

MANAGEMENT'S DISCUSSION AND ANALYSIS

For the three months ended March 31, 2018

May 10, 2018

This Management's Discussion and Analysis ("MD&A") of Aptose Biosciences Inc. ("we", "our", "us" and similar expressions) for the interim period should be read in conjunction with our unaudited condensed consolidated interim financial statements for the three months ended March 31, 2018 and 2017 which are incorporated by reference herein and form an integral part of this MD&A. Our March 31, 2018 interim financial statements and additional information about us, including the annual audited financial statements and Management's Discussion and Analysis for the year ended December 31, 2017 and annual information form as at December 31, 2017 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.

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 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;*
- *our plans to secure and maintain strategic partnerships to assist in the further development of our product candidates and to build our pipeline;*
- *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 three months ended March 31, 2018, 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 \$1.0 million to CG to acquire the option. Should we elect to exercise the option, upon exercise, we would pay an additional \$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. On May 7, 2018, we paid the option fee of \$2.0 million in cash to CrystalGenomics in order to exercise early the option and gain an exclusive license to CG-806 in all territories outside of Korea and China.

CG’806 exhibits a picomolar IC₅₀ 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. Finally, recent data demonstrated the CG-806 exerts potent *ex vivo* activity against a broad spectrum of AML patient bone marrow samples, suggesting that CG-806 may actually be useful for treating a broad range of AML patients irrespective of their FLT3 status.

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 safety 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 September 12, 2017 we announced that we received a notice from the USPTO stating that our U.S. Patent Application had been issued as a patent. The patent 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. On March 31, 2018 we received a notice from the Japan Patent Office stating that our Japan Patent Application has been allowed for issuance as a patent. The allowed application claims the CG'806 compound, pharmaceutical compositions comprising the CG'806 compound, and uses for 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 Japan Patent Office can withdraw the allowed application from issuance. We also received on March 21, 2018, a communication from the European Patent Office indicating their intention to grant a patent. This application claims the CG'806 compound, pharmaceutical compositions comprising the CG'806 compound, and uses for treating diseases caused by abnormal or uncontrolled activation of protein kinases, such as cancer. This communication is not a grant of a patent, and although extremely unlikely, the European Patent Office can withdraw the intention before the grant of patent is published.

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 us with seven years of marketing exclusivity.

On April 15, 2018 at the 2018 Annual Meeting of the American Association for Cancer Research (AACR), we presented with the OHSU Knight Cancer Institute preclinical data demonstrating that CG'806, a pan-FLT3/pan-BTK inhibitor, demonstrates superiority to other FLT3 and BTK inhibitors against primary patient samples. We also presented preclinical data demonstrating CG'806 targets multiple pathways to kill diverse subtypes of AML and B-cell malignancies in vitro. The data were highlighted in poster presentations on April 15, 2018 at the 2018 Annual Meeting of the American Association for Cancer Research.

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 (drug substance), 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. We then completed in March 2018 the manufacture of a multi-kg batch of GLP grade API for use in GLP toxicology studies, and we currently are formulating the API into a drug product that we intend to take into the GLP toxicology studies. Also, we currently are manufacturing a multi-kg batch of API under GMP conditions that is intended to represent our API supply for our planned 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 submit an IND by late 2018 and initiate a first-in-human Phase I clinical trial soon thereafter. The total direct costs of such activities and to reach the submission of the IND are currently expected to

range between \$1.7 million and \$3.2 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. Provided the release specifications for the new clinical supply are met, we then 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 \$200 thousand and \$600 thousand. 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 cancer 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 presented at the 2017 Meeting of the American Society of Hematology (“ASH”) and these abstracts were published on the ASH website. Additionally, two manuscripts related to the mechanism of action of APTO-253 have been published in a peer reviewed AACR journal during the second quarter of 2018.

Finally, on April 17, 2018 at the 2018 Annual Meeting of the American Association for Cancer Research (AACR), we presented preclinical data demonstrating that APTO-253 is a new addition to the repertoire of drugs that can exploit DNA BRCA1/2 deficiency, broadening the potential applicability of APTO-253 towards solid cancer indications. The data were highlighted in poster presentations on April 17, 2018 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 us 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 our dual bromodomain and extra-terminal domain motif (BET) protein and kinase inhibitor program. Under the agreement, we will retain reacquisition rights to certain molecules, while OHM/LALS will have the rights to develop and sublicense all other molecules. We will receive a nominal upfront cash payment, a portion of which have already been received, and are 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

At-The-Market Facility

On March 27, 2018, we entered into an at-the-market equity facility (“ATM Facility”) with Cantor Fitzgerald & Co (“Cantor Fitzgerald”), acting as sole agent. Under the terms of this facility, we may, from time to time, sell common shares having an aggregate offering value of up to \$30 million through Cantor Fitzgerald. We determine, at our sole discretion, the timing and number of shares to be sold under the ATM Facility.

Subsequent to March 31, 2018, we issued 165,624 common shares under the ATM Facility for gross proceeds of approximately \$597 thousand.

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.

During the three months ended March 31, 2018, we issued 3.2 million common shares under the Purchase Agreement for gross proceeds of approximately \$8.9 million. Subsequent to March 31, 2018, we issued an additional 2,031,953 shares under the Purchase Agreement for gross proceeds of approximately \$6.1 million. On a cumulative basis, we raised a total of \$15.5 million under the Aspire Purchase Agreement, the total amount available under the Purchase Agreement.

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.

In managing our liquidity risk, we have considered our available cash and cash equivalents and investments as at March 31, 2018. We have also considered our ability to continue to raise funds in 2018 through the ATM Facility with Cantor Fitzgerald in assessing whether we will have sufficient resources to fund research and development operations through to at least the year ending December 31, 2018.

We are an early stage development company and we currently do not earn any significant 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.

CASH POSITION

The following table presents our cash and cash equivalent, investments and working capital as at March 31, 2018, and December 31, 2017.

(in thousands)	Balances at March 31, 2018	Balances at December 31, 2017
Cash and cash equivalents	\$ 15,408	\$ 10,631
Investments	770	798
Total	\$ 16,178	\$ 11,429
Working capital	\$ 14,319	\$ 10,060

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.

RESULTS OF OPERATIONS

The results of operations for the three months ended March 31, 2018 and 2017 are presented below:

(in thousands)	Three months ended March 31,	
	2018	2017
Revenues	\$ -	\$ -
Research and development expenses	3,140	1,735
General and administrative expenses	3,702	1,590
Net finance income	26	33
Net loss and comprehensive loss for the period	\$ 6,816	\$ 3,292
Basic and diluted loss per common share	\$0.23	\$0.19

The increase in the net loss during the three months ended March 31, 2018 compared with the three months ended March 31, 2017 results mostly from \$2.2 million in non-cash expenses related to stock option compensation recorded in the current period, higher research and development expenses related to our CG'806 program and higher professional fees related to regulatory filings in support of financing activities.

Research and Development

Components of research and development expenses

The research and development expenses for the three months ended March 31, 2018 and 2017 are as follows:

(in thousands)	Three months ended March 31,	
	2018	2017
Program costs – CG '806	\$1,354	\$407
Program costs – APTO-253	921	840
Salaries	489	429
Stock-based compensation	367	50
Depreciation of equipment	9	9
	\$3,140	\$1,735

The changes in research and development expenses in the three months ended March 31, 2018 as compared to the three months ended March 31, 2017 result from the following:

- An increase in research and development activities related to our CG'806 development program. Activities in the current period ended March 31, 2018 included the completion of two dose range finding studies and the manufacturing of a batch of the drug substance to be used in toxicity studies. In the comparative period, CG'806 program included formulation and PK studies;
- An increase in expenditures on the APTO-253 program. In the period ended March 31, 2018, we completed production of a GMP batch of drug product, and initiated necessary studies to present to the FDA. In the comparative period we had put this program on hold due to a manufacturing issue.
- An increase in salaries expense mostly related to additional clinical research staff hired at the end of the prior fiscal year to prepare for returning APTO-253 to the clinic.
- An increase in stock option compensation related mostly to stock options granted in the current period of which 100,000 with a grant date fair value of \$2.03 vested immediately.

The CG'806 program was licensed to us in June of 2016. Total program costs from inception to March 31, 2018 are approximately \$5.0 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 March 31, 2018, direct program costs relating to the research and development of APTO-253 represented approximately \$10.7 million.

General and Administrative

Components of general and administrative expenses

The general and administrative expenses for the three months ended March 31, 2018 and 2017 are as follows:

(in thousands)	Three months ended March 31,	
	2018	2017
General and administrative excluding salaries	\$1,293	\$ 708
Salaries	541	858
Stock-based compensation	1,861	10
Depreciation of equipment	7	14
	\$3,702	\$1,590

General and administrative expenses excluding salaries increased in the three months ended March 31, 2018, compared with the three months ended March 31, 2017. The increase is mostly the result of higher professional fees related to regulatory filings for the base shelf prospectus and a follow on supplemental prospectus filed in the current period, higher investor relations, higher patent fees associated with our expanded IP portfolio, and higher office administrative costs associated with having additional employees. Salaries expenses in the three months ended March 31, 2018, decreased in comparison with the three months ended March 31, 2017, due mostly to separation payments made in the period ended March 31, 2017.

Stock-based compensation increased in the three months ended March 31, 2018, compared with the three months ended March 31, 2017 mostly related to stock options granted in the current period, of which 750,000 with a grant date fair value of \$2.03 vested immediately, and also as a result of large forfeitures in the three months ended March 31, 2017.

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.

	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2
<i>(Amounts in 000's except for per common share data)</i>	Mar 31, 2018	Dec 31, 2017	Sept 30, 2017	June 30, 2017	Mar 31, 2017	Dec 31, 2016	Sept 30, 2016	June 30, 2016
Revenue	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Research and development expense	3,140	2,061	1,390	1,088	1,735	1,917	1,663	2,563
General and administrative expense	3,702	1,250	1,319	1,393	1,590	1,115	1,502	1,864
Net loss	(6,816)	(3,288)	(2,640)	(2,441)	(3,292)	(2,969)	(3,105)	(4,408)
Basic and diluted net loss per share	(\$0.23)	(\$0.12)	(\$0.11)	(\$0.11)	(\$0.19)	(\$0.23)	(\$0.24)	(\$0.36)
Cash (used in) operating activities	\$(4,098)	\$(2,905)	\$(2,092)	\$(2,641)	\$(2,653)	\$(2,510)	\$(3,277)	\$(3,607)

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 September 30, 2016 and the follow on quarters up to and including the three months ended December 31, 2016, research and development expenses increased due to the costs associated with the quality, manufacturing and formulation work to resolve the clinical hold of the APTO-253 trial previously described herein, as well as costs related to the collaboration with LALS/Moffitt. In the three months ended June 30, 2016, there was a further increase in expenses due to the \$1 million option fee paid to CG as previously described herein. For the three months ended March 31, 2017, cost savings from the cancellation of the LALS/Moffitt program are offset by increased costs related to the CG'806 program. For the three months ended June 30, 2017, there are further savings related to lower expense on the APTO-253 program related to our decision to refocus our resources towards CG'806. The increase in costs in the quarter ended September 30, 2017 are related mostly to development activities for the CG'806 development program.

Changes in general and administrative costs over time result mostly from changes in headcount, foreign exchange, 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 general and administrative costs in the three months ended September 30, 2016, is primarily due to lower stock-based compensation expense and the completion of certain projects. 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 but slightly higher as a result of higher salaries expense related to severance payments made in the period. Lower expenses in the quarters ended June 30 and September 30, 2017 reflect mostly lower stock option compensation and lower salaries expense. Higher costs in the quarter ended March 31, 2018 reflect mostly stock option compensation and transaction costs associated with regulatory filings in support of financing activities.

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

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 in support of mechanism of action studies, drug resistance induction studies and in vivo efficacy, PK and tolerance studies. 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. This research services agreement has been extended three times, each time for an additional year of service to be billed as services are performed. The most recent extension was made in March 2018, for a maximum amount of fees of \$300,000. These transactions, each approved by our Board of Directors, are in the normal course of business and are measured at the amount of consideration established and agreed to by the related parties.

Contractual Obligations and Off-Balance Sheet Financing

At March 31, 2018, 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	\$ 257	\$ 522	\$ 543	\$ 265	\$ 1,587

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 \$3.7 million.

As at March 31, 2018, 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)	March 31, 2018	December 31, 2017
Financial assets		
Cash and cash equivalents, consisting of high interest savings accounts and short term deposits	\$15,408	\$ 10,631
Investments, consisting of fixed income securities	770	798
Financial liabilities		
Accounts payable and accrued liabilities	2,205	1,765

At March 31, 2018, 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. We manage credit risk associated with its 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 which are capable of prompt liquidation. We manage our liquidity risk by continuously monitoring forecasts and actual cash flows. We are subject to interest rate risk on our cash and cash equivalents and investments. 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 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 our results. We do not have any forward exchange contracts to hedge this risk.

See note 5 to the audited financial statements for expanded disclosure of each risk and our 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, we filed a short form base shelf prospectus in Canada and a registration statement with the U.S. Securities and Exchange Commission (collectively, the “Base Shelf”) that qualifies 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 us 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 offerings under the Base Shelf will be used in line with our Board approved budget and multi-year plan. The Base Shelf allowed us to enter into the ATM Facility. Under the terms of the ATM Facility, we may, from time to time, sell common shares having an aggregate offering value of up to \$30 million through Cantor Fitzgerald on the Nasdaq Capital Market. We determine, at our sole discretion, the timing and number of shares to be sold under this ATM Facility. We intend to use this equity arrangement as an additional option to assist us in achieving our capital objectives. The ATM Facility provides us with the opportunity to regularly raise capital on the Nasdaq Capital Market, at prevailing market prices, at our sole discretion, providing us with the ability to better manage cash resources.

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 March 31, 2018

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.

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.

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

We adopted IFRS 9 (2014) in its consolidated financial statements effective January 1, 2018. 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 adoption of this policy did not have a material impact on the financial results as most of its financial assets are cash and cash equivalents and highly liquid investments. We do 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

We expect that effective December 31, 2018, we will become a domestic issuer under the rules of the U.S. Securities and Exchange Commission, and will no longer qualify as a "foreign private issuer" under those rules, and as a result we will have to prepare our 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. We will report our first, second and third quarterly for 2018 results under IFRS as issued by the International Accounting Standards Board, and intend to provide further guidance over the year on the impacts of converting to US GAAP.

Accordingly, should we become an SEC foreign issuer, we 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 our most recently filed annual information form and annual report on Form 40-F filed with the U.S. Securities and Exchange Commission, in addition to the other information included or incorporated by reference into the most recently filed annual information form and Form 40-F, as well as our historical consolidated financial statements and related notes.

EVALUATION OF DISCLOSURE CONTROLS AND INTERNAL CONTROLS

There have been no changes in our internal control over financial reporting that occurred during the three months ended March 31, 2018, that have materially affected or are reasonably likely to materially affect our internal control over financial reporting. As of March 31, 2018, our management has assessed the effectiveness of our internal control over financial reporting using the Committee of Sponsoring Organizations of the Treadway Commission's 2013 framework, and our disclosure controls and procedures. 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 May 10, 2018, we had 32,900,881 common shares issued and outstanding. In addition there were 4,425,589 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.

Aptose Biosciences Inc.

Condensed Consolidated Interim Statements of Financial Position

(Expressed in thousands of US dollars)

(unaudited)

	as at	March 31, 2018	December 31, 2017
ASSETS			
Current			
Cash and cash equivalents (note 4(a))	\$	15,408	\$ 10,631
Investments (note 4(b))		770	798
Prepaid expenses and other assets		346	396
Total Current Assets		16,524	11,825
Non-current			
Property and equipment		150	142
Total Non-Current Assets		150	142
Total Assets	\$	16,674	\$ 11,967
LIABILITIES			
Current			
Accounts payable and accrued liabilities		2,205	1,765
Total Current Liabilities		2,205	1,765
SHAREHOLDERS' EQUITY			
Share capital			
Common shares (note 6)		240,778	231,923
Stock options (note 7)		8,684	6,456
Contributed surplus		22,909	22,909
Accumulated other comprehensive loss		(4,298)	(4,298)
Deficit		(253,604)	(246,788)
Total Equity		14,469	10,202
Total Liabilities and Equity	\$	16,674	\$ 11,967

See accompanying notes to the condensed consolidated interim financial statements (unaudited)
Commitments, contingencies and guarantees (Note 10)

Aptose Biosciences Inc.

Condensed Consolidated Interim Statements of Loss and Comprehensive Loss
(Expressed in thousands of US dollars except for per common share data)
(unaudited)

	Three months ended March 31, 2018	Three months ended March 31, 2017
REVENUE	\$ -	\$ -
EXPENSES		
Research and development (note 9)	3,140	1,735
General and administrative (note 9)	3,702	1,590
Operating expenses	6,842	3,325
Finance expense (note 9)	18	-
Finance income (note 9)	(44)	(33)
Net financing income	(26)	(33)
Net loss and comprehensive loss for the period	6,816	3,292
Basic and diluted loss per common share	\$ 0.23	\$ 0.19
Weighted average number of common shares outstanding used in the calculation of basic and diluted loss per common share (000's) (note 6(b))	29,042	17,399

See accompanying notes to the condensed consolidated interim financial statements (unaudited)

Aptose Biosciences Inc.

Condensed Consolidated Interim Statement of Changes in Equity
 (Expressed in thousands of US dollars)
 (unaudited)

	Number of Common Shares	Share capital	Stock options	Contributed surplus	Accumulated other comprehensive loss	Deficit	Total
	(in thousands)						
Balance, January 1, 2018	27,502	\$ 231,923	\$ 6,456	\$ 22,909	\$ (4,298)	\$ (246,788)	\$ 10,202
Common shares issued pursuant to share purchase agreement (note 6(a)(i))	3,200	8,855	-	-	-	-	8,855
Stock-based compensation (note 7)	-	-	2,228	-	-	-	2,228
Net loss for the period	-	-	-	-	-	(6,816)	(6,816)
Balance, March 31, 2018	30,702	\$ 240,778	\$ 8,684	\$ 22,909	\$ (4,298)	\$ (253,604)	\$ 14,469
Balance, January 1, 2017	15,722	\$ 218,034	\$ 7,306	\$ 21,413	\$ (4,298)	\$ (235,127)	\$ 7,328
Common shares issued under the ATM (note 6(a)(ii))	3,222	3,676	-	-	-	-	3,676
Stock-based compensation (note 7)	-	-	61	-	-	-	61
Expiry of vested stock options	-	-	(150)	150	-	-	-
Net loss for the period	-	-	-	-	-	(3,292)	(3,292)
Balance, March 31, 2017	18,944	\$ 221,710	\$ 7,217	\$ 21,563	\$ (4,298)	\$ (238,419)	\$ 7,773

Aptose Biosciences Inc.

Condensed Consolidated Interim Statements of Cash Flows
(Expressed in thousands of US dollars)
(unaudited)

	Three months ended March 31, 2018	Three months ended March 31, 2017
Cash flows used in operating activities:		
Net loss for the period	\$ (6,816)	\$ (3,292)
Items not involving cash and other adjustments:		
Stock-based compensation	2,228	61
Depreciation of property and equipment	16	23
Finance income	(44)	(8)
Accretion expense		
Unrealized foreign exchange loss/(gain)	28	(21)
Other	-	-
Change in non-cash operating working capital (note 8)	490	584
Cash used in operating activities	(4,098)	(2,653)
Cash flows from financing activities:		
Issuance of common shares pursuant to share purchase agreement (note 6(a)(i))	\$ 8,855	-
Issuance of common shares pursuant to ATM (note 6 (a)(ii))	-	3,676
Cash provided by financing activities	8,855	3,676
Cash flows from investing activities:		
Investment of short-term investments	-	-
Purchase of property and equipment	(24)	-
Interest received	44	8
Cash (used in) provided by investing activities	20	8
Foreign exchange (losses) on cash and cash equivalents	-	21
Increase in cash and cash equivalents during the period	4,777	1,052
Cash and cash equivalents, beginning of period	10,631	7,940
Cash and cash equivalents, end of period	\$ 15,408	\$ 8,992

See accompanying notes to the condensed consolidated interim financial statements (unaudited)

APTOSE BIOSCIENCES INC.

NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)

Three months ended March 31, 2018 and 2017

(Tabular amounts are in 000s except per share amounts)

1. Reporting Entity

Aptose Biosciences Inc. ("Aptose" or the "Company") is a clinical-stage biotechnology company committed to developing highly differentiated therapeutics that target the underlying mechanisms and 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, Suite 228, Mississauga, Ontario, Canada, L4V 1R9.

2. Basis of presentation

(a) Statement of Compliance

These unaudited condensed consolidated interim financial statements of the Company as at March 31, 2018, were prepared in accordance with International Accounting Standard ("IAS") 34, *Interim Financial Reporting* as issued by the International Accounting Standards Board ("IASB") and do not include all of the information required for full annual financial statements. They do not include all of the information and disclosures required by IFRS for annual financial statements. In the opinion of management, all adjustments considered necessary for fair presentation have been included in these unaudited condensed consolidated interim financial statements. Operating results for the three-month period ended March 31, 2018, are not necessarily indicative of the results that may be expected for the full year ended December 31, 2018. For further information, see the Company's audited consolidated financial statements including notes thereto for the year ended December 31, 2017. These unaudited condensed consolidated interim financial statements should be read in conjunction with the Company's audited annual consolidated financial statements and accompanying notes.

The unaudited condensed consolidated interim financial statements of the Company were reviewed by the Audit Committee and approved and authorized for issue by the Board of Directors on May 10, 2018.

(b) Functional and presentation currency

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

(c) Significant accounting judgments, estimates and assumptions

The preparation of these unaudited condensed consolidated interim 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 unaudited condensed consolidated interim financial statements and reported amounts of revenues and expenses during the reporting period. Actual outcomes could differ from these estimates.

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 5 (b) (ii) for a discussion of the factors considered by management in arriving at its assessment.

The unaudited condensed consolidated interim financial statements include estimates, which, by their nature, are uncertain. The impacts of such estimates are pervasive throughout the unaudited condensed consolidated interim 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.

3. Significant accounting policies

The accompanying unaudited condensed consolidated interim financial statements follow the same accounting policies and methods of application as the audited consolidated financial statements of the Company for the year ended December 31, 2017, except as noted below.

a) Policies adopted in the period

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'

APTOSE BIOSCIENCES INC.

NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)

Three months ended March 31, 2018 and 2017

(Tabular amounts are in 000s except per share amounts)

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 adoption of this policy did not have a material impact on the 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.

b) Recent accounting pronouncements not yet adopted:

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. 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.

4. Capital disclosures

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 short-term 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 month ended March 31, 2018.

In October 2017, the Company entered into a Common Shares Purchase Agreement (the "Agreement") of up to \$15.5 Million with Aspire Capital Fund, LLC ("Aspire Capital"). Under the terms of the Agreement, Aspire Capital committed to purchase up to \$15.5 million of common shares of Aptose, at Aptose's 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 this equity arrangement, the Company issued \$8.9 million of Common Shares during the three months ended March 31, 2018 and, subsequent to March 31, 2018, the Company issued a further \$6.1 million of Common Shares. There are no further shares available to be issued under the Agreement. (Note 6 and Note 12).

In March 2018, Aptose filed a short form base shelf prospectus (the "2018 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 2018 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 allowed us to enter into an "At-The-Market" Facility ("ATM") equity distribution agreement with Cantor Fitzgerald 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 \$30 million through Cantor Fitzgerald on the Nasdaq Capital Market. We determine, at our sole discretion, the timing and number of shares to be sold under this ATM facility. The Company intends to use this equity arrangement as an additional option to assist it in achieving its capital objectives. This equity arrangement provides the Company with the opportunity to regularly raise capital at prevailing market prices, at its sole discretion providing the ability to better manage cash resources.

(a) Cash and cash equivalents:

Cash and cash equivalents consists of cash of \$1.169 million (December 31, 2017 - \$3.225 million) and a bankers' acceptance, a short-term treasury bill with original maturity of three months, and funds deposited into high interest savings accounts totaling \$14.239 million (December 31, 2017 - \$7.406 million).

APTOSE BIOSCIENCES INC.**NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)***Three months ended March 31, 2018 and 2017*

(Tabular amounts are in 000s except per share amounts)

(b) Investments:

As at March 31, 2018 and December, 31, 2017, investments consisted of a guaranteed investment certificate with maturity date of October 10, 2018, bearing an interest rate 1.45%.

5. Financial instruments**(a) Financial instruments**

The Company financial instruments are as follows:

	As at March 31, 2018	As at December 31, 2017
<u>Financial assets</u>		
Cash and cash equivalents (consisting of high interest savings accounts, treasury bill and short term bankers' acceptance), measured at amortized cost	\$ 15,408	\$ 10,631
Investments, consisting of fixed income securities, measured at amortized cost	770	798
<u>Financial liabilities</u>		
Accounts payable and accrued liabilities, measured at amortized cost	\$ 2,205	\$ 1,765

At March 31, 2018, there are no significant differences between the carrying values of these amounts and their estimated fair values.

(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 for its cash and cash equivalents and short-term investments by maintaining minimum standards of R1-low or A-low investments and the Company invests 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 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, the Board considers securing additional funds through equity or debt 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 short-term investments as at March 31, 2018. The Company has also considered its ability to continue to raise funds in 2018 through its share purchase agreement with Aspire Capital and through its ATM facility with Cantor Fitzgerald in assessing whether it will have sufficient resources to fund research and development operations through to at least the 12 month period ending March 31, 2019.

After considering the above factors, management has 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

APTOSE BIOSCIENCES INC.**NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)***Three months ended March 31, 2018 and 2017*

(Tabular amounts are in 000s except per share amounts)

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.

(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 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 for activities in Canada and the cash balances held in foreign currencies. Fluctuations in the Canadian 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 US dollar against the Canadian dollar would result in an increase or decrease in loss for the year of \$42 thousand. Balances in foreign currencies at March 31, 2018, are as follows:

	CA\$ Balances at March 31, 2018	CA\$ Balances at December 31, 2017
Cash and cash equivalents	\$ 54	\$ 83
Investments	1,005	1,000
Accounts payable and accrued liabilities	(462)	(384)
Balance, end of period	\$ 597	\$ 699

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

6. Share capital

The Company is authorized to issue an unlimited number of common shares.

(a) Equity issuances:**i) Share purchase agreement**

On October 27, 2017, we entered into the Aspire Purchase Agreement, which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of \$15,500,000 of Common Shares over approximately 30 months. Pursuant to the terms of this agreement, on October 31, 2017, Aspire Capital purchased 357,143 Common Shares for gross proceeds of \$500 thousand (\$324 thousand net of cash share issue costs). We also issued 321,429 Common Shares to Aspire Capital in consideration for entering into the Aspire Purchase Agreement. On a cumulative basis to March 31, 2018, the Company has raised a total of \$9.4 million gross proceeds under the Aspire Purchase Agreement.

During the three months ended March 31, 2018, the Company issued 3,200,000 common shares under the share purchase agreement at an average price of \$2.77 per share for gross and net proceeds of approximately \$8.9 million.

ii) At-The-Market ("ATM") Facility

On April 2, 2015, Aptose entered into an at-the-market ("ATM") equity facility with Cowen and Company, LLC, acting as sole agent. Under the terms of the ATM, Aptose was permitted to sell Common Shares having an aggregate offering value of \$20,000,000 on NASDAQ. The ATM expired on December 29, 2017 and as at that date the Company had issued a cumulative \$20,000,000 of Common Shares pursuant to this facility.

During the three months ended March 31, 2017, the Company issued 3,222,009 common shares under this ATM equity facility at an average price of \$1.18 per share for gross proceeds of approximately \$3.81 million (\$3.68 million net of share issue costs). Costs associated with the proceeds included a 3% cash commission as well as legal and accounting fees.

APTOSE BIOSCIENCES INC.

NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)

Three months ended March 31, 2018 and 2017

(Tabular amounts are in 000s except per share amounts)

(b) Loss per share

Loss per common share is calculated using the weighted average number of common shares outstanding for the three month periods ending March 31, 2018 and 2017 calculated as follows:

	Three months ended March 31,	
	2018	2017
Issued common shares, beginning of period	27,502	15,722
Effect of shares issued pursuant to share purchase agreement (6(a)(i))	1,540	-
Effect of ATM issuances(6(a)(ii))	-	1,677
	29,042	17,399

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

7. Other equity

(a) Stock options transactions for the period:

	Three months ended March 31, 2018		Three months ended March 31, 2017	
	Number of Options	Weighted average exercise price	Number of Options	Weighted average exercise price
Outstanding, beginning of period	2,344	\$ 3.46	2,005	\$4.31
Granted	2,059	2.96	480	1.14
Forfeited	-	-	(142)	3.65
Expired	-	-	(47)	3.94
Outstanding, end of period	4,403	\$ 3.18	2,296	\$3.73

(b) Stock options outstanding at March 31, 2018:

Range of exercise prices	Options outstanding			Options exercisable	
	Options	Weighted average remaining contractual life (years)	Weighted average exercise price	Options	Weighted average exercise price
\$1.03-\$2.72	858	8.9	\$ 1.29	284	\$ 1.46
\$2.73-\$2.88	850	9.8	2.79	850	2.79
\$2.89-\$3.03	359	8.5	2.97	179	2.96
\$3.04-\$4.05	1,140	9.7	3.09	21	4.00
\$4.06-\$33.53	1,196	6.4	4.97	1,119	4.94
	4,403	8.6	\$ 3.18	2,453	\$ 3.63

APTOSE BIOSCIENCES INC.

NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)

Three months ended March 31, 2018 and 2017

(Tabular amounts are in 000s except per share amounts)

(c) Fair value assumptions

The following table presents the weighted average assumptions that were used in the Black-Scholes option pricing model to determine the fair value of stock options granted during the period, and the resultant weighted average fair values:

	Three months ended March 31, 2018	Three months ended March 31, 2017
Weighted average risk free interest rate	2.39%	1.10
Expected dividend yield	—	—
Weighted average expected volatility	93.9%	101.3%
Weighted average expected life of options	5 years	5 years
Weighted average fair value of options granted in the period	\$ 2.14	\$ 0.85

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 three months ended March 31, 2018 vest 50% after one year and 16.67% on each of the next three anniversaries, with the exception of 91,000 options that vest 50% after one year and 25% on each of the next two anniversaries and 850,000 that vested immediately on the grant date. During the three-month period ending March 31, 2018, the Company recorded share-based payment expense of \$2,228 thousand (2017 - \$53 thousand) related to issued stock options.

Refer to note 9 for a breakdown of stock-based compensation expense by function related to both issued stock options and restricted share units.

The Company has available up to 5,372,859 common shares for issuance relating to outstanding options, rights and other entitlements under the stock-based compensation plans of the Company as of March 31, 2018.

(d) Restricted share units

The Company has a stock incentive plan (SIP) pursuant to which the Board may grant stock-based awards comprised of restricted stock units or dividend equivalents to employees, officers, consultants, independent contractors, advisors and non-employee directors of the Corporation or any affiliate. Each restricted unit is automatically redeemed for one common share of the Company upon vesting. The following table presents the activity under the SIP plan for the three months ended March 31, 2018, and the units outstanding.

	Three months ended, March 31, 2018		Three months ended, March 31, 2017	
	Number (in thousands)	Weighted average grant date fair value	Number (in thousands)	Weighted average grant date fair value
Outstanding, beginning of period	-	\$ -	-	\$ -
Granted	-	-	150	1.14
Outstanding, end of period	-	\$ -	150	\$ 1.14

On March 28, 2017 the Company granted 150,000 restricted share units with a vesting term of three months. During the three month period ending March 31, 2018, the Company recorded share-based payment expense of \$nil (2017 - \$8 thousand) related to the issued RSUs.

APTOSE BIOSCIENCES INC.**NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)***Three months ended March 31, 2018 and 2017*

(Tabular amounts are in 000s except per share amounts)

The grant date fair value was determined as the closing value of the common shares of the Company on the Toronto Stock Exchange on the date prior to the date of grant.

8. Additional cash flow disclosures

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

	Three months ended March 31,	
	2018	2017
Prepaid expenses and other assets	\$ 50	\$ 143
Accounts payable and accrued liabilities	440	441
	\$ 490	\$ 584

9. Other expenses

Components of research and development expenses:

	Three months ended March 31,	
	2018	2017
Program costs, excluding salaries	\$ 2,275	\$ 1,247
Salaries	489	429
Stock-based compensation	367	50
Depreciation of equipment	9	9
	\$ 3,140	\$ 1,735

Components of general and administrative expenses:

	Three months ended March 31,	
	2018	2017
General and administrative excluding salaries	\$ 1,293	\$ 708
Salaries	541	858
Stock-based compensation	1,861	10
Depreciation of equipment	7	14
	\$ 3,702	\$ 1,590

Components of finance expense:

	Three months ended March 31,	
	2018	2017
Foreign exchange loss	\$ 18	\$ -
	\$ 18	\$ -

Components of finance income:

	Three months ended March 31,	
	2018	2017
Interest income	\$ 44	\$ 8
Foreign exchange gain	-	25
	\$ 44	\$ 33

APTOSE BIOSCIENCES INC.**NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)***Three months ended March 31, 2018 and 2017*

(Tabular amounts are in 000s except per share amounts)

10. Commitments, contingencies and guarantees

	Less than 1 year	1 – 3 years	3 – 5 years	Greater than 5 years	Total
Operating leases	\$ 257	\$ 522	\$ 543	\$ 265	\$ 1,587

The Company has entered into various contracts with service providers with respect to the clinical development of APTO-253 and for the development plan of CG'806. These contracts will result in future payments of up to \$3.7 million.

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 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 total development milestones of \$16 million related to the initiation of Phase 2 and pivotal clinical trials, and regulatory milestones totalling \$44 million. The Company also has an obligation to pay royalty payments on sales of commercialized product. The timing of any milestone or royalty payments that may become due is not yet determinable.

On May 7, 2018, we paid the option fee of \$2.0 million in cash to CrystalGenomics in order to exercise early the option and gain an exclusive license to CG-806 in all territories outside of Korea and China.

11. Related Party Transactions

The Company uses 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 oversees the laboratory work. The work is completed under the terms of research services agreements executed in March 2015 and has been extended annually. In May, 2017, the Company extended the agreement with UCSD for a twelve month period for a maximum annual fee of \$300,000, to be billed on a monthly basis as services are performed. In March 2018, the Board approved an extension of this agreement for a further twelve months for services up to \$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.

During the three months ended March 31, 2018, the Company recorded \$61 thousand (2017 – \$63 thousand) in research and development expenses related to this agreement.

12. Subsequent Events

Subsequent to the quarter end the Company issued 165,624 common shares pursuant to its ATM with Cantor Fitzgerald for gross proceeds of \$596,990 and also issued 2,031,953 common shares under the Aspire Purchase Agreement for gross proceeds of approximately \$ 6.1 million. These transactions will be accounted for in the three months ended June 30, 2018.