiate the phase I clinical trial any manufacturing failures, delays or compliance issues could impact our ability to complete the phase I clinical trial.

There can be no assurances that CMOs will be able to meet our timetable and requirements. We have not 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. If we are unable to arrange for alternative third-party manufacturing sources on commercially reasonable terms or in a timely manner, we may be further delayed 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.

Clinical trials are long, expensive and uncertain processes and the United States FDA or Health Canada may ultimately not approve any of our product candidates. We may never develop any commercial drugs or other products that generate revenues.

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 product candidate APTO-253 has entered a Phase Ib testing in patients with relapsed or refractory hematologic malignancies for which 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 and we delayed its development due to a lack of resources.

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.

Our failure to develop safe, commercially viable drugs would substantially impair our ability to generate revenues and sustain our operations and would materially harm our business and adversely affect our share price.

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 commencement and completion of clinical trials and our ability to secure the financing necessary to continue the development of our product candidates. The actual timing of these events can vary dramatically due to factors within and beyond our control, such as delays or failures in our 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. Our clinical trials may not be completed; we may not make regulatory submissions or receive regulatory approvals as planned; 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.

If we have difficulty enrolling patients in clinical trials, the completion of the trials may be delayed or cancelled.

As our product candidates advance from preclinical testing to clinical testing, and then through progressively larger and more complex clinical trials, we will need to enroll an increasing number of patients that meet our eligibility criteria. There is significant competition for recruiting cancer patients in clinical trials, and we may be unable to enroll the patients we need to complete clinical trials on a timely basis or at all. Certain factors that affect enrollment of patients onto our clinical trials are impacted by external forces that may be beyond our control. Such factors include, but are not limited to, the following:

- size and nature of the patient population;
- eligibility and exclusion criteria for the trial;
- design of the study protocol;
- competition with other companies for clinical sites or patients;
- the perceived risks and benefits of the product candidate under study;
- the patient referral practices of physicians; and
- the number, availability, location and accessibility of clinical trial sites.

If we are unable to successfully develop companion diagnostics for our therapeutic product candidates, or experience significant delays in doing so, we may not achieve marketing approval or realize the full commercial potential of our therapeutic product candidates.

We plan to develop companion diagnostics for our therapeutic product candidates. We expect that, at least in some cases, regulatory authorities may require the development and regulatory approval of a companion diagnostic as a condition to approving our therapeutic product candidates. We have limited experience and capabilities in developing or commercializing diagnostics and plan to rely in large part on third parties to perform these functions. We do not currently have any agreement in place with any third party to develop or commercialize companion diagnostics for any of our therapeutic product candidates.

Companion diagnostics are subject to regulation by the FDA, Health Canada and comparable foreign regulatory authorities as medical devices and may require separate regulatory approval or clearance prior to commercialization. If we, or any third parties that we engage to assist us, are unable to successfully develop companion diagnostics for our therapeutic product candidates, or experience delays in doing so, our business may be substantially harmed.

We rely and will continue to rely on third parties to conduct and monitor many of our preclinical studies and our clinical trials, and their failure to perform as required could cause substantial harm to our business.

We rely and will continue to rely on third parties to conduct a significant portion of our preclinical and clinical development activities. Preclinical activities include in vivo studies providing access to specific disease models, pharmacology and toxicology studies, and assay development. Clinical development activities include trial design, regulatory submissions, clinical patient recruitment, clinical trial monitoring, clinical data management and analysis, safety monitoring and project management, contract manufacturing and quality assurance. If there is any dispute or disruption in our relationship with third parties, or if they are unable to provide quality services in a timely manner and at a feasible cost, our active development programs will face delays. Further, if any of these third parties fails to perform as we expect or if their work fails to meet regulatory requirements, our testing could be delayed, cancelled or rendered ineffective.

We heavily rely on the capabilities and experience of our key executives and scientists and the loss of any of them could affect our ability to develop our products.

The loss of Dr. William G. Rice, our Chairman, President and Chief Executive Officer, or other key members of our staff, including Gregory Chow, our Senior Vice President and Chief Financial Officer, could harm us. We have employment agreements with Dr. Rice and Mr. Chow although such employment agreements do not guarantee their retention. We also depend on our scientific and clinical collaborators and advisors, all of whom have outside commitments that may limit their availability to us. In addition, we believe that our future success will depend in large part upon our ability to attract and retain highly skilled scientific, managerial, medical, clinical and regulatory personnel, particularly as we expand our activities and seek regulatory approvals for clinical trials. We routinely enter into consulting agreements with our scientific and clinical collaborators and advisors, key opinion leaders and academic partners in the ordinary course of our business. We also enter into contractual agreements with physicians and institutions who will recruit patients into our clinical trials on our behalf in the ordinary course of our business. Notwithstanding these arrangements, we face significant competition for these types of personnel from other companies, research and academic institutions, government entities and other organizations. We cannot predict our success in hiring or retaining the personnel we require for continued growth. The loss of the services of any of our executive officers or other key personnel could potentially harm our business, operating results or financial condition.

Our employees may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have a material adverse effect on our business.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include failures to comply with FDA regulations, provide accurate information to the FDA, comply with manufacturing standards we have established, comply with federal and state health-care fraud and abuse laws and regulations, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a substantial impact on our business and results of operations, including the imposition of substantial fines or other sanctions.

We may expand our business through the acquisition of companies or businesses or by entering into collaborations or by in-licensing product candidates, each of which could disrupt our business and harm our financial condition.

We may in the future seek to expand our pipeline and capabilities by acquiring one or more companies or businesses, entering into collaborations or in-licensing one or more product candidates. For example in November 2015 we licensed intellectual property from the Moffittt Cancer Center for exclusive global rights to potent, multi-targeting, single-agent inhibitors for the treatment of hematologic and solid tumor cancers.

Acquisitions, collaborations and in-licenses involve numerous risks, including, but not limited to:

- substantial cash expenditures;
- technology development risks;
- potentially dilutive issuances of equity securities;
- incurrence of debt and contingent liabilities, some of which may be difficult or impossible to identify at the time of acquisition;
- difficulties in assimilating the operations of the acquired companies;
- potential disputes regarding contingent consideration;
- diverting our management's attention away from other business concerns;
- entering markets in which we have limited or no direct experience;
- potential loss of our key employees or key employees of the acquired companies or businesses; and
- failure of the in-licensed agents or technologies to deliver the desired activities or functions.

We have experience in entering collaborations and in-licensing product candidates, however, we cannot provide assurance that any acquisition, collaboration or in-license will result in short-term or long-term benefits to us. We may incorrectly judge the value or worth of an acquired company or business or in-licensed product candidate. In addition, our future success would depend in part on our ability to manage the rapid growth associated with some of these acquisitions, collaborations and in-licenses. We cannot assure you that we would be able to successfully combine our business with that of acquired businesses, manage a collaboration or integrate in-licensed product candidates. Furthermore, the development or expansion of our business may require a substantial capital investment by us.

Negative results from clinical trials or studies of others and adverse safety events involving the targets of our products may have an adverse impact on our future commercialization efforts.

From time to time, studies or clinical trials on various aspects of biopharmaceutical products are conducted by academic researchers, competitors or others. The results of these studies or trials, when published, may have a significant effect on the market for the biopharmaceutical product that is the subject of the study. The publication of negative results of studies or clinical trials or adverse safety events related to our product candidates, or the therapeutic areas in which our product candidates compete, could adversely affect our share price and our ability to finance future development of our product candidates, and our business and financial results could be materially and adversely affected.

As a result of intense competition and technological change in the biotechnical and pharmaceutical industries, the marketplace may not accept our products or product candidates, and we may not be able to compete successfully against other companies in our industry and achieve profitability.

Many of our competitors have:

- drug products that have already been approved or are in development, and operate large, well-funded research and development programs in the biotechnical and pharmaceutical fields;
- substantially greater financial, technical and management resources, stronger intellectual property positions and greater manufacturing, marketing and sales capabilities, areas in which we have limited or no experience; and
- significantly greater experience than we do in undertaking preclinical testing and clinical trials of new or improved pharmaceutical products and obtaining required regulatory approvals.

Consequently, our competitors may obtain FDA, Health Canada and other regulatory approvals for product candidates sooner and may be more successful in manufacturing and marketing their products than we or our collaborators are.

Our competitor's existing and future products, therapies and technological approaches will compete directly with the products we seek to develop. Current and prospective competing products may be more effective than our existing and future products insofar as they may provide greater therapeutic benefits for a specific problem or may offer easier delivery or comparable performance at a lower cost.

Any product candidate that we develop and that obtains regulatory approval must then compete for market acceptance and market share. Our products may not gain market acceptance among physicians, patients, healthcare payers, insurers, the medical community and other stakeholders. Further, any products we develop may become obsolete before we recover any expenses we incurred in connection with the development of these products. As a result, we may never achieve profitability.

We may be unable to obtain patents to protect our technologies from other companies with competitive products, and patents of other companies could prevent us from manufacturing, developing or marketing our products.

Patent protection

The patent positions of pharmaceutical and biotechnology companies are uncertain and involve complex legal and factual questions. The United States Patent and Trademark Office and many other patent offices in the world have not established a consistent policy regarding the breadth of claims that they will allow in biotechnology patents.

Our pending patent applications may not result in issued patents and our issued patents may not be held valid and enforceable if challenged. Competitors may be able to circumvent any such issued patents by adoption of a competitive, though non-infringing product or process. Interpretation and evaluation of pharmaceutical or biotechnology patent claims present complex and often novel legal and factual questions. Our business could be adversely affected by increased competition in the event that any patent granted to it is held to be invalid or unenforceable or is inadequate in scope to protect our operations.

Allowable patentable subject matter and the scope of patent protection obtainable may differ between jurisdictions. If a patent office allows broad claims, the number and cost of patent interference proceedings in the United States, or analogous proceedings in other jurisdictions and the risk of infringement litigation may increase. If it allows narrow claims, the risk of infringement may decrease, but the value of our rights under our patents, licenses and patent applications may also decrease.

The scope of the claims in a patent application can be significantly modified during prosecution before the patent is issued. Consequently, we cannot know whether our pending applications will result in the issuance of patents or, if any patents are issued, whether they will provide us with significant proprietary protection or will be circumvented, invalidated or found to be unenforceable.

Publication of discoveries in scientific or patent literature often lags behind actual discoveries. Patent applications filed in the United States generally will be published 18 months after the filing date unless the applicant certifies that the invention will not be the subject of a foreign patent application. In many other jurisdictions, such as Canada, patent applications are published 18 months from the priority date. We may not be aware of such literature. Accordingly, we cannot be certain that the named inventors of our products and processes were the first to invent that product or process or that we were the first to pursue patent coverage for our inventions.

In addition, U.S. patent laws may change which could prevent or limit us from filing patent applications or patent claims in the United States to protect our products and technologies or limit the exclusivity periods that are available to patent holders for U.S. patents. For example, the Leahy-Smith America Invents Act, (the " **Leahy-Smith Act**") was signed into law in 2011 and includes a number of significant changes to U.S. patent law. These include changes to transition from a "first-to-invent" system to a "first-to-file" system and to the way issued patents are challenged. These changes may favour larger and more established companies that have more resources to devote to patent application filing and prosecution. It is not clear what, if any, impact the Leahy-Smith Act will ultimately have on the cost of prosecuting our patent applications in the United States, our ability to obtain patents in the United States based on our discoveries and our ability to enforce or defend our U.S. issued patents.

Until such time, if ever, that further patents are issued to us, we will rely upon the law of trade secrets to the extent possible given the publication requirements under international patent treaty laws and/or requirements under foreign patent laws to protect our technology and our products incorporating the technology. In this regard, we have adopted certain confidentiality procedures. These include: limiting access to confidential information to certain key personnel; requiring all directors, officers, employees and consultants and others who may have access to our intellectual property to enter into confidentiality agreements which prohibit the use of or disclosure of confidential information to third parties; and implementing physical security measures designed to restrict access to such confidential information and products. Our ability to maintain the confidentiality of our technology is crucial to our ultimate possible commercial success. The procedures adopted by us to protect the confidentiality of our technology may not be effective, third parties may gain access to our trade secrets or disclose our confidential technology. Further, by seeking patent protection in various countries, it is inevitable that a substantial portion of our technology will become available to our competitors, through publication of such patent applications.

Enforcement of intellectual property rights

Protection of the rights revealed in published patent applications can be complex, costly and uncertain. Our commercial success depends in part on our ability to maintain and enforce our proprietary rights. If third parties engage in activities that infringe our proprietary rights, our management's focus will be diverted and we may incur significant costs in asserting our rights. We may not be successful in asserting our proprietary rights, which could result in our patents being held invalid or a court holding that the third party is not infringing, either of which would harm our competitive position.

Others may design around our patented technology. We may have to participate in interference proceedings declared by the United States Patent and Trademark Office, European opposition proceedings, or other analogous proceedings in other parts of the world to determine priority of invention and the validity of patent rights granted or applied for, which could result in substantial cost and delay, even if the eventual outcome is favourable to us. Our pending patent applications, even if issued, may not be held valid or enforceable.

Trade secrets

We also rely on trade secrets, know-how and confidentiality provisions in our agreements with our collaborators, employees and consultants to protect our intellectual property. However, these and other parties may not comply with the terms of their agreements with us, and we might be unable to adequately enforce our rights or obtain adequate compensation for the damages caused by unauthorized disclosure or use of our trade secrets or know how. Our trade secrets or those of our collaborators also may be independently discovered by others.

Our products and product candidates may infringe the intellectual property rights of others, or others may infringe on our intellectual property rights which could increase our costs.

Our success also depends on avoiding infringement of the proprietary technologies of others. In particular, there may be certain issued patents and patent applications claiming subject matter which we or our collaborators may be required to license in order to research, develop or commercialize APTO-253, our lead product candidate. In addition, third parties may assert infringement or other intellectual property claims against us. An adverse outcome in these proceedings could subject us to significant liabilities to third-parties, require disputed rights to be licensed from third-parties or require us to cease or modify our use of the technology. If we are required to license third-party technology, a license under such patents and patent applications may not be available on acceptable terms or at all. Further, we may incur substantial costs defending ourselves in lawsuits against charges of patent infringement or other unlawful use of another's proprietary technology. We may also need to bring claims against others who we believe are infringing our rights in order to become or remain competitive and successful. Any such claims can be time consuming and expensive to pursue.

We may incur substantial cost in defending our intellectual property.

While we believe that our products and technology do not infringe proprietary rights of others, third parties may assert infringement claims in the future and such claims could be successful. Even if challenges are unsuccessful, we could incur substantial costs in defending ourselves against patent infringement claims brought by others or in prosecuting suits against others. In addition, others may obtain patents that we would need to license, which may not be available to us on reasonable terms. Whether we are able to obtain a necessary license would depend on the terms offered, the degree of risk of infringement and the need for the patent.

If product liability, clinical trial liability or environmental liability claims are brought against us or we are unable to obtain or maintain product liability, clinical trial or environmental liability insurance, we may incur substantial liabilities that could reduce our financial resources.

The clinical testing and commercial use of pharmaceutical products involves significant exposure to product liability, clinical trial liability, environmental liability and other risks that are inherent in the testing, manufacturing and marketing of our products. These liabilities, if realized, could have a material adverse effect on the Company's business, results of operations and financial condition.

We have obtained limited product liability insurance coverage for our clinical trials on humans; however, our insurance coverage may be insufficient to protect us against all product liability damages. Regardless of merit or eventual outcome, liability claims may result in decreased demand for a future product, injury to reputation, withdrawal of clinical trial volunteers, loss of revenue, costs of litigation, distraction of management and substantial monetary awards to plaintiffs. Additionally, if we are required to pay a product liability claim, we may not have sufficient financial resources to complete development or commercialization of any of our product candidates and our business and results of operations will be adversely affected. In general, insurance will not protect us against some of our own actions, such as negligence.

As the Company's development activities progress towards the commercialization of product candidates, our liability coverage may not be adequate, and the Company may not be able to obtain adequate product liability insurance coverage at a reasonable cost, if at all. Even if the Company obtains product liability insurance, its financial position may be materially adversely affected by a product liability claim. A product liability claim could also significantly harm the Company's reputation and delay market acceptance of its product candidates. Additionally, product recalls may be issued at the direction of the FDA, other government agencies or other companies having regulatory control for pharmaceutical sales. If a product recall occurs in the future, such a recall could adversely affect our business, financial condition or reputation.

We may be unable to obtain partnerships for our product candidates, which could curtail future development and negatively affect our share price. In addition, our partners might not satisfy their contractual responsibilities or devote sufficient resources to our partnership.

Our strategy for the research, development and commercialization of our products requires entering into various arrangements with corporate collaborators, licensors, licensees and others, and our commercial success is dependent upon these outside parties performing their respective contractual responsibilities. The amount and timing of resources that such third parties will devote to these activities may not be within our control. These third parties may not perform their obligations as expected and our collaborators may not devote adequate resources to our programs. In addition, we could become involved in disputes with our collaborators, which could result in a delay or termination of the related development programs or result in litigation. We intend to seek additional collaborative arrangements to develop and commercialize some of our products. We may not be able to negotiate collaborative arrangements on favourable terms, or at all, in the future, and our current or future collaborative arrangements may not be successful.

If we cannot negotiate collaboration, license or partnering agreements, we may never achieve profitability and we may not be able to continue to develop our product candidates. Phase II and Phase III clinical trials for APTO-253 would require significant amounts of funding and such funding may not be available to us.

Exchange rate risk

We are exposed to fluctuations of the Canadian dollar against certain other currencies because we publish our financial statements and hold most of our investments in Canadian dollars, while we incur many of our expenses in foreign currencies, primarily the United States dollar. Fluctuations in the value of currencies such as the recent depreciation of the Canadian dollar against the United States dollar could cause us to incur currency exchange losses. We do not currently employ a hedging strategy against exchange rate risk. We cannot assert with any assurance that we will not suffer losses as a result of unfavorable fluctuations in the exchange rates between the Canadian dollar, the United States dollar and other currencies.

Extensive Government Regulation

Government regulation is a significant factor in the development, production and marketing of the Company's products. Research and development, testing, manufacture, marketing and sales of pharmaceutical products or related products are subject to extensive regulatory oversight, often in multiple jurisdictions, which may cause significant additional costs and/or delays in bringing products to market, and in turn, may cause significant losses to investors. The regulations applicable to the Company's product candidates may change. Even if granted, regulatory approvals may include significant limitations on the uses for which products can be marketed or may be conditioned on the conduct of post-marketing surveillance studies. Failure to comply with applicable regulatory requirements can, among other things, result in warning letters, the imposition of civil penalties or other monetary payments, delay in approving or refusal to approve a product candidate, suspension or withdrawal of regulatory approval, product recall or seizure, operating restrictions, interruptions of clinical trials or manufacturing, injunctions or criminal prosecution. In addition, regulatory agencies many not approve the labeling claims that are necessary or desirable for the successful commercialization of the Company's product candidates.

Requirements for regulatory approval vary widely from country to country. Whether or not approved in Canada or the United States, regulatory authorities in other countries must approve a product prior to the commencement of marketing the product in those countries. The time required to obtain any such approval may be longer or shorter than in Canada or the United States. Approved drugs, as well as their manufacturers, are subject to continuing and ongoing review, and discovery of problems with these products or the failure to adhere to manufacturing or quality control requirements may result in regulatory restrictions being imposed.

Risks Related to Our Common Shares

Our share price has been and is likely to continue to be volatile and an investment in our Common Shares could suffer a decline in value.

You should consider an investment in our Common Shares as risky and invest only if you can withstand a significant loss and wide fluctuations in the market value of your investment. The market price of our Common Shares has been highly volatile and is likely to continue to be volatile. This leads to a heightened risk of securities litigation pertaining to such volatility. Factors affecting our Common Share price include but are not limited to:

- our ability to raise additional capital;
- the progress of our clinical trials:
- our ability to obtain partners and collaborators to assist with the future development of our products;
- general market conditions;
- announcements of technological innovations or new product candidates by us, our collaborators or our competitors;
- published reports by securities analysts;
- developments in patent or other intellectual property rights;
- the cash and investments held by us and our ability to secure future financing;
- public concern as to the safety and efficacy of drugs that we and our competitors develop;
- shareholder interest in our Common Shares; and
- low liquidity in the daily trading volume of our Common Shares.

Future sales of our Common Shares by us or by our existing shareholders could cause our share price to fall.

The issuance of Common Shares by us could result in significant dilution in the equity interest of existing shareholders and adversely affect the market price of our Common Shares. Sales by existing shareholders of a large number of our Common Shares in the public market and the issuance of shares issued in connection with strategic alliances, or the perception that such additional sales could occur, could cause the market price of our Common Shares to decline and have an undesirable impact on our ability to raise capital.

We are susceptible to stress in the global economy and therefore, our business may be affected by the current and future global financial condition.

If the increased level of volatility and market turmoil that have marked recent years continue, our operations, business, financial condition and the trading price of our Common Shares could be materially adversely affected. Furthermore, general economic conditions may have a great impact on us, including our ability to raise capital, our commercialization opportunities and our ability to establish and maintain arrangements with others for research, manufacturing, product development and sales.

An active trading market in our Common Shares may not be sustained.

Our Common Shares are listed for trading on the NASDAQ Capital Market ("**NASDAQ**") and the Toronto Stock Exchange ("**TSX**"). However, an active trading market in our Common Shares on the stock exchanges may not be sustained and we may not be able to maintain our listings.

It may be difficult for non-Canadian investors to obtain and enforce judgments against us because of our Canadian incorporation and presence.

We are a corporation existing under the laws of Canada. Some of our directors and officers, and many of the experts named in this Annual Report and the documents incorporated by reference into this Annual Report, are residents of Canada, and all or a substantial portion of their assets, and a substantial portion of our assets, are located outside the United States. Consequently, although we have appointed an agent for service of process in the United States, it may be difficult for holders of our shares who reside in the United States to effect service within the United States upon our directors and officers and experts who are not residents of the United States. It may also be difficult for holders of our shares who reside in the United States to realize in the United States upon judgments of courts of the United States predicated upon our civil liability and the civil liability of our directors, officers and experts under the United States federal securities laws. Investors should not assume that Canadian courts (i) would enforce judgments of United States courts obtained in actions against us or our directors, officers or experts predicated upon the civil liability provisions of the United States federal securities laws or the securities or "blue sky" laws of any state within the United States or (ii) would enforce, in original actions, liabilities against us or our directors, officers or experts predicated upon the United States federal securities laws or any such state securities or "blue sky" laws. In addition, we have been advised by our Canadian counsel that in normal circumstances, only civil judgments and not other rights arising from United States securities legislation are enforceable in Canada and that the protections afforded by Canadian securities laws may not be available to investors in the United States.

We are likely a "passive foreign investment company" which may have adverse U.S. federal income tax consequences for U.S. shareholders.

U.S. investors in our Common Shares should be aware that the Company believes it was classified as a passive foreign investment company ("PFIC") during the tax year ended December 31, 2015, and based on the nature of our business, the projected composition of our gross income and the projected composition and estimated fair market value of our assets, the Company expects to be a PFIC for the current tax year ending December 31, 2016 and may be a PFIC in subsequent tax years. If the Company is a PFIC for any year during a U.S. shareholder's holding period, then such U.S. shareholder generally will be required to treat any gain realized upon a disposition of Common Shares, or any so-called "excess distribution" received on its Common Shares, as ordinary income, and to pay an interest charge on a portion of such gain or distributions, unless the shareholder makes a timely and effective "qualified electing fund" election ("QEF election") or a "mark-to-market" election with respect to the Common Shares. A U.S. shareholder who makes a QEF election generally must report on a current basis its share of the Company's net capital gain and ordinary earnings for any year in which the Company is a PFIC, whether or not the Company distributes any amounts to its shareholders. However, U.S. shareholders should be aware that we do not intend to satisfy record keeping requirements that apply to a qualified electing fund, and we do not intend to supply U.S. shareholders with information that such U.S. shareholders require to report under the QEF election rules, in the event that we are a PFIC and a U.S. shareholder wishes to make a QEF election. Thus, U.S. shareholders should assume that they will not be able to make a QEF election with respect to their Common Shares. A U.S. shareholder who makes the mark-to-market election generally must include as ordinary income each year the excess of the fair market value of the Common Shares over the taxpayer's basis therein. This paragraph is qualified in its entirety by the discussion below under the heading "Certain United States Federal Income Tax Considerations." Each U.S. shareholder should consult its own tax advisor regarding the U.S. federal, U.S. local, and foreign tax consequences of the PFIC rules and the acquisition, ownership, and disposition of our Common Shares.

We are an "emerging growth company," and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common shares less attractive to investors.

We are an "emerging growth company," as defined in the U.S. Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We will cease to be an emerging growth company upon the earliest of:

- the last day of the fiscal year during which we have total annual gross revenues of $1,000,000,000 (as such amount is indexed for inflation every five years by the SEC or more;

- the last day of our fiscal year following the fifth anniversary of the completion of our first sale of common equity securities pursuant to an effective registration statement under the Securities Act;

- the date on which we have, during the previous three-year period, issued more than $1,000,000,000 in non- convertible debt; or

- the date on which we are deemed to be a "large accelerated filer", as defined in Rule 12b–2 of the Exchange Act, which would occur if the market value of our ordinary shares and ADSs that are held by non-affiliates exceeds $700,000,000 as of the last day of our most recently-completed second fiscal quarter.

We cannot predict if investors will find our common shares less attractive because we may rely on these exemptions. If some investors find our Common Shares less attractive as a result, there may be a less active trading market for our Common Shares and our share price may be more volatile.

Any failure to maintain an effective system of internal controls may result in material misstatements of our consolidated financial statements or cause us to fail to meet our reporting obligations or fail to prevent fraud; and in that case, our shareholders could lose confidence in our financial reporting, which would harm our business and could negatively impact the price of our common shares.

Section 404(a) of the Sarbanes-Oxley Act of 2002, as amended, or SOX, requires that our management assess and report annually on the effectiveness of our internal controls over financial reporting and identify any material weaknesses in our internal controls over financial reporting. Although Section 404(b) of the SOX requires our independent registered public accounting firm to issue an annual report that addresses the effectiveness of our internal controls over financial reporting, we have opted to rely on the exemptions provided to us by virtue of being a foreign private issuer and an emerging growth company, and consequently will not be required to comply with SEC rules that implement Section 404(b) of SOX until we lose our emerging growth company status.

Effective internal controls are necessary for us to provide reliable financial reports and prevent fraud. If we fail to maintain an effective system of internal controls, we might not be able to report our financial results accurately or prevent fraud; and in that case, our shareholders could lose confidence in our financial reporting, which would harm our business and could negatively impact the price of our common shares. While we believe that we have sufficient personnel and review procedures to allow us to maintain an effective system of internal controls, we cannot assure you that we will not experience potential material weaknesses in our internal control. Even if we conclude that our internal control over financial reporting provides reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with IFRS, as issued by the International Accounting Standards Board, because of its inherent limitations, internal control over financial reporting may not prevent or detect fraud or misstatements. Failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our results of operations or cause us to fail to meet our future reporting obligations.

If we fail to timely achieve and maintain the adequacy of our internal control over financial reporting, we may not be able to produce reliable financial reports or help prevent fraud. Our failure to achieve and maintain effective internal control over financial reporting could prevent us from complying with our reporting obligations on a timely basis, which could result in the loss of investor confidence in the reliability of our consolidated financial statements, harm our business and negatively impact the trading price of our common shares.

As a foreign private issuer, we are not subject to certain United States securities law disclosure requirements that apply to a domestic United States issuer, which may limit the information which would be publicly available to our shareholders.

As a foreign private issuer, we are exempt from certain rules under the Exchange Act that impose disclosure requirements as well as procedural requirements for proxy solicitations under Section 14 of the Exchange Act. In addition, our officers, directors and principal shareholders are exempt from the reporting and "short-swing" profit recovery provisions of Section 16 of the Exchange Act. Moreover, we are not required to file periodic reports and financial statements with the SEC as frequently or as promptly as a company that files as a domestic issuer whose securities are registered under the Exchange Act, nor are we generally required to comply with the SEC's Regulation FD, which restricts the selective disclosure of material non-public information. For as long as we are a "foreign private issuer" we intend to file our annual financial statements on Form 20-F and furnish our quarterly updates on Form 6-K to the SEC for so long as we are subject to the reporting requirements of Section 13(g) or 15(d) of the Exchange Act. However, the information we file or furnish is not the same as the information that is required in annual and quarterly reports on Form 10-K or Form 10-Q for U.S. domestic issuers. Accordingly, there may be less information publicly available concerning us than there is for a company that files as a domestic issuer.

DISCLOSURE CONTROLS AND INTERNAL CONTROL OVER FINANCIAL REPORTING

The Company has implemented a system of internal controls that it believes adequately protects the assets of the Company and is appropriate for the nature of its business and the size of its operations. Our internal control system was designed to provide reasonable assurance that all transactions are accurately recorded, that transactions are recorded as necessary to permit preparation of financial statements in accordance with IFRS, and that our assets are safeguarded. These internal controls include disclosure controls and procedures designed to ensure that information required to be disclosed by the Company is accumulated and communicated as appropriate to allow timely decisions regarding required disclosure.

Internal control over financial reporting means a process designed by or under the supervision of the Chief Executive Officer and the Chief Financial Officer, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS as issued by the IASB. The internal controls are not expected to prevent and detect all misstatements due to error or fraud.

There were no changes in our internal control over financial reporting that occurred during the year ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting

As of December 31, 2016, the Company’s management has assessed the effectiveness of our internal control over financial reporting and disclosure controls and procedures using the Committee of Sponsoring Organizations of the Treadway Commission’s 2013 framework. Based on their evaluation, the Chief Executive Officer and the Chief Financial Officer have concluded that these controls and procedures are effective.

UPDATED SHARE INFORMATION

As at March 28, 2017, we had 18,849,224 common shares issued and outstanding. In addition there were 1,970,587 common shares issuable upon the exercise of outstanding stock options.

ADDITIONAL INFORMATION

Additional information relating to Aptose, including Aptose' December 31, 2016 annual report on form 20-F and other disclosure documents, are available on EDGAR at www.sec.gov/edgar.shtml and on SEDAR at www.sedar.com.