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

Form 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 OF THE SECURITIES EXCHANGE ACT OF 1934

For the month of August 2016

Commission File Number: 001-32001

Aptose Biosciences Inc.
(Translation of registrant's name into English)

5955 Airport Road, Suite 228
Mississauga, Ontario L4V 1R9
Canada
(*Address of principal executive offices*)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.
Form 20-F ☒ Form 40-F ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1) ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7) ☐

INCORPORATION BY REFERENCE

Exhibits 99.1 and 99.2 to this Report of Foreign Issuer on Form 6-K of Aptose Biosciences Inc. (the "Registrant") are hereby incorporated by reference into the registration statement on Form F-3 of the Registrant (File No. 333-200660) and the prospectus, forming a part thereof.

DOCUMENTS FILED AS PART OF THIS FORM 6-K

See Exhibit Index hereto.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Aptose Biosciences Inc.

Date: August 9, 2016

By: "*Gregory Chow*"
Name: Gregory Chow
Title: Senior Vice President and Chief Financial Officer

EXHIBIT LIST

99.1	Interim Financial Statements
99.2	Management's Discussion and Analysis
99.3	CEO and CFO Certificates

Aptose Biosciences Inc.
Condensed Consolidated Interim Statements of Financial Position
(unaudited)

(amounts in 000's of Canadian Dollars)	**as at**	**June 30, 2016**		**December 31, 2015**
ASSETS				
Current				
Cash and cash equivalents (note 4(a))	**$**	**12,591**	$	11,503
Investments (note 4(b))		**-**		8,245
Prepaid expenses and other assets		**569**		1,067
Total Current Assets		**13,160**		20,815
Non-current				
Equipment		**372**		434
Total Non-Current Assets		**372**		434
Total Assets	**$**	**13,532**	$	21,249
LIABILITIES				
Current				
Accounts payable	**$**	**110**	$	522
Accrued liabilities		**1,691**		1,834
Total Current Liabilities		**1,801**		2,356
SHAREHOLDERS' EQUITY				
Share capital (note 6)				
Common shares		**225,626**		223,425
Stock options (notes 6 and 7)		**7,485**		6,256
Contributed surplus		**22,129**		22,037
Warrants		**84**		84
Deficit		**(243,593)**		(232,909)
Total Equity		**11,731**		18,893
Total Liabilities and Equity	**$**	**13,532**	$	21,249

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
(unaudited)

(amounts in 000's of Canadian Dollars except for per common share data)	**Three months ended June 30, 2016**	Three months ended June 30, 2015	**Six months ended June 30, 2016**	Six months ended June 30, 2015
REVENUE	**$ -**	$ -	**$ -**	$ -
EXPENSES				
Research and development (note 9)	**3,293**	1,308	**5,608**	2,192
General and administrative (note 9)	**2,343**	2,504	**4,951**	5,233
Operating expenses	**5,636**	3,812	**10,559**	7,425
Finance expense (note 9)	**9**	15	**205**	35
Finance income (note 9)	**(33)**	(462)	**(80)**	(526)
Net financing (income) expense	**(24)**	(447)	**125**	(491)
Net loss and comprehensive loss for the period	**5,612**	3,365	**10,684**	6,934
Basic and diluted loss per common share	**$ 0.46**	$ 0.28	**$ 0.88**	$ 0.59
Weighted average number of common shares outstanding used in the calculation of basic and diluted loss per common share (000's) (note 6(d))	**12,231**	11,909	**12,140**	11,852

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

Aptose Biosciences Inc.
Condensed Consolidated Interim Statement of Changes in Equity
(unaudited)

(amounts in 000's of Canadian Dollars)	Common Shares	Stock Options	Warrants	Contributed Surplus	Equity Portion of Convertible Promissory Notes	Deficit	Total
Balance, January 1, 2016	$ 223,425	$ 6,256	$ 84	$ 22,037	$ -	$ (232,909)	$ 18,893
Shares issued under the ATM (note 6)	2,201	-	-	-	-	-	2,201
Stock-based compensation (notes 6 and 7)	-	1,321	-	-	-	-	1,321
Expiry of vested stock options	-	(92)	-	92	-	-	-
Net loss	-	-	-	-	-	(10,684)	(10,684)
Balance, June 30, 2016	**$ 225,626**	**$ 7,485**	**$ 84**	**$ 22,129**	**$ -**	**$ (243,593)**	**$ 11,731**
Balance, January 1, 2015	$ 221,259	$ 4,078	$ 501	$ 21,653	$ 64	$ (218,283)	$ 29,272
Warrant and stock option exercises	1,481	(493)	(140)	-	-	-	848
Stock-based compensation (notes 6 and 7)	-	1,584	-	-	-	-	1,584
Promissory note conversion (note 6(e))	150	-	-	10	(21)	-	139
Expiry of vested stock options	-	(38)	-	38	-	-	-
Net loss	-	-	-	-	-	(6,934)	(6,934)
Balance, June 30, 2015	**$ 222,890**	**$ 5,131**	**$ 361**	**$ 21,701**	**$ 43**	**$ (225,217)**	**$ 24,909**

Aptose Biosciences Inc.
Condensed Consolidated Interim Statements of Cash Flows
(unaudited)

(amounts in 000's of Canadian Dollars)	**Three months ended June 30, 2016**	Three months ended June 30, 2015	**Six months ended June 30, 2016**	Six months ended June 30, 2015
Cash flows used in operating activities:				
Net loss for the period	**$ (5,612)**	$ (3,365)	**$ (10,684)**	$ (6,934)
Items not involving cash and other adjustments:				
Stock-based compensation	**786**	625	**1,321**	1,584
Depreciation of equipment	**32**	24	**65**	36
Finance income	**(33)**	(462)	**(80)**	(526)
Finance expense	**-**	15	**-**	35
Unrealized foreign exchange loss	**23**	-	**264**	-
Other	**-**	(2)	**-**	(1)
Change in non-cash operating working capital (note 8)	**156**	(1,131)	**(57)**	(672)
Cash used in operating activities	**(4,648)**	(4,296)	**(9,171)**	(6,478)
Cash flows from financing activities:				
Proceeds from ATM (note 6 (a))	**2,201**	-	**2,201**	-
Exercise of warrants and stock options	**-**	281	**-**	848
Interest on promissory notes	**-**	(7)	**-**	(20)
Cash provided by financing activities	**2,201**	274	**2,201**	828
Cash flows from investing activities:				
Divestiture of short-term investments	**8,286**	8,078	**8,245**	8,015
Purchase of fixed assets	**-**	(103)	**(3)**	(212)
Interest received	**33**	73	**80**	176
Cash provided by investing activities	**8,319**	8,048	**8,322**	7,979
Foreign exchange (losses) gains on cash and cash equivalents	**(23)**	390	**(264)**	350
Increase in cash and cash equivalents during the period	**5,849**	4,416	**1,088**	2,679
Cash and cash equivalents, beginning of period	**6,742**	12,628	**11,503**	14,365
Cash and cash equivalents, end of period	**$ 12,591**	$ 17,044	**$ 12,591**	$ 17,044

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

1. Reporting Entity

Aptose Biosciences Inc. ("Aptose" or the "Company") is a clinical-stage biotechnology company developing personalized therapies to address unmet medical needs in oncology, with a particular focus on hematologic malignancies. 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 June 30, 2016 were prepared in accordance with International Financial Reporting Standards ("IFRS") and 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. 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 August 9, 2016.

(b) Functional and presentation currency
The functional and presentation currency of the Company is the Canadian dollar ("$").

(c) Significant accounting judgments, estimates and assumptions
The preparation of these 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. 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.

The key assumptions concerning the future, and other key sources of estimation uncertainty as of the date of the statement of financial position that have a significant risk of causing material adjustment to the carrying amounts of assets and liabilities within the next fiscal year arise in connection with the valuation of contingent liabilities and valuation of tax accounts. Significant estimates also take place in connection with the valuation of share-based compensation, share purchase warrants and finders' warrants.

3. Significant accounting policies

The accompanying unaudited condensed consolidated interim financial statements are prepared in accordance with IFRS and follow the same accounting policies and methods of application as the audited consolidated financial statements of the Company for the year ended December 31, 2015. 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 and six month periods ended June 30, 2016 are not necessarily indicative of the results that may be expected for the full year ended December 31, 2016. For further information, see the Company's audited consolidated financial statements including notes thereto for the year ended December 31, 2015.

Standards and Interpretations Adopted in Fiscal 2016
Adoption of Amendments to IAS 1

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

4. Capital disclosures

The Company's objectives when managing capital are to:

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

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

In December 2014, Aptose filed a short form base shelf prospectus (the "Base Shelf") that qualifies for the distribution of up to US$100,000,000 of common shares, warrants, or units comprising any combination of common shares and warrants ("Securities"). The distribution of Securities may be effected from time to time in one or more transactions at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, or at prices related to such prevailing market prices to be negotiated with purchasers and as set forth in an accompanying prospectus supplement, including transactions that are deemed to be "at-the-market" distributions. The Base Shelf provides us with additional flexibility when managing our 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. Our Base Shelf expires in December, 2017. The Base Shelf allowed us to enter into an "At-The-Market" Facility ("ATM") equity distribution agreement with Cowen and Company, LLC, acting as sole agent. Under the terms of this facility, we may, from time to time, sell shares of our common stock having an aggregate offering value of up to US$20 million through Cowen and Company, LLC on the Nasdaq Capital Market. We determine, at our sole discretion, the timing and number of shares to be sold under this ATM facility (see note 6). We intend to use this equity arrangement as an additional option to assist us in achieving our capital objectives. The ATM provides the Company with the opportunity to regularly raise capital on the Nasdaq Capital Market, at prevailing market prices, at its sole discretion providing the ability to better manage cash resources.

The Company is not subject to externally imposed capital requirements.

The Company's overall strategy with respect to capital risk management remains unchanged from the year ended December 31, 2015.

(a) Cash and cash equivalents:

Cash and cash equivalents consists of cash of $3.1 million (December 31, 2015 - $761 thousand) and funds deposited into high interest savings accounts totalling $9.5 million (December 31, 2015 - $10.7 million). The current interest rate earned on these deposits is 0.2%-0.75% (December 31, 2015 – 0.2-0.75%).

(b) Investments:

As at June 30, 2016 there were no investments outstanding. At December 31, 2015, investments consisted of guaranteed investment certificates with Canadian financial institutions having high credit ratings including six investments with maturity dates from April 22, 2016 to June 19, 2016, bearing interest rates from 1.80% to 2.10% per annum.

(Tabular amounts are in 000s)

5. Financial instruments

(a) Financial instruments

The Company has classified its financial instruments as follows:

		As at June 30, 2016		As at December 31, 2015
Financial assets				
Cash and cash equivalents (consisting of high interest savings accounts), measured at amortized cost	$	12,591	$	11,503
Investments, consisting of guaranteed investment certificates, measured at amortized cost		-		8,245
Financial liabilities				
Accounts payable, measured at amortized cost		**110**		522
Accrued liabilities, measured at amortized cost		**1,691**		1,834

At June 30, 2016, there are no significant differences between the carrying values of these amounts and their estimated market 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 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.

(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. Aptose is exposed to currency risk from employee costs as well as the purchase of goods and services primarily in the United States and the cash balances held in foreign currencies. Fluctuations in the US dollar exchange rate could potentially have a significant impact on the Company's results. Assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the US dollar would result in an increase or decrease in loss for the year and comprehensive loss of $402 thousand (December 31, 2015- $576 thousand). Balances in foreign currencies at June 30, 2016 are as follows:

		U.S.$ balances at June 30, 2016		U.S $ balances at December 31, 2015
Cash and cash equivalents	**$**	**4,069**	$	5,000
Accounts payable and accrued liabilities		**(955)**		(838)
	$	**3,114**	$	4,162

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

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

6. Share capital

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

	Common shares		Warrants	
	Number	Amount	Number	Amount
	(In thousands)		(In thousands)	
Balance, January 1, 2015	**11,700**	**$ 221,259**	**209**	**$ 501**
Warrant exercises	81	503	(81)	(155)
Warrant expiry	-	-	(55)	(262)
Option exercises	143	1,215	-	-
Common shares issued under the ATM	2	10	-	-
Promissory note conversion	122	438	-	-
Balance, December 31, 2015	**12,048**	**$ 223,425**	**73**	**$ 84**
Common shares issued under the ATM	641	2,201	-	-
Balance, June 30, 2016	**12,689**	**$ 225,626**	**73**	**$ 84**

(a) At The Market Facility ("ATM")

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

During the three months ended June 30, 2016, the Company issued 641,734 common shares through the ATM raising gross proceeds of USD$1.8 million. Costs associated with the proceeds included a 3% cash commission as well as legal and accounting fees. The net proceeds raised during the quarter totaled USD$1.7 million or $2.2 million.

(b) Exercise of Warrants

There were no warrants exercised during the six months ended June 30, 2016.

Warrants exercised during the six months ended June 30, 2015:

(in thousands)	Number	Proceeds
August 2011 warrants (i)	5	$ 24
June 2013 private placement warrants	47	142
December 2013 broker warrants	18	121
Total	70	$ 287

In addition to the cash proceeds received, the original fair value related to these warrants of $140 thousand was transferred from warrants to share capital. This resulted in a total amount of $427 thousand credited to share capital.

Summary of outstanding warrants:

(in thousands)	June 30, 2016	December 31, 2015
August 2011 warrants (i)	**73**	73
Number of warrants outstanding, end of period	**73**	73

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

(Tabular amounts are in 000s)

(b) Continuity of contributed surplus

Contributed surplus is comprised of the cumulative grant date fair value of expired share purchase warrants and expired stock options as well as the cumulative amount of previously expensed and unexercised equity settled share-based payment transactions.

		Six months ended June 30, 2016		Six months ended June 30, 2015
Balance, beginning of period	**$**	**22,037**	$	21,653
Exercise of convertible promissory notes		**-**		10
Expiry of vested stock options		**92**		38
Balance, end of period	**$**	**22,129**	$	21,701

(c) Continuity of stock options

		Six months ended June 30, 2016		Six months ended June 30, 2015
Balance, beginning of period	**$**	**6,256**	$	4,078
Stock based compensation		**1,321**		1,584
Exercise of stock options		**-**		(493)
Expiry of vested stock options		**(92)**		(38)
Balance, end of period	**$**	**7,485**	$	5,131

(d) Loss per share

Loss per common share is calculated using the weighted average number of common shares outstanding for the three and six month periods ending June 30, 2016 calculated as follows:

	Three months ended		**Six months ended**	
	June 30, 2016	June 30, 2015	**June 30, 2016**	June 30, 2015
Issued common shares, beginning of period	**12,048**	11,867	**12,048**	11,700
Effect of ATM issuances	**183**	—	**92**	—
Effect of warrant and option exercises	—	42	—	120
Effect of promissory note conversions	—	—	—	32
	12,231	11,909	**12,140**	11,852

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

(e) Convertible promissory notes

During the six months ended June 30, 2015, $150 thousand promissory notes due in September 2015 incurring interest at a rate of 10% and with a carrying value of $140 thousand were converted into 42 thousand common shares of the Company. All of the promissory notes were converted prior to September 30, 2015.

(Tabular amounts are in 000s)

7. Stock options

(a) Stock options transactions for the period:

	Six months ended June 30, 2016		Six months ended June 30, 2015	
	Number of Options	**Weighted average exercise price**	Number of Options	Weighted average exercise price
Outstanding, Beginning of period	**1,689**	**$ 6.31**	1,374	$ 5.95
Granted	**382**	**3.82**	478	6.92
Exercised	**-**	**-**	(121)	4.66
Expired	**(25)**	**8.73**	(1)	48.41
Outstanding, end of period	**2,046**	**$ 5.81**	1,730	$ 6.28

(b) Stock options outstanding at June 30, 2016:

	Options outstanding			Options exercisable	
Range of exercise prices	Number of Options	Weighted average remaining contractual life (years)	Weighted average exercise price	Number of Options	Weighted average exercise price
$ 2.16 - $ 4.49	490	8.9	$ 3.60	109	$ 2.82
$ 4.50 - $ 5.49	155	8.0	5.26	78	5.26
$ 5.50 - $ 5.85	471	7.8	5.70	361	5.70
$ 5.86 - $ 6.87	351	8.0	6.24	237	6.18
$ 6.88 - $118.80	579	8.3	7.67	379	8.02
	2,046	8.3	$ 5.81	1,164	$ 6.25

(c) Fair value assumptions

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

	Six months ended June 30, 2016	Six months ended June 30, 2015
Exercise price	**$ 3.82**	$ 6.77-7.14
Grant date share price	**$ 3.82**	$ 6.77-7.14
Risk free interest rate	**0.68%**	0.75-1.5%
Expected dividend yield	**—**	—
Expected volatility	**109.5%**	103-113%
Expected life of options	**5 years**	5 years
Weighted average fair value of options granted in the period	**$ 2.99**	$5.33

Stock options granted by the Company during the six months ended June 30, 2016 vest 50% after one year and 16.67% on each of the next three anniversaries.

Stock options granted by the Company during the six months ended June 30, 2015 consist of 128,000 options that vest 50%, 25% and 25% on each of the next three anniversaries and 350,000 options that vest 50% on the first anniversary and 16.67% on each of the next three anniversaries (total four year vesting).

Refer to note 9 for a breakdown of stock option expense by function.

The Company has available up to 2,220,000 common shares for issuance relating to outstanding options, rights and other entitlements under the stock based compensation plans of the Company as of June 30, 2016.

(Tabular amounts are in 000s)

8. Additional cash flow disclosures

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

	Three months ended		Six months ended	
	June 30, 2016	June 30, 2015	**June 30, 2016**	June 30, 2015
Prepaid expenses and other assets	**$ 212**	$ 104	**$ 498**	$ (4)
Accounts payable	**(220)**	(404)	**(412)**	(106)
Accrued liabilities	**164**	(831)	**(143)**	(562)
	$ 156	$ (1,131)	**$ (57)**	$ (672)

9. Expenses

Components of research and development expenses:

	Three months ended		Six months ended	
	June 30, 2016	June 30, 2015	**June 30, 2016**	June 30, 2015
Program costs	**$ 1,879**	$ 1,257	**$ 4,126**	$ 2,117
CrystalGenomics Option Fee (a)	**1,294**	-	**1,294**	-
Stock-based compensation	**109**	46	**165**	65
Depreciation of equipment	**11**	5	**23**	10
	$ 3,293	$ 1,308	**$ 5,608**	$ 2,192

(a) During the three month period ended June 30, 2016 the Company paid US$1.0 million ($1.3 million) to CrystalGenomics for an option fee related to the CG'806 technology. Should the Company elect to exercise the option prior to filing of an Investigational New Drug application with the Food and Drug Administration, the Company would pay an additional US$2 million in cash or common shares, and would receive full development and commercial rights for the program in all territories outside of Korea and China.

Components of general and administrative expenses:

	Three months ended		Six months ended	
	June 30, 2016	June 30, 2015	**June 30, 2016**	June 30, 2015
General and administrative excluding salaries	**$ 822**	$ 1,149	**$ 1,955**	$ 2,178
Salaries	**823**	757	**1,798**	1,510
Stock-based compensation	**677**	579	**1,156**	1,519
Depreciation of equipment	**21**	19	**42**	26
	$ 2,343	$ 2,504	**$ 4,951**	$ 5,233

Components of finance expense:

	Three months ended		Six months ended	
	June 30, 2016	June 30, 2015	**June 30, 2016**	June 30, 2015
Interest expense	**$ -**	$ 15	**$ -**	$ 35
Foreign exchange loss	**9**	-	**205**	-
	$ 9	$ 15	**$ 205**	$ 35

Components of finance income:

	Three months ended		Six months ended	
	June 30, 2016	June 30, 2015	**June 30, 2016**	June 30, 2015
Interest income	**$ 33**	$ 72	**$ 80**	$ 176
Foreign exchange gain	**-**	390	**-**	350
	$ 33	$ 462	**$ 80**	$ 526

10. Commitments, contingencies and guarantees.

(in thousands)	Less than 1 year	1-3 years	3-5 years	Total
Operating leases	$ 530	751	174	$ 1,455

The Company has entered into various contracts with service providers with respect to the clinical development of APTO-253. These contracts could result in future payment commitments of up to approximately $2.6 million over the related service period. Of this amount, $799 thousand has been paid and $35 thousand has been accrued at June 30, 2015. The payments are based on services performed and amounts may be higher or lower based on actual services performed.

11. Related Party Transactions

In March 2016, the Company entered into an agreement with the Moores Cancer Center at the University of California San Diego ("UCSD") to provide pharmacology lab services to the Company. Dr. Stephen Howell is the Acting Chief Medical Officer of Aptose and is also a Professor of Medicine at UCSD and will be overseeing the laboratory work. The research services will be provided from April 1, 2016 to March 31, 2017 and will be billed monthly for services rendered. The total amount for services provided under the agreement is not to exceed US$200,000.

12. Subsequent Events

Subsequent to the quarter end, the Company issued 203,384 common shares under the ATM for gross proceeds of US$510 thousand. These transactions will be accounted for in the three months ended September 30, 2016.

Exhibit 99.2

MANAGEMENT'S DISCUSSION AND ANALYSIS

For the three and six months ended June 30, 2016

August 9, 2016

This Management's Discussion and Analysis ("MD&A") of Aptose Biosciences Inc. ("Aptose", the "Company", "we", "us" and similar expressions) for the interim period should be read in conjunction with the Company's unaudited condensed consolidated interim financial statements for the three and six months ended June 30, 2016 and 2015 which are incorporated by reference herein and form an integral part of this MD&A. The June 30, 2016 interim financial statements and additional information about the Company, including the annual audited financial statements and MD&A as at December 31, 2015 and for the year then ended, and the annual report on form 20-F of the Company as at December 31, 2015 and for the year then ended can be found on SEDAR at www.sedar.com and EDGAR at www.sec.gov/edgar.shtml.

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

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

- *our business strategy;*
- *our clinical development plans;*
- *our ability to obtain the substantial capital we require to fund research and operations;*
- *our plans to secure strategic partnerships to assist in the further development of our product candidates and to build our pipeline;*
- *our plans to conduct clinical trials and preclinical programs;*
- *our expectations regarding the progress and the successful and timely completion of the various stages of our drug discovery, preclinical and clinical studies and the regulatory approval process;*
- *our plans, objectives, expectations and intentions; and*
- *other statements including words such as "anticipate", "contemplate", "continue", "believe", "plan", "estimate", "expect", "intend", "will", "should", "may", and other similar expressions.*

The forward-looking statements reflect our current views with respect to future events, are subject to significant risks and uncertainties, and are based upon a number of estimates and assumptions that, while considered reasonable by us, are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause our actual results, performance or achievements to be materially different from any future results, performance, or achievements that may be expressed or implied by such forward-looking statements, including, among others:

- *our ability to obtain the substantial capital we require to fund research and operations;*
- *our lack of product revenues and history of operating losses;*
- *our early stage of development, particularly the inherent risks and uncertainties associated with (i) developing new drug candidates generally, (ii) demonstrating the safety and efficacy of these drug candidates in clinical studies in humans, and (iii) obtaining regulatory approval to commercialize these drug candidates;*
- *our drug candidates require time-consuming and costly preclinical and clinical testing and regulatory approvals before commercialization;*
- *clinical studies and regulatory approvals of our drug candidates are subject to delays, and may not be completed or granted on expected timetables, if at all, and such delays may increase our costs and could delay our ability to generate revenue;*
- *the regulatory approval process;*
- *our ability to recruit patients for clinical trials;*
- *the progress of our clinical trials;*
- *our ability to find and enter into agreements with potential partners;*
- *our ability to attract and retain key personnel;*
- *our ability to obtain and maintain patent protection;*
- *our ability to protect our intellectual property rights and not infringe on the intellectual property rights of others;*
- *our ability to comply with applicable governmental regulations and standards;*
- *development or commercialization of similar products by our competitors, many of which are more established and have or have access to greater financial resources than us;*
- *commercialization limitations imposed by intellectual property rights owned or controlled by third parties;*
- *potential product liability and other claims;*
- *our ability to maintain adequate insurance at acceptable costs;*
- *further equity financing, which may substantially dilute the interests of our existing shareholders;*
- *changing market conditions; and*
- *other risks detailed from time-to-time in our on-going quarterly filings, annual information forms, annual reports and annual filings with Canadian securities regulators and the United States Securities and Exchange Commission, and those which are discussed under the heading "Risk Factors" in this document.*

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

PROGRAM UPDATES

APTO-253

Phase Ib Trial

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

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

Aptose has modified the clinical trial design for the Phase 1b study, pending approval from the FDA, in order to focus all resources on the patient population most likely to benefit from APTO-253. Under the proposed modification, Arm B of the dose-escalation phase of the study, initially designed to enroll approximately fifteen (15) patients with multiple myeloma and lymphoma, will be discontinued. Arm A of the study, focused on patients with acute leukemias and myelodysplastic syndromes (MDS) remains unchanged.

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

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

Clinical Hold and Current Status

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

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

During the quarter, Aptose worked with a contract manufacturing organization ("CMO") and determined that the filter clogging event with the drug product that was administered in the clinic was chemistry-based. Likewise, Aptose guided a qualified CMO to introduce new methodologies to formulate APTO-253 into a drug product that is stable, and which should not result in filter clogging events in the future. Good Manufacturing Practice ("GMP") batches of the Active Pharmaceutical Ingredient ("API") have been manufactured to provide material for formulation studies and to supply the clinical drug product into the future. Based on numerous formulation studies conducted by a CMO with expertise in formulation development, a new soluble and stable formulation for the drug product has been selected. In parallel with these studies, mock infusion studies using the newly formulated drug product demonstrated no filter clogging, and supplementary mock infusion studies are ongoing at multiple CROs to ensure the safety, durability and solubility of the new formulation. In order to respond to the FDAs clinical hold which is related to the filter clogging issue, Aptose must articulate the root cause of the filter clogging incident; and demonstrate to the FDA that a newly manufactured batch of the APTO-253 drug substance has been formulated, is stable, and should not cause such incidents in the future. The ultimate decisions regarding the removal of the clinical hold, the appropriateness of the new drug product, and the starting dose for the trial will reside with the FDA.

CG'806

In June 2016, Aptose announced a definitive agreement with South Korean company, CrystalGenomics, Inc. ("CG"), granting Aptose an exclusive option to research, develop and commercialize CG026806 ("CG'806") in all countries of the world except Korea and China, for all fields of use. CG'806 is a highly potent, non-covalent small molecule therapeutic agent. This multi-kinase inhibitor exhibits a picomolar IC50 toward the FMS-like tyrosine kinase 3 with the Internal Tandem Duplication ("FLT3-ITD") and potency against a host of mutant forms of FLT3, as well as single-digit nanomolar IC50's against Bruton's tyrosine kinase ("BTK") and its C481S mutant ("BTK-C481S"). Aptose paid US$1.0 million ($1.3 million) to CG to acquire the option. Should we elect to exercise the option prior to filing of an Investigational New Drug ("IND") application with the FDA, we would pay an additional US$2 million in cash or common shares, and would receive full development and commercial rights for the program in all territories outside of Korea and China.

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

The C481S mutation of BTK arises from therapy with covalent, irreversible BTK inhibitors that target the Cysteine ("Cys") residues of BTK, thereby conferring resistance to other covalent BTK inhibitors. Of note, following mutation of the Cysteine 481 residue to a Serine residue, the "Cys" target of the covalent, irreversible inhibitors no longer exists in the BTK enzyme. As a non-covalent, reversible inhibitor, CG'806 does not rely on the Cysteine 481 residue for inhibition of the BTK enzyme. Consequently, patients relapsed or refractory to other commercially approved or development stage BTK inhibitors with chronic lymphocytic leukemia ("CLL") or mantle cell lymphoma ("MCL") may continue to be sensitive to CG'806 therapy.

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

Multi-Targeting Bromodomain Program

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

Multi-Targeting Epigenetic Program

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

FINANCING ACTIVITIES

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

During the three months ended June 30, 2016, the Company issued 641,734 common shares through the ATM Facility raising gross proceeds of US$1.8 million. Costs associated with the proceeds included a 3% cash commission as well as legal and accounting fees. The net proceeds raised during this three month period totaled US$1.7 million or $2.2 million.

Subsequent to the quarter end, we issued an additional 203,384 common shares under the ATM Facility for gross proceeds of US$510 thousand.

LIQUIDITY AND CAPITAL RESOURCES

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

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

CASH POSITION

At June 30, 2016, we had cash and cash equivalents of $12.6 million compared to $19.7 million at December 31, 2015. We generally invest our cash in excess of current operational requirements in highly rated and liquid instruments. Investment decisions are made in accordance with an established investment policy administered by senior management and overseen by our Audit Committee and Board of Directors. As at June 30, 2016, our cash consisted of $3.1 million (December 31, 2015 - $761 thousand) and funds deposited into high interest savings accounts in both Canadian and US funds totaling $9.5 million (December 31, 2015 - $10.7 million). Working capital (representing primarily cash, cash equivalents, investments and other current assets less current liabilities) at June 30, 2016 was $11.4 million (December 31, 2015 –$18.5 million).

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

RESULTS OF OPERATIONS

Our net loss for the three months ended June 30, 2016 was $5.6 million ($0.46 per share) compared with $3.4 million ($0.28 per share) in the same period in the prior year. Net loss for the six months ended June 30, 2016 was $10.7 million ($0.88 per share) compared with $6.9 million ($0.59 per share) during the six months ended June 30, 2015.

The increase in net loss during the three months ended June 30, 2016 in comparison to the three months ended June 30, 2015 is the result of higher research and development costs due to a $1.3 million option fee paid for CG'806, costs associated with APTO-253 and efforts to return the program to the clinic and costs related to the Moffit/LALS development program. In addition, in the three months ended June 30, 2015 we recognized a foreign exchange gain on our US dollar denominated cash balances of $390 thousand which offset our net loss during the period. In the three months ended June 30, 2016 we recognized a foreign exchange loss of $9 thousand.

The increase in net loss during the six months ended June 30, 2016 compared with the six month period ended June 30, 2015 is primarily due to higher research and development activities related to the $1.3 million option fee for CG'806, costs associated with APTO-253 and the new Moffit/LALS program as well as additional headcount in the research and clinical departments to support these activities. In addition, the lower Canadian dollar resulted in an increase in our US dollar denominated costs in comparison with the prior year. Additionally, we recognized net finance income of $491 thousand in the prior year period due to gains on our US dollar denominated cash and cash equivalents compared with a net finance loss of $125 thousand in the current year period due to foreign exchange losses on our US dollar denominated cash and cash equivalents.

We utilized cash of $4.6 million in our operating activities in the three-month period ended June 30, 2016 compared with $4.3 million during the three months ended June 30, 2015. For the six months ended June 30, 2016 we utilized cash of $9.2 million compared with $6.5 million in the six months ended June 30, 2015. The cash utilized in the three month period is only slightly higher than the three months ended June 30, 2015 despite a higher net loss due to cash used to reduce accounts payable and accrual balances in the prior year period. The cash utilized in the six months ended June 30, 2016 increased compared to the prior year period due to an increased net loss offset by cash used to reduce accounts payable and accrual balances in the prior year period.

At June 30, 2016, we had cash and cash equivalents of $12.6 million compared to $19.7 million at December 31, 2015.

Research and Development

Research and development expenses totaled $3.3 million in the three months ended June 30, 2016 compared to $1.3 million during the three months ended June 30, 2015 and totaled $5.6 million for the six month period ended June 30, 2016 compared with $2.2 million in the same period in the prior year. Research and development costs consist of the following:

Components of research and development expenses:

(in thousands)	Three months ended June 30, 2016	Three months ended June 30, 2015	Six months ended June 30, 2016	Six months ended June 30, 2015
Program costs	**$ 1,879**	$ 1,257	**$ 4,126**	$ 2,117
CrystalGenomics Option Fee	**1,294**	-	**1,294**	-
Stock based compensation	**109**	46	**165**	65
Depreciation of equipment	**11**	5	**23**	10
	$ 3,293	$ 1,308	**$ 5,608**	$ 2,192

The increase in research and development costs in the three and six months ended June 30, 2016 compared with the three and six months ended June 30, 2015 is due to the following reasons:

- 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;
- Increased research and clinical operations headcount;
- Formulation and manufacturing costs associated with APTO-253 and the root cause analysis of the filter clogging identified in November 2015; and
- Increased Contract Research Organization costs related to consultants and advisors as we work towards returning APTO-253 to the clinic.

During the three months ended June 30, 2016 Aptose paid US$1.0 million ($1.3 million) to CG for an option fee related to the CG'806 technology. Should the results of the planned pre-clinical studies be positive, we would choose to pay an additional US$2.0 million in cash or common shares to exercise the option and receive the commercial license prior to initiating any clinical studies. No comparable expense existed in the same period in the prior year.

Stock-based compensation costs allocated to research and development increased in the three and six months ended June 30, 2016 to reflect option grants to new employees.

General and Administrative

General and administrative expenses totaled $2.3 million in the three-month period ended June 30, 2016 compared to $2.5 million in the three months ended June 30, 2015. For the six month period ended June 30, 2016, general and administrative expenses totaled $5.0 million compared with $5.2 million in the same period in the prior year. General and administrative expenses consist of the following:

Components of general and administrative expenses:

(in thousands)	Three months ended June 30, 2016	Three months ended June 30, 2015	Six months ended June 30, 2016	Six months ended June 30, 2015
General and administrative excluding salaries	**$ 822**	$ 1,149	**$ 1,955**	$ 2,178
Salaries	**823**	757	**1,798**	1,510
Stock-based compensation	**677**	579	**1,156**	1,519
Depreciation of equipment	**21**	19	**42**	26
	$ 2,343	$ 2,504	**$ 4,951**	$ 5,233

General and administrative expenses excluding salaries, decreased in the three months ended June 30, 2016 compared with the three months ended June 30, 2015. The decrease is primarily attributable to lower legal and patent costs as well as lower regulatory and filing fees related to transactions completed in the same period in the prior year.

General and administrative expenses excluding salaries, decreased in the six months ended June 30, 2016 compared with the six months ended June 30, 2015. The decrease is the result of lower legal costs related to transactions completed in the prior year as well as costs due to the clean-up and move associated with the Toronto office and lab relocation completed in the six months ended June 30, 2015 for which comparable expenses do not exist in the current year.

Salary charges in the three and six months ended June 30, 2016 increased in comparison with the three and six months ended June 30, 2015 due to additional headcount as well as a higher average CA/US exchange rate which increased the cost of our US denominated salaries.

Stock-based compensation costs increased in the three months ended June 30, 2016 compared with the three months ended June 30, 2015 due to annual option grants at the end of March 2016 compared with June 2015 which resulted in higher amortization earlier in the year.

Stock-based compensation decreased in the six months ended June 30, 2016 compared with the six months ended June 30, 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.

Finance Expense

Finance expense for the three months ended June 30, 2016 totaled $9 thousand compared with $15 thousand for the three months ended June 30, 2015. For the six months ended June 30, 2016, finance expense totaled $205 thousand compared with $35 thousand for the same period in the prior year. Finance expense includes the following items:

	Three months ended		Six months ended	
(in thousands)	**June 30, 2016**	June 30, 2015	**June 30, 2016**	June 30, 2015
Interest expense	**$ -**	$ 15	**$ -**	$ 35
Foreign exchange loss	**9**	-	**205**	-
	$ 9	$ 15	**$ 205**	$ 35

Interest expense for the three and six months ended June 30, 2015 relates to interest accrued at a rate of 10% on the remaining balance of convertible promissory notes issued in September 2013 as well as accretion expense related to the conversion feature of the notes. As the promissory notes were converted before September 2015, no interest expense was incurred in 2016.

Foreign exchange loss is the result of the fluctuation of exchange rates between US and Canadian dollars and the impact on our US dollar denominated cash balances.

Finance Income

Finance income totaled $33 thousand in the three months ended June 30, 2016 compared to $462 thousand in the three months ended June 30, 2015. For the six months ended June 30, 2016, finance income totaled $80 thousand compared with $526 thousand in the same period in the prior year. Finance income includes the following items:

	Three months ended		Six months ended	
(in thousands)	**June 30, 2016**	June 30, 2015	**June 30, 2016**	June 30, 2015
Interest income	**$ 33**	$ 72	**$ 80**	$ 176
Foreign exchange gain	**-**	390	**-**	350
	$ 33	$ 462	**$ 80**	$ 526

Interest income represents interest earned on our cash and cash equivalent and investment balances. The foreign exchange gain incurred in the three and six months ended June 30, 2015 was the result of an increase in the value of US dollar denominated cash and cash equivalents balances during such periods due to a depreciation of the Canadian dollar compared to the US dollar.

Net loss for the period

For the reasons discussed above, our net loss for the three months ended June 30, 2016 increased to $5.6 million ($0.46 per share) compared to $3.4 million ($0.28 per share) in the three months ended June 30, 2015 and increased in the six months ended June 30, 2016 to $10.7 million ($0.88 per share) compared to $6.9 million ($0.59 per share) in the six months ended June 30, 2015.

QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

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

(Amounts in 000's except for per common share data)	Q2 June 30, 2016	Q1 Mar 31, 2016	Q4 Dec 31, 2015	Q3 Sept 30, 2015	Q2 June 30, 2015	Q1 Mar 31, 2015	Dec 31, 2014	Four months ended Sept 30, 2014
Revenue	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Research and development expense	3,293	2,315	2,340	1,722	1,308	884	1,093	1,311
General and administrative expense	2,343	2,608	2,364	2,248	2,504	2,729	2,554	2,988
Net loss	(5,612)	(5,072)	(4,431)	(3,261)	(3,365)	(3,569)	(3,584)	(4,187)
Basic and diluted net loss per share	$ (0.46)	$ (0.42)	$ (0.38)	$ (0.27)	$ (0.28)	$ (0.30)	$ (0.31)	$ (0.36)
Cash (used in) operating activities	$ (4,648)	$ (4,523)	$ (3,619)	$ (2,567)	$ (4,296)	$ (2,183)	$ (2,745)	$ (3,926)

Research and development expenditures increased in the three months ended June 30, 2016 due to the $1.3 million option fee paid to CG as previously described herein. Research and development expenses increased in the quarters ended March 31, 2016, December 31, 2015 and September 30, 2015 in comparison to the prior year quarters due to the Phase 1b clinical trial of APTO-253 for which the first patient was enrolled in January 2015 and was subsequently placed on hold in November 2015, and the costs associated with the quality, manufacturing and formulation work including the clinical hold previously described herein as well as costs related to the collaboration agreement with Moffit and LALS.

In the four months ended September 30, 2014, general and administrative expense is higher due to a four-month versus three-month period in relation to the change in the financial year of the Company. General and administrative costs in the three months ended March 31, 2015 again were higher due to the relocation of the Toronto office and related clean-up costs as well as costs related to our NASDAQ listing. In the three months ended March 31, 2016 costs increased due to our US dollar expenses and payroll costs which were more costly due to the valuation of the Canadian dollar over that time period.

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

Contractual Obligations and Off-Balance Sheet Financing

At June 30, 2016, we had contractual obligations requiring annual payments as follows:

(in thousands)	Less than 1 year	1-3 years	3-5 years	Total
Operating leases	$ 530	751	174	$ 1,455

The Company has entered into various contracts with service providers with respect to the clinical development of APTO-253. These contracts could result in future payment commitments of up to approximately $2.6 million over the related service period. Of this amount, $799 thousand has been paid and $35 thousand has been accrued at June 30, 2016. The payments are based on services performed and amounts may be higher or lower based on actual services performed.

As at June 30, 2016, we have not entered into any off-balance sheet arrangements other than the operating leases for our offices and labs and certain office equipment.

RISK FACTORS

Before making an investment decision with respect to our common shares, you should carefully consider the following risk factors, in addition to the other information included or incorporated by reference into this report. The risks set out below are not the only risks we face. If any of the following risks should be realized, our business, financial condition, prospects or results of operations would likely suffer. In that case, the trading price of our common shares could decline and you may lose all or part of the money you paid to buy our common shares.

Please refer to our December 31, 2015 MD&A for a complete discussion of risks and uncertainties.

- We are at an early stage of development. Significant additional investment will be necessary to complete the development of any of our products to approval.

- The FDA may not remove the clinical hold described herein and may not allow resumption of the Phase 1b clinical trial with APTO-253.
- We need to raise additional capital. Due to our lack of product revenues, we have an ongoing need to raise additional capital. To obtain the necessary capital, we must rely on some or all of the following: additional share issuances, debt issuances, collaboration agreements or corporate partnerships and grants and tax credits to provide full or partial funding for our activities. Additional funding may not be available on terms that are acceptable to us or in amounts that will enable us to carry out our business plan.
- We have a history of operating losses. We expect to incur net losses and we may never achieve or maintain profitability.
- Clinical trials are long in duration, expensive and uncertain processes and the FDA may ultimately not approve any of our product candidates. We may never develop any commercial drugs or other products that generate revenues.
- We may not achieve our projected development goals in the time frames we announce and expect.
- Delays in clinical testing could result in delays in commercializing our product candidates and our business may be substantially harmed.
- We rely on contract manufacturers over whom we have limited control. If we are subject to quality, cost or delivery issues with the preclinical and clinical grade materials supplied by contract manufacturers, our business operations could suffer significant harm.
- If we have difficulty enrolling patients in clinical trials, the completion of the trials may be delayed or cancelled.
- If we are unable to successfully develop companion diagnostics for our therapeutic product candidates, or experience significant delays in doing so, we may not achieve marketing approval or realize the full commercial potential of our therapeutic product candidates.
- We rely and will continue to rely on third parties to conduct and monitor many of our preclinical studies and our clinical trials, and their failure to perform as required could cause substantial harm to our business.
- We heavily rely on the capabilities and experience of our key executives and scientists and the loss of any of them could affect our ability to develop our products.
- Our employees may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have a material adverse effect on our business.
- We may expand our business through the acquisition of companies or businesses or by entering into collaborations or by in-licensing product candidates, each of which could disrupt our business and harm our financial condition.
- Negative results from clinical trials or studies of others and adverse safety events involving the targets of our products may have an adverse impact on our future commercialization efforts.
- As a result of intense competition and technological change in the biotechnical and pharmaceutical industries, the marketplace may not accept our products or product candidates, and we may not be able to compete successfully against other companies in our industry and achieve profitability.
- We may be unable to obtain patents to protect our technologies from other companies with competitive products, and patents of other companies could prevent us from manufacturing, developing or marketing our products.
- Our products and product candidates may infringe the intellectual property rights of others, or others may infringe on our intellectual property rights which could increase our costs.
- We may incur substantial cost in defending our intellectual property.
- If product liability, clinical trial liability or environmental liability claims are brought against us or we are unable to obtain or maintain product liability, clinical trial or environmental liability insurance, we may incur substantial liabilities that could reduce our financial resources.
- We may be unable to obtain partnerships for one or more of our product candidates which could curtail future development and negatively impact our share price. In addition, our partners might not satisfy their contractual responsibilities or devote sufficient resources to our partnership.
- We may be exposed to fluctuations of the Canadian dollar against certain other currencies because we publish our consolidated financial statements and hold most of our investments in Canadian dollars, while we incur many of our expenses in foreign currencies, primarily the United States dollar. Fluctuations in the value of currencies could cause us to incur currency exchange losses.
- We are subject to extensive government regulation.
- Our share price has been and may continue to be volatile and an investment in our common shares could suffer a decline in value.
- Future sales of our common shares by us or by our existing shareholders could cause our share price to fall.
- We are susceptible to stress in the global economy therefore, our business may be affected by the current and future global financial condition.
- There is no assurance that an active trading market in our common shares will be sustained.
- It may be difficult for non-Canadian investors to obtain and enforce judgments against us because of our Canadian incorporation and presence.
- We are likely a “passive foreign investment company” which may have adverse U.S. federal income tax consequences for U.S. shareholders.

- We are an "emerging growth company," and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common shares less attractive to investors.
- Any failure to maintain an effective system of internal controls may result in material misstatements of our consolidated financial statements or cause us to fail to meet our reporting obligations or fail to prevent fraud; and in that case, our shareholders could lose confidence in our financial reporting, which would harm our business and could negatively impact the price of our common shares.
- As a foreign private issuer, we are not subject to certain United States securities law disclosure requirements that apply to a domestic United States issuer, which may limit the information which would be publicly available to our shareholders.

FINANCIAL INSTRUMENTS

(a) Financial instruments

We have classified our financial instruments as follows:

(in thousands)	June 30, 2016	December 31, 2015
Financial assets:		
Cash and cash equivalents, consisting of high interest savings accounts, measured at amortized cost	$ 12,591	$ 11,503
Investments, consisting of guaranteed investment certificates, measured at amortized cost including accrued interest	-	8,245
Financial liabilities:		
Accounts payable, measured at amortized cost	110	522
Accrued liabilities, measured at amortized cost	1,691	1,834

At June 30, 2016, there are no significant differences between the carrying values of these amounts and their estimated market values due to their short-term nature.

(b) Financial risk management

We have exposure to credit risk, liquidity risk and market risk. Our Board of Directors has the overall responsibility for the oversight of these risks and reviews our policies on an ongoing basis to ensure that these risks are appropriately managed.

(i) Credit risk

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

We manage credit risk for our cash and cash equivalents and investments by maintaining minimum standards of R1-low or A-low investments and we invest only in highly rated Canadian corporations with debt securities that are traded on active markets and are capable of prompt liquidation.

(ii) Liquidity risk

Liquidity risk is the risk that we will not be able to meet our financial obligations as they come due. To the extent that we do not believe we have sufficient liquidity to meet our current obligations, the Board considers securing additional funds through equity or debt transactions. We manage our liquidity risk by continuously monitoring forecasts and actual cash flows. All of our financial liabilities are due within the current operating period.

(iii) Market risk

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

We are subject to interest rate risk on our cash and cash equivalents however we do not believe that the results of operations or cash flows would be affected to any significant degree by a sudden change in market interest rates relative to interest rates on the investments, owing to the relative short-term nature of the investments. We do not have any material interest bearing liabilities subject to interest rate fluctuations.

Currency risk is the risk that future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. We are exposed to currency risk from employee costs as well as the purchase of goods and services primarily in the United States and the cash balances held in foreign currencies. Fluctuations in the US dollar exchange rate could potentially have a significant impact on the Company's results. Assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the US dollar would result in an increase or decrease in loss for the year and comprehensive loss of $402 thousand (December 31, 2015- $576 thousand). Balances in foreign currencies at June 30, 2016 are as follows:

(in thousands)		**US$ balances at June 30, 2016**		US$ balances at December 31, 2015
Cash and cash equivalents	**$**	**4,069**	$	5,000
Accounts payable and accrued liabilities		**(955)**		(838)
	$	**3,114**	$	4,162

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

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

(c) Capital management

Our primary objective when managing capital is to ensure that we have sufficient cash resources to fund our development activities and to maintain our ongoing operations. To secure the additional capital necessary to pursue these plans, we may attempt to raise additional funds through the issuance of equity or by securing strategic partners.

We include cash and cash equivalents and investments in the definition of capital.

We are not subject to externally imposed capital requirements and there has been no change with respect to the overall capital management strategy during the three months ended June 30, 2016.

USE OF PROCEEDS

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

As of June 30, 2016 the following expenditures have been incurred:

(in thousands)		**Previously disclosed**		Additional Costs		Spent to Date		**Remaining to be spent**
Phase Ib clinical trial	**$**	**3,350**	$	**	$	2,052	**$**	**
Depending on the Phase Ib clinical trial of APTO-253 results, fund single agent expansion and drug combination focused Phase 2 Trials in both AML and MDS patients		**7,800**		-		nil		**7,800**
APTO-253 manufacturing program		**2,250**		**		1,608		**
Research and development programs[(1)]		**2,000**		-		2,000		**-**
General and corporate purposes[(1)]		**15,869**		-		15,869		**-**
	$	**31,269**	$	**	$	21,529	**$**	**

(1) We have utilized all of the funds allocated from the December 2013 and April 2014 equity offerings to Research and Development programs and General and Corporate purposes and continue to fund expenses through proceeds related to warrant and stock option exercises for which no allocations were stipulated.

** In November 2015, the ongoing Phase 1b clinical trial was placed on clinical hold (as previously described herein). We are diligently working on reinitiating the clinical trial, however the ultimate decisions, and the related costs, regarding the lift of the clinical hold and the appropriateness of the new drug product will depend on the outcome of our discussions with the FDA and may vary significantly. As such, we are not currently in a position to reasonably estimate the total costs to be incurred to complete the Phase 1b clinical trial and associated manufacturing program and do not anticipate to be in such a position until we receive additional feedback from the FDA.

We do not anticipate initiating the Phase 2 trial(s) until the results of the Phase Ib are available and only then if the results warrant further clinical investigation.

EVALUATION OF DISCLOSURE CONTROLS AND INTERNAL CONTROL

There were no changes in our internal control over financial reporting that occurred during the three months ended June 30, 2016 that have materially affected, or are reasonably likely to materially affect our internal control over financial reporting. As of June 30, 2016, we have 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 August 9, 2016, we had 12,892,573 common shares issued and outstanding. In addition there were 2,043,941 common shares issuable upon the exercise of outstanding stock options and a total of 72,605 common shares issuable upon the exercise of common share purchase warrants.

ADDITIONAL INFORMATION

Additional information relating to Aptose, including Aptose' December 31, 2015 annual report on form 20-F and other disclosure documents, are available on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Exhibit 99.3

FORM 52-109F2
CERTIFICATION OF INTERIM FILINGS– FULL CERTIFICATE

I, William G. Rice, Chairman, President and Chief Executive Officer of Aptose Biosciences Inc. certify the following:

1. ***Review:*** I have reviewed the interim financial report and interim MD&A (together, the "interim filings") of Aptose Biosciences Inc. (the "issuer") for the interim period ended June 30, 2016.

2. ***No misrepresentations:*** Based on my knowledge, having exercised reasonable diligence, the interim filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, with respect to the period covered by the interim filings.

3. ***Fair presentation:*** Based on my knowledge, having exercised reasonable diligence, the interim financial report together with the other financial information included in the interim filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the interim filings.

4. ***Responsibility:*** The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as those terms are defined in National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings*, for the issuer.

5. ***Design:*** Subject to the limitations, if any described in paragraphs 5.2 and 5.3, the issuer's other certifying officer(s) and I have, as at the end of the period covered by the interim filings

   (a) designed DC&P, or caused it to be designed under our supervision, to provide reasonable assurance that

      (i) material information relating to the issuer is made known to us by others, particularly during the period in which the interim filings are being prepared;

      (ii) information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and

   (b) designed ICFR, or caused it to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

5.1 ***Control framework:*** The control framework the issuer's other certifying officer(s) and I used to design the issuer's ICFR is Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

5.2 ***ICFR -- material weakness relating to design:*** N/A

5.3 ***Limitation on scope of design:*** N/A

6. ***Reporting changes in ICFR:*** The issuer has disclosed in its interim MD&A any change in the issuer's ICFR that occurred during the period beginning on April 1, 2016 and ended on June 30, 2016 that has materially affected, or is reasonably likely to materially affect, the issuer's ICFR.

Date: August 9, 2016

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

FORM 52-109F2
CERTIFICATION OF INTERIM FILINGS– FULL CERTIFICATE

I, Gregory K. Chow, Senior Vice President and Chief Financial Officer of Aptose Biosciences Inc. certify the following:

1. ***Review:*** I have reviewed the interim financial report and interim MD&A (together, the "interim filings") of Aptose Biosciences Inc. (the "issuer") for the interim period ended June 30, 2016.

2. ***No misrepresentations:*** Based on my knowledge, having exercised reasonable diligence, the interim filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, with respect to the period covered by the interim filings.

3. ***Fair presentation:*** Based on my knowledge, having exercised reasonable diligence, the interim financial report together with the other financial information included in the interim filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the interim filings.

4. ***Responsibility:*** The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as those terms are defined in National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings*, for the issuer.

5. ***Design:*** Subject to the limitations, if any described in paragraphs 5.2 and 5.3, the issuer's other certifying officer(s) and I have, as at the end of the period covered by the interim filings

   (a) designed DC&P, or caused it to be designed under our supervision, to provide reasonable assurance that

      (i) material information relating to the issuer is made known to us by others, particularly during the period in which the interim filings are being prepared;

      (ii) information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation;

   (b) designed ICFR, or caused it to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

5.1 ***Control framework:*** The control framework the issuer's other certifying officer(s) and I used to design the issuer's ICFR is Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

5.2 ***ICFR -- material weakness relating to design:*** N/A

5.3 ***Limitation on scope of design:*** N/A

6. ***Reporting changes in ICFR:*** The issuer has disclosed in its interim MD&A any change in the issuer's ICFR that occurred during the period beginning on April 1, 2016 and ended on June 30, 2016 that has materially affected, or is reasonably likely to materially affect, the issuer's ICFR.

Date: August 9, 2016

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