MANAGEMENT DISCUSSION AND ANALYSIS

DECEMBER 31, 2017

MANAGEMENT'S DISCUSSION AND ANALYSIS

March 27, 2018

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, 2017 and the annual information form of the Company for the year ended December 31, 2017 which can be found on SEDAR at www.sedar.com and EDGAR at *www.sec.gov/edgar.shtml.*

All amounts are expressed in United States dollars unless otherwise stated.

CHANGE IN FUNCTIONAL AND REPORTING CURRENCY

Effective January 1, 2017, the Company changed its functional currency to US dollars given the prevalence of US dollar denominated activities over time. Since the Company's inception in 1986 to fiscal 2014 all operations of the entity were conducted in Canada and the Canadian dollar was determined to be the functional currency. During fiscal years 2015 and 2016, the Company gradually transitioned most of its research and development activities, including both headcount and studies, to the US, and completed this transition in January 2017. The change in functional currency from Canadian dollars to US dollars is accounted for prospectively from January 1, 2017. Foreign currency transactions are translated into US 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 US dollars at the rates in effect at that date. Foreign exchange gains and losses are recorded in the consolidated statement of loss.

Effective December 31, 2017, we changed our presentation currency to US dollars from Canadian dollars. All amounts included in this document are in US dollars unless disclosed otherwise. The change in reporting currency was accounted for on a retrospective basis as if the US dollar had always been the Company's presentation currency. Accordingly, the financial statements for all the periods presented have been translated to the US dollar. Comparative balances of earnings and cash flows have been translated into US dollars using average exchange rates for the reporting periods. For comparative balances, assets and liabilities have been translated into the presentation currency at the rate of exchange prevailing at the reporting date. Components of equity were translated at the exchange rates prevailing at the dates of the relevant transactions.

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

The forward-looking statements 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 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 ability to obtain the substantial capital we require to fund research and operations;*
- *our lack of product revenues and history of operating losses;*
- *our drug candidates require time-consuming and costly synthesis and formulation, 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;*
- *our ability to recruit patients for clinical trials;*
- *our ability to develop successfully companion diagnostics for our therapeutic product candidates;*
- *our reliance on third parties to conduct and monitor our preclinical studies and our clinical trials;*
- *our ability to attract and retain key personnel;*
- *the proper conduct of our employees;*
- *our ability to expand our business and to find and enter into agreements with potential partners;*
- *results from our clinical trials or studies;*
- *the regulatory approval process;*
- *the progress of our clinical trials;*
- *potential exposure to legal actions and potential need to take action against other entities;*
- *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;*
- *exposure to fluctuations of foreign currencies;*
- *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 our most recent annual information form.*

Should one or more of these risks or uncertainties materialize, or should the assumptions set out in the section entitled "Risk Factors" in our most recent annual information form 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, 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, 2017 and any subsequent development up until the date hereof.

PROGRAM UPDATES

CG'806

In June 2016, we announced a definitive agreement with South Korean company CrystalGenomics, Inc. ("CG"), granting us an exclusive option to research, develop and commercialize CG026806 ("CG'806") in all countries of the world except the Republic of Korea and China, for all fields of use. CG'806 is a highly potent, orally bioavailable non-covalent small molecule being developed for acute myeloid leukemia (AML) and certain B cell malignancies because of its actions as a pan-FLT3/pan-BTK inhibitor. We paid US$1.0 million to CG to acquire the option. Should we elect to exercise the option, upon exercise, 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 the Republic of Korea and China. The option fee is due on the earlier of (i) filing of an Investigational New Drug ("IND") application with the Food and Drug Administration ("FDA"), (ii) first dosage of a human in a clinical trial or (iii) or early June 2018.

CG'806 exhibits a picomolar IC_{50} toward the FMS-like tyrosine kinase 3 (FLT3) with the Internal Tandem Duplication ("FLT3-ITD"), potency against the wild type FLT3 and 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"). Consequently, CG'806 is characterized as a pan-FLT3/pan-BTK inhibitor. Further, CG'806 impacts a small group of other relevant oncogenic kinases/pathways (including CSF1R, Aurora kinases ("AURK"), TRK, and the AKT and ERK pathways) that are operative in AML and certain B cell malignancies, but not the TEC, EGFR and ErbB2/4 kinases that are responsible for safety concerns with certain other kinase inhibitors.

As a potent inhibitor of FLT3-ITD, CG'806 may become an effective therapy in a high-risk subset of AML patients. This is because the FLT3-ITD mutation occurs in approximately 30% of patients with AML and is associated with a poor prognosis. In murine xenograft studies of human AML (FLT3-ITD), CG'806 administered orally once daily for 14 days resulted in tumor elimination without measurable toxicity. Importantly, CG'806 targets other oncogenic kinases which may also be operative in FLT3-ITD AML, thereby potentially allowing the agent to become an important therapeutic option for a broader group of this difficult-to-treat AML

patient population. The findings that CG'806 targets all forms of FLT3 and other oncogenic pathways, and that CG'806 was well tolerated from a safety perspective during efficacy studies, suggest that CG'806 may also have applicability in treating patients, particularly those over the age of 65, who cannot tolerate other therapies.

Separate from the AML and FLT3 story, overexpression of the BTK enzyme can drive oncogenic signaling of certain B cell malignancies, such as chronic lymphocytic leukemia (CLL), mantle cell lymphoma (MCL), diffuse large cell B cell lymphoma (DLBCL) and others. Therapy of these patients with covalent, irreversible BTK inhibitors, such as ibrutinib, that target the active site Cysteine ("Cys") residue of BTK can be beneficial in many patients. However, therapy with covalent BTK inhibitors can select for BTK with a C481S mutation, thereby conferring resistance to covalent BTK inhibitors. Furthermore, approximately half of CLL patients have discontinued treatment with ibrutinib after 3.4 years of therapy. Discontinuation of ibrutinib is due to the development of drug resistance (in particular, patients have malignancies that developed the BTK-C481S mutation), or due to refractory disease (patient tumors did not respond to ibrutinib) or intolerance (side effects led to discontinuation of ibrutinib), according to a study performed at The Ohio State University. The C481S mutation is observed in 5-10% of the patients, while 40-45% of the patients were intolerant or refractory to ibrutinib. As a non-covalent, reversible inhibitor of BTK, CG'806 does not rely on the Cysteine 481 residue (C481) for inhibition of the BTK enzyme. Indeed, recent X-ray crystallographic studies (with wild type and C481S BTK) demonstrated that CG'806 binds productively to the BTK active site in a position that is indifferent to the presence or absence of mutations at the 481 residue. Moreover, in vitro studies demonstrated that CG'806 kills B cell malignancy cell lines on average approximately 1500 times more potently than ibrutinib, and CG'806 demonstrated a high degree of safely in animal efficacy studies. Consequently, patients who are resistant, refractory or intolerant to ibrutinib or other commercially approved or development-stage BTK inhibitors with B cell malignancies may continue to be sensitive to CG'806 therapy. This is particularly true since CG'806 inhibits the wild type and mutant forms of BTK, as well as other kinases/pathways that drive the survival and proliferation of B cell malignancies.

On May 7, 2017, we presented preclinical data for our pan-FLT3/pan-BTK inhibitor CG'806 at the 2017 American Association for Cancer Research (AACR) Conference for Hematologic Malignancies: Translating Discoveries to Novel Therapies in Boston, MA. Two separate presentations highlighting CG'806 were presented. In one presentation, our scientists, with researchers from the Knight Cancer Institute at Oregon Health & Science University (OHSU), presented data relating to the potency of CG'806 against samples derived from patients with various hematologic malignancies. In a separate presentation, our scientists, with researchers from the MD Anderson Cancer Center, presented data demonstrating CG'806's potent activity against AML cells harboring wild type or specific mutant forms of FLT3.

On August 4, 2017 we received a notice from the USPTO stating that our U.S. Patent Application is allowed for issuance as a patent. The allowed application claims numerous compounds, including the CG'806 compound, pharmaceutical compositions comprising the CG'806 compound, and methods of treating various diseases caused by abnormal or uncontrolled activation of protein kinases. The notice of allowance is not a grant of patent rights and although it is uncommon, the USPTO can withdraw the allowed application from issuance.

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

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

On March 15, 2018, we announced two abstracts related to the mechanistic properties of CG'806 in AML cells and in B cell malignancy cells have been accepted for poster presentations at the upcoming 2018 Annual Meeting of the American Association for Cancer Research (AACR).

We have invested significant time, effort and capital to create a scalable chemical synthetic route for the manufacture of CG'806 drug substance, to develop an oral formulation for clinical development, and to study the actions of CG'806 in various preclinical biological pathway studies. Our efforts to develop the scalable chemical synthetic route have taken longer than anticipated and thus pushed the timeline for the IND submission and initiation of the first-in-human Phase I clinical trial further into the future than we had originally anticipated. We now have solved the synthetic route, can scale the manufacture of API, and now have manufactured and delivered a batch of API which was used for Dose Range Finding Studies that were performed and completed in early January 2018.

Currently we are manufacturing a multi-kg batch of GLP grade API (drug substance) for use in GLP toxicology studies. We also reported that we selected the oral formulation that we intend to take into the GLP toxicology studies and the first-in-human clinical trials. In addition, R&D funds are being utilized to support exploratory formulation studies in an ongoing effort to craft superior formulations for CG'806. Provided we are able to manufacture CG'806 for both the non-clinical (GLP) studies and clinical trial, complete the non-clinical studies, and receive a favorable approval from the FDA on our IND submission and continue on the anticipated timeline, we expect to initiate a first-in-human Phase I clinical trial by late 2018. The total direct costs of such activities and to reach the submission of the IND are currently expected to range between US$3 million and US$4.5 million. However any interruptions or additional studies in these activities could cause a delay in the anticipated commencement of the Phase I trial. Greater granularity on the timing of the IND submission and clinical trial will be provided in the coming months. CG'806 is being developed with the intent to deliver the agent as an oral therapeutic and to develop it in parallel for AML and for appropriate B cell malignancies (likely CLL). As clinical trials are lengthy, complex, costly, and uncertain processes, an estimate of the future costs is not reasonable at this time.

APTO-253

Phase Ib Trial

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

Clinical Hold and Current Status

As previously disclosed, the Phase Ib trial was placed on clinical hold in order to solve a chemistry-based formulation issue, and the chemistry of the API and the formulation had undergone minor modifications to deliver a stable and soluble drug product for return to the clinical setting. In December 2016, we announced that we had successfully manufactured multiple non-GMP batches of a new drug product formulation for APTO-253, including a batch that had been stable and soluble for over six months. However, the 40L batch that was the intended clinical supply encountered an unanticipated mishap during the filling process that compromised the stability of that batch of drug product. On January 23, 2017, we announced that the root cause and corrective action studies would take longer than originally expected and that we would temporarily delay clinical activities with APTO-253 in order to elucidate the cause of the manufacturing setback, with the intention of restoring the molecule to a state supporting clinical development and partnering. Formal root cause analyses studies have now been completed and have identified the reason for the drug product stability failure, and we have established a corrective and prevention action plan for the manufacture of future batches of drug product. Given these findings, in February, 2018, we manufactured a new GMP clinical supply of drug product and are in the process of performing studies required to demonstrate the fitness of the drug product for clinical usage, and then we plan to present the findings to the FDA in the second quarter of 2018 with the hope of having the clinical hold removed by the end of the second quarter of 2018 and returning APTO-253 to the clinical trial soon thereafter. The total direct costs of such activities to reach the presentation of the findings to the FDA are currently expected to range between US$1 million and US$1.5 million. Investors are cautioned that there can be no assurance that the FDA will remove the clinical hold.

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

Two abstracts related to the mechanistic properties of APTO-253 were submitted to the 2017 Meeting of the American Society of Hematology ("ASH") and these abstracts were published on the ASH website. An additional abstract has been submitted to the 2018 Annual Meeting of the American Association of Cancer Research (AACR) for presentation in April 2018. Finally, two manuscripts related to the mechanism of action of APTO-253 have been accepted for publication and are expected to be published during the second quarter of 2018.

Finally, on March 15, 2018, we announced that one abstract related to the mechanistic properties of APTO-253 was accepted for presentation at the 2018 Annual Meeting of the American Association for Cancer Research.

Multi-Targeting Epigenetic Program

In November 2015, we 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 was responsible for optimizing candidates derived from our collaboration with the Moffitt Cancer Center ("Moffitt"), terminated in January 2017, for the development of dual-targeting single agent inhibitors for the treatment of hematologic and solid tumor cancers and we would own global rights to all newly discovered candidates characterized and optimized under the collaboration, including all generated intellectual property. As of November 2016, LALS and we had 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, LALS and Aptose suspended work on the program in January 2017, and the collaboration with LALS was terminated. However, the program delivered novel intellectual property and compelling hit molecules for further optimization.

On March 7, 2018, we entered into an exclusive global license agreement with Ohm Oncology (OHM), an affiliate of LALS that was formed in 2016 to advance the clinical development of compelling molecules derived from the LALS initiative, for the development, manufacture and commercialization of APL-581, as well as related molecules from Aptose's dual bromodomain and extra-terminal domain motif (BET) protein and kinase inhibitor program. Under the agreement, Aptose will retain reacquisition rights to certain molecules, while OHM/LALS will have the rights to develop and sublicense all other molecules. Aptose will receive a nominal upfront cash payment and is eligible to receive up to $125 million of additional payments based on the achievement of certain development, regulatory and sales milestones, as well as significant royalties on future sales generated from the program, if any.

FINANCING ACTIVITIES

Common Shares Purchase Agreement

In October 2017, we entered into a Common Shares Purchase Agreement (the "Purchase Agreement") with Aspire Capital Fund, LLC ("Aspire Capital") to sell up to US $15.5 million of common shares to Aspire Capital. Under the terms of the Purchase Agreement, Aspire Capital has made an initial purchase of 357,143 common shares at a price of $1.40 per share, representing gross proceeds of approximately $500,000 ($324,000 net of share issue costs). Under the terms of the Purchase Agreement, Aspire Capital has committed to purchase up to an aggregate of $15.0 million of our common shares, at our request from time to time during a 30-month period beginning on the effective date of a registration statement related to the transaction and at prices based on the market price at the time of each sale. Under terms of the Purchase Agreement, we also issued 321,429 common shares to Aspire Capital as consideration for Aspire Capital entering into the Purchase Agreement. Subsequent to the year end, we issued an additional 3.2million common shares under the Purchase agreement for gross proceeds of approximately $8.9million.

We intend to use this equity arrangement as an additional option to assist us in achieving our capital objectives. The equity line provides us with the opportunity to regularly raise capital at prevailing market prices, at our sole discretion providing us with the ability to better manage our cash resources.

At-The-Market ("ATM") Facility

On April 2, 2015, we entered into an at-the-market equity facility ("ATM Facility") with Cowen and Company, LLC, acting as sole agent. During the year ended December 31, 2017, we issued and sold 10,952,093 common shares through the ATM Facility, raising net proceeds of approximately $13.4 million. Costs associated with the sale of shares under the ATM Facility included a 3% cash commission as well as legal and accounting fees. The ATM Facility expired on December 29, 2017 and, as at that date, the Company had issued a cumulative $20 million of common shares pursuant to the ATM Facility.

April 2014

In April 2014, we completed a public offering of common shares. Aptose issued 4,708,334 common shares at a purchase price of CA$6.00 (CA$0.50 pre-consolidation) per common share, including 541,667 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 common shares at a price of CA$6.60 per common share and an additional 159,125 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 CA$1.1 million which include a cash commission of CA$483 thousand based on 6% of the gross proceeds received as part of the offering, and the issuance of 73,198 broker warrants with an

estimated fair value of CA$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 CA$6.60 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 $279,000. During the year ended December 31, 2016 the remaining warrants from a 2011 financing expired. As at December 31, 2017 there are no outstanding warrants.

LIQUIDITY AND CAPITAL RESOURCES

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

We are an early stage development company and we currently do not earn any revenues from our drug candidates. 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 our liquidity risk, we have considered our available cash and cash equivalents as at December 31, 2017 and our ability to raise further capital through the use of the Purchase Agreement with Aspire Capital in assessing whether we will have sufficient resources to fund research and development operations through to at least the twelve month period ending December 31, 2018. As at December 31, 2017 we had $11.4 million of cash and cash equivalents and investments. Subsequent to year end and to the date of this report, we issued 3.2 million common shares to Aspire Capital under the Purchase Agreement for gross proceeds of approximately $8.9 million. We have a further 2.2 million available common shares and $6.1 million available under the Purchase Agreement**.**

CASH POSITION

The following table presents our cash and cash equivalent, investments and working capital as at December 31, 2017, December 31, 2016, and December 2015. (the amounts reported in the table below for the years ended December 31, 2016 and 2015, have been recast to US dollars).

(in thousands)	**Balances at December 31, 2017**	Balances at December 31, 2016	Balances at December 31, 2015
Cash and cash equivalents	**$ 10,631**	$ 7,940	$ 8,311
Investments	**798**	-	5,957
Total	**$ 11,429**	$ 7,940	$ 14,268
Working capital	**$ 10,060**	$ 7,115	$ 13,338

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.

Working capital represents primarily cash, cash equivalents, investments and other current assets less current liabilities.

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, and manufacturing, as well as 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.

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, 2017 (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[1]

(amounts in US thousands except for per common share data)	**Year ended December 31, 2017**	**Year ended December 31, 2016**	**Year ended December 31, 2015**
REVENUE	**$ —**	$ —	$ —
EXPENSES			
Research and development	**6,274**	**7,834**	**4,865**
General and administrative	**5,552**	**6,439**	**7,992**
Operating expenses	**11,826**	**14,273**	**12,857**
Finance expense	**-**	**46**	**34**
Finance income	**(165)**	**(79)**	**(1,180)**
Net finance expense (income)	**(165)**	**(33)**	**(1,146)**
Net loss and total comprehensive loss for the period	**(11,661)**	**(14,240)**	**(11,711)**
Basic and diluted loss per common share	**$ (0.52)**	**$ (1.12)**	**$ (0.98)**
Weighted average number of common shares outstanding used in the calculation of: Basic and diluted loss per share	**22,313**	**12,743**	**11,906**
Total Assets	**$ 11,967**	**$ 8,646**	**$ 15,353**
Total Long-term Liabilities	**$ —**	$ –	$ –

(1)The amounts reported in the table above for the years ended December 31, 2016 and 2015, have been recast to US dollars.

RESULTS OF OPERATIONS

The decrease in the net loss during the year ended December 31, 2017 compared with the year ended December 31, 2016 results mostly from our decision in January 2017 to refocus our resources on our CG'806 development program and towards determining the root cause of the manufacturing issue with the APTO-253 program. Expenses were lower due to the cancellation of the LALS/Moffitt collaboration, lower costs associated with the APTO-253 program, and offset by increased development activities related to the CG'806 development program which were nominal in comparable periods, other than the license fee that was paid in June 2016 to acquire an option on the technology.

Research and Development

Components of research and development expenses

The research and development expenses for the years ended December 31, 2017, 2016 and 2015 are as follows:

(in thousands)	**2017**	2016[1]	2015[1]
CrystalGenomics Option Fee	**$ -**	$ 1,000	$ -
Program costs – CG '806	**2,245**	394	-
Program costs – APTO-253	**2,328**	3,340	2,928
Program costs – LALS/Moffitt	**-**	1,126	203
Salaries	**1,451**	1,691	1,528
Stock-based compensation	**214**	247	183
Depreciation of equipment	**36**	36	23
	$ 6,274	$ 7,834	$ 4,865

(1) The amounts reported in the table below for the years ended December 31, 2016 and 2015, have been recast to US dollars:

The CG'806 program was licensed into the Company in June of 2016. Including the license fee, total program costs from inception to December 31, 2017 are approximately $3.6 million.

From June 1, 2014, being the beginning of the fiscal year when APTO-253 was redirected from solid tumor indications to hematologic malignancies to December 31, 2017, direct program costs relating to the research and development of APTO-253 represented approximately $9.8 million.

The changes in research and development expenses in the year ended December 31, 2017 as compared to the year ended December 31, 2016 result from the following:

- In the comparative period, we paid $1.0 million to CG for an option fee related to the CG'806 technology and in that period began research and development activities for this program.
- An increase in research and development activities related to our CG'806 development program. Activities in the current year ended December 31, 2017 included formulation studies and PK studies and the manufacturing of a first batch of the drug substance to be used in dose range finding studies, the initiation of the dose range finding studies, and the initiation of the manufacturing of a GLP batch of drug substance to be used in the toxicity studies. CG'806 program expenses were nominal in the comparative period as the technology was licensed to us in June 2016;
- Reduced expenditures on the APTO-253 program. In the year ended December 31, 2017, we completed the root cause analysis and determined the cause of the manufacturing issue, established a Corrective and Prevention Action (CAPA) plan to ensure the clinical supply can be manufactured in a reliable manner, and the initiation of manufacturing of a new clinical supply. In the comparative period, we were actively manufacturing a clinical batch and preparing to return APTO-253 to the clinic; and
- Savings from cancellation of the LALS/Moffitt collaboration which was active in the year ended December 31, 2016. There are no costs related to this program in the year ended December 31, 2017.

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 in support of the CG'806 program, including the $1 million option fee paid;
- 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.

General and Administrative

Components of general and administrative expenses

The general and administrative expenses for the years ended December 31, 2017, 2016 and 2015 are as follows:

	Year ended December 31,		
(in thousands)	**2017**	2016[(1)]	2015[(1)]
General and administrative excluding salaries	**$ 2,610**	$ 2,566	$ 3,377
Salaries	**2,290**	2,334	2,246
Stock-based compensation	**602**	1,459	2,317
Depreciation of equipment	**50**	80	52
	$ 5,552	$ 6,439	$ 1,932

(1) The amounts reported in the table above for the years ended December 31, 2016 and 2015, have been recast to US dollars.

The changes in general and administrative expenses in the year ended December 31, 2017 as compared to the year ended December 31, 2016 result from the following:

- General and administrative expenses excluding salaries, decreased slightly in the year ended December 31, 2017, compared with the year ended December 31, 2016. The decrease is mostly the result of lower travel costs, consulting and

rent costs in the first six months of the fiscal year related to cost containment initiatives taken in the prior fiscal year and offset by higher investor relations, professional fees and travel costs in the three months ended December 31, 2017.

- Salaries expenses in the year ended December 31, 2017, were slightly lower in comparison with year ended December 31, 2016. Savings from reduced headcount were offset by a higher bonus recognized in the current period.
- Stock-based compensation decreased in the year ended December 31, 2017, compared with the year ended December 31, 2016, due to large forfeitures in the three months ended March 31, 2017 and also due to grants in the prior periods having a greater fair value than the grants issued in the year ended December 31, 2017, and therefore contributing to higher stock-based compensation in the year ended December 31, 2016.

The changes in general and administrative expenses in the year ended December 31, 2016 as compared to the year ended December 31, 2015 result from the following:

- 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 year ended December 31, 2016.
- 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.
- 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.

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 except that the amounts reported in the table above for the quarters ending March 31, 2016 through to September 30, 2017 have been recast to US dollars.

	Q4	**Q3**	**Q2**	**Q1**	**Q4**	**Q3**	**Q2**	**Q1**
(Amounts in 000's except for per common share data)	**Dec 31, 2017**	**Sept 30, 2017**	**June 30, 2017**	**Mar 31, 2017**	**Dec 31, 2016**	**Sept 30, 2016**	**June 30, 2016**	**Mar 31, 2016**
Revenue	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Research and development expense	2,061	1,390	1,088	1,735	1,917	1,663	2,563	1,691
General and administrative expense	1,250	1,319	1,393	1,590	1,115	1,502	1,864	1,958
Net loss	(3,288)	(2,640)	(2,441)	(3,292)	(2,969)	(3,105)	(4,408)	(3,758)
Basic and diluted net loss per share	($0.12)	($0.11)	($0.11)	($0.19)	($0.23)	($0.24)	($0.36)	($0.31)
Cash (used in) operating activities	$(2,905)	$(2,092)	$(2,641)	$(2,653)	$(2,510)	$(3,277)	$(3,607)	$(3,299)

Changes in research and development expenses follow the activities and stages of development of our programs. Specific activities or events that had significant impacts on the costs incurred for individual periods are as follows: In the three months ended June 30, 2016, there is an increase in expenses due to the $1.0 million option fee paid to CG as previously described herein. A decrease in research and development expenses in the first three quarters of 2017 reflect our decision to refocus our resources towards CG'806. R&D expenses increased in the last quarter of this year related to higher costs of the CG'806 program as well as manufacturing costs for GMP batch of APTO-253 as we prepare for the possibility of returning APTO-253 to the clinic.

Changes in general and administrative costs over time result mostly from changes in headcount, the granting of stock options and decisions by us to engage in certain corporate projects. Specific activities that had significant impacts on the expenses incurred for individual periods are as follows: The decrease in administrative costs in the three months ended December 31, 2016, was mainly due to the reversal of previously recognized bonus accruals. The expenses for the three months ended March 31, 2017, are comparable with the expenses recorded in the three months ended September 30, 2016. Higher salaries expense related to severance and separation payments made in the period are offset by lower stock option compensation. Lower expenses in the quarters ended June 30 and September 30, 2017 and December 31, 2017 reflect mostly lower stock option compensation.

Cash used in operating activities fluctuates primarily as a result of changes in amounts of expenses incurred and the timing of payments.

THREE MONTHS ENDED DECEMBER 31, 2017 AND 2016 (UNAUDITED)

(in thousands)	Three months ended December 31, 2017	2016[1]
Revenues	**$ -**	$ -
Research and development expenses	**2,061**	1,917
General and administrative expenses	**1,250**	1,115
Net finance income (loss)	**(23)**	(63)
Net loss for the period	**(3,288)**	(2,969)
Basic and diluted loss per common share	**$(0.12)**	$(0.23)

(1) The amounts reported in the table above for the three months ended December 31, 2016, have been recast to US dollars.

The research and development expenses for the three months ended December 31, 2017 and 2016 are as follows:

(in thousands)	Three months ended December 31, 2017	2016[1]
CrystalGenomics Option Fee	**$ -**	$ -
Program costs – CG '806	**843**	315
Program costs – APTO-253	**774**	1,073
Program costs – LALS/Moffitt	**-**	147
Salaries	**387**	325
Stock-based compensation	**48**	48
Depreciation of equipment	**9**	9
	$ 2,061	$ 1,917

(1) The amounts reported in the table above for the three months ended December 31, 2016, have been recast to US dollars

The changes in research and development expenses in the three months ended December 31, 2017 as compared to the three months ended December 31, 2016 result from the following:

- An increase in R&D activities on our CG'806 program as described above;
- A decrease in R&D activities on our APTO-253 program as described above;
- Savings from cancellation of the LALS/Moffitt collaboration as described above;
- Higher salaries expense mostly related to additional clinical research staff hired at the end of the year to prepare for returning APTO-253 to the clinic.

The general and administrative expenses for the three months ended December 31, 2017 and 2016 are as follows:

(in thousands)	Three months ended December 31, 2017	2016[1]
General and administrative excluding salaries	**$ 630**	$ 542
Salaries	**506**	329
Stock-based compensation	**104**	211
Depreciation of equipment	**10**	33
	$ 1,250	$ 1,115

(1) The amounts reported in the table above for the three months ended December 31, 2016, have been recast to US dollars

The changes in general and administrative expenses in the three months ended December 31, 2017 as compared to the three months ended December 31, 2016 result from the following:

- higher investor relations, professional fees and travel costs in the three months ended December 31, 2017
- higher salaries related mostly to a bonus adjustment in the comparative period
- stock option grants issued in the current year with a lower grant date fair value than the comparative period.

RELATED PARTY TRANSACTIONS

In March 2015, we entered into an agreement with the Moores Cancer Center at the University of California San Diego (UCSD) to provide us with pharmacology lab services. Dr. Stephen Howell serves as our Acting Chief Medical Officer and holds a faculty position as a Distinguished Professor of Medicine at UCSD and oversees the laboratory work. The research services were provided for an annual fee of $154,456 to be paid to UCSD in monthly installments. This research services agreement was approved by our 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 $200,000. In May 2017, we entered into another agreement with UCSD for an additional twelve month period for an annual fee of $300,000. In March 2018, the Board approved and extension of this agreement for a further twelve months for the same annual fee of $300,000. These transactions are in the normal course of business and are 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, 2017, we had contractual obligations requiring annual payments as follows:

	Less than 1 year	1 – 3 years	3 – 5 years	Greater than 5 years	Total
Operating leases	$ 225	$ 410	$ 433	$ 289	$ 1,357

We have entered into various contracts with service providers with respect to the clinical development of APTO-253 and for our CG'806 development program. These contracts will result in future payments commitments of up to $4 million.

As at December 31, 2017, we have not entered into any off-balance sheet arrangements other than the operating leases for our offices and labs and certain office equipment.

Under the license agreement with CrystalGenomics, the Company has an option to pay $2.0 million in cash or combination of cash and common shares, for the full development and commercial rights for the program in all territories outside of the Republic of Korea and China. The option fee is due on the earlier of (i) filing of an Investigational New Drug ("IND") application with the Food and Drug Administration ("FDA"), (ii) first dosage of a human in a clinical trial or (iii) or early June 2018. In addition, under the terms of the license agreement, there are development milestones on the initiation of Phase 2 and pivotal clinical trial of $16 million, and regulatory milestones totaling $44 million. The Company also has an obligation to pay royalty payments on sales of commercialized product. Milestone and royalty payments that may become due 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.

FINANCIAL INSTRUMENTS

(a) Financial instruments

	As at December 31,	
(in thousands)	2017	2016[(1)]
Financial assets		
Cash and cash equivalents, consisting of high interest savings accounts and short term deposits	$ 10,631	$ 7,940
Investments, consisting of fixed income securities	798	2,246
Financial liabilities		
Accounts payable and accrued liabilities	1,765	1,318

(1) The amounts reported in the table above for the year ended December 31, 2016, have been recast to US dollars

At December 31, 2017, 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. The Company manages credit risk associated with its cash and cash equivalents and investments 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. The Company manages its liquidity risk by continuously monitoring forecasts and actual cash flows. 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. We are exposed to currency risk from employee costs as well as the purchase of goods and services for activities in Canada and the cash balances held in foreign currencies. Fluctuations in the Canadian dollar exchange rate could potentially have an impact on the Company's results. The Company does not have any forward exchange contracts to hedge this risk.

See note 8 to the audited financial statements for expanded disclosure of each risk and the Company's management of same.

(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.

In March 2018, Aptose filed a short form base shelf prospectus (the "Base Shelf") that qualifies for the distribution of up to $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.

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 three months ended December 31, 2017.

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, we have reviewed our 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.

Change in Functional and Reporting Currency

Effective January 1, 2017, we changed our functional currency to US dollars given the prevalence of US dollar denominated activities over time. Since our inception in 1988 to fiscal 2014, all operations of the entity were conducted in Canada and the Canadian dollar was determined to be the functional currency. During fiscal years 2015 and 2016, we gradually transitioned most of our research and development activities, including both headcount and studies, to the US and completed this transition in January 2017. The change in functional currency from Canadian dollars to US dollars is accounted for prospectively from January 1, 2017. Foreign currency transactions are translated into US 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 US dollars at the rates in effect at that date. Foreign exchange gains and losses are recorded in the consolidated statement of loss.

Historically, our sources of financing, with the exception of the recent ATM Facility and Purchase Agreement, have been in Canadian dollars and we have had a majority of our shareholders in Canada. Therefore, we chose to keep our presentation currency in Canadian dollars at the time of changing our functional currency.

Effective December 31, 2017 we changed our reporting currency to US dollars to align our reporting currency with the functional currency. At the date of this report, most of the Company's shareholders are now in the US and most of the trading of the Company's shares are traded on the Nasdaq Capital Market. The Company applied the change retrospectively as if the US dollar had always been the Company's presentation currency. Accordingly, the financial statements for all the periods presented have been translated to the US dollar. Comparative balances of earnings and cash flows have been translated into US dollars using average exchange rates for the reporting periods. For comparative balances, assets and liabilities have been translated into the presentation currency at the rate of exchange prevailing at the reporting date. Components of equity were translated at the exchange rates prevailing at the dates of the relevant transactions. The cumulative impact of the change in reporting currency was a loss of $4,298 in accumulated other comprehensive income as at December 31, 2016.

Significant accounting judgments and estimates

Management's assessment of our 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.

Other important accounting policies and estimates made by management are the valuation of tax accounts, the valuation of contingent liabilities, and the assumptions used in determining the valuation of share-based compensation. These are described in note 3 of the audited financial statements for the year ended December 31, 2017.

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 Company expects that the adoption of this policy will not have a material impact on its financial results as most of its financial assets are cash and cash equivalents and highly liquid investments. The Company does not enter into any hedging activities.

IFRS 16, Leases ("IFRS 16")

On January 13, 2016, the IASB issued IFRS 16. 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.

EXPECTED CHANGE IN ISSUER'S GAAP

The Company expects that effective December 31, 2018 it will become an SEC foreign issuer, and no longer a foreign private issuer, and as a result will have to prepare its December 31, 2018 annual financial statements in accordance with US GAAP, with such change being applied retrospectively. The extent of the impact of adoption of the standard has not yet been determined. The Company will report its first, second and third quarterly for 2018 results under IFRS as issued by the International Accounting Standards Board, and will provide further guidance over the year on the impacts of converting to US GAAP.

Accordingly, should the Company become an SEC foreign issuer, the Company will adopt the FASB guidance for lease accounting and not IFRS guidance.

OUTLOOK

Until one of our drug candidates receives regulatory approval and is successfully commercialized, we 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 our 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 risk factors in the our most recently filed annual information form, 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.

EVALUATION OF DISCLOSURE CONTROLS AND INTERNAL CONTROLS

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 as issued by the IASB, 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.

Management is responsible for establishing and maintaining adequate internal control over financial reporting. 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, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting

As of December 31, 2017, 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 27, 2018, we had 30,702,053 common shares issued and outstanding. In addition there were 4,401,840 common shares issuable upon the exercise of outstanding stock options.

ADDITIONAL INFORMATION

Additional information relating to us, including our December 31, 2017 annual information form and other disclosure documents, are available on EDGAR at www.sec.gov/edgar.shtml and on SEDAR at www.sedar.com.