
FORM 6-K
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Report of Foreign Issuer

**Pursuant to Rule 13a-16 or 15d-16 of
the Securities Exchange Act of 1934**

For the Month of May, 2015

Commission File Number 1-32001

Aptose Biosciences Inc.

(Translation of registrant's name into English)

**5955 Airport Road, Suite 228
Mississauga, ON
L4V 1R9**

(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): ____

DOCUMENTS FILED AS PART OF THIS FORM 6-K

See the Exhibit Index hereto.

SIGNATURE

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: May 6, 2015

By: /s/ "Gregory Chow"

Gregory Chow

Senior Vice President and Chief Financial Officer

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

(amounts in 000's of Canadian Dollars)

	as at	March 31, 2015	December 31, 2014
ASSETS			
Current			
Cash and cash equivalents (note 4(a))	\$	12,628	\$ 14,365
Investments (note 4(b))		16,243	16,180
Prepaid expenses and other assets		963	855
Total Current Assets		29,834	31,400
Non-current			
Equipment		296	200
Total Non-Current Assets		296	200
Total Assets	\$	30,130	\$ 31,600
LIABILITIES			
Current			
Accounts payable	\$	554	\$ 256
Accrued liabilities		1,931	1,662
Convertible promissory notes (note 6(e))		277	410
Total Current Liabilities		2,762	2,328
SHAREHOLDERS' EQUITY			
Share capital			
Common shares (note 6)		222,460	221,259
Equity portion of convertible promissory notes		43	64
Stock options (note 6(c) and 7)		4,561	4,078
Contributed surplus (note 6(b))		21,663	21,653
Warrants (note 6(a))		493	501
Deficit		(221,852)	(218,283)
Total Equity		27,368	29,272
Total Liabilities and Equity	\$	30,130	\$ 31,600

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)

	Three months ended Mar. 31, 2015	Three months ended Feb. 28, 2014
	(Note 1)	
<i>(amounts in 000's of Canadian Dollars except for per common share data)</i>		
REVENUE	\$ -	\$ -
EXPENSES		
Research and development (note 9)	884	597
General and administrative (note 9)	2,769	1,771
Operating expenses	3,653	2,368
Finance expense	20	78
Finance income	(104)	(13)
Net finance expense (income)	(84)	65
Net loss and total comprehensive loss for the period	3,569	2,433
Basic and diluted loss per common share	\$ 0.30	\$ 0.48
Weighted average number of common shares outstanding used in the calculation of basic and diluted loss per common share (000's) (note 6(d))	11,794	5,106

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

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

<i>(amounts in 000's of Canadian Dollars)</i>	Common Shares	Stock Options	Warrants	Contributed Surplus	Equity Portion of Convertible Promissory Notes	Deficit	Total
Balance, January 1, 2015	\$ 221,259	\$ 4,078	\$ 501	\$ 21,653	\$ 64	\$ (218,283)	\$ 29,272
Warrant and stock option exercises	1,051	(476)	(8)	-	-	-	567
Stock-based compensation (note 7)	-	959	-	-	-	-	959
Promissory note conversion (note 6(e))	150	-	-	10	(21)	-	139
Net loss	-	-	-	-	-	(3,569)	(3,569)
Balance, March 31, 2015	\$ 222,460	\$ 4,561	\$ 493	\$ 21,663	\$ 43	\$ (221,852)	\$ 27,368
Balance, December 1, 2013	\$ 176,923	\$ 1,983	\$ 2,000	\$ 21,280	\$ 88	\$ (203,858)	\$ (1,584)
Public equity offering	6,927	-	350	-	-	-	7,277
Stock-based compensation	-	349	-	-	-	-	349
Warrant and stock option exercises	537	(20)	(78)	-	-	-	439
Expiry of stock options	-	(27)	-	27	-	-	-
Net loss	-	-	-	-	-	(2,433)	(2,433)
Balance, February 28, 2014	\$ 184,387	\$ 2,285	\$ 2,272	\$ 21,307	\$ 88	\$ (206,291)	\$ 4,048

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

	Three months ended March 31, 2015	Three months ended Feb. 28, 2014
	(Note 1)	
<i>(amounts in 000's of Canadian Dollars)</i>		
Cash flows from operating activities:		
Net loss for the period	\$ (3,569)	\$ (2,433)
Items not involving cash and other adjustments:		
Stock-based compensation	959	349
Depreciation of equipment	12	5
Finance income	(104)	(13)
Accretion expense	7	36
Finance expense	13	42
Other	-	(2)
Change in non-cash operating working capital (note 8)	459	(175)
Cash used in operating activities	(2,223)	(2,191)
Cash flows from financing activities:		
Issuance of common shares and warrants, net of issuance costs	-	7,277
Exercise of warrants and options	567	440
Interest on promissory notes	(13)	(42)
Cash provided by financing activities	554	7,675
Cash flows from investing activities:		
Acquisitions of short-term investments	(63)	-
Purchase of fixed assets	(109)	(5)
Interest income	104	13
Cash (used in) provided by investing activities	(68)	8
(Decrease) increase in cash and cash equivalents during the period	(1,737)	5,492
Cash and cash equivalents, beginning of period	14,365	1,738
Cash and cash equivalents, end of period	\$ 12,628	\$ 7,230

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, 2015 and three months ended February 28, 2014
(Tabular amounts are in 000s)

1. Reporting Entity

Aptose Biosciences Inc. ("Aptose" or the "Company") is a clinical-stage biotechnology company committed to discovering and developing personalized therapies addressing unmet medical needs in oncology. Aptose is a publicly listed company incorporated under the laws of Canada. The Company's shares are listed on the Nasdaq Capital Markets and the Toronto Stock Exchange. The head office, principal address and records of the Company are located at 5955 Airport Road, Suite 228, Mississauga, Ontario, Canada, L4N 1R9

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

Effective July 17, 2014 the Company changed its fiscal year end from May 31 to December 31. As a result of that change the current reporting fiscal period is for the three months ended March 31, 2015 while the prior year comparative period is for the three months ended February 28, 2014 and therefore are not directly comparable to the current period.

2. Basis of presentation

(a) Statement of Compliance

These unaudited condensed consolidated interim financial statements of the Company as at March 31, 2015 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 does 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 May 5, 2015.

(b) Functional and presentation currency

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

(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 seven months ended December 31, 2014. 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, 2015 are not necessarily indicative of the results that may be expected for the full year ended December 31, 2015. For further information, see the Company's audited consolidated financial statements including notes thereto for the seven months ended December 31, 2014.

APTOSE BIOSCIENCES INC.
NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)
Three months ended March 31, 2015 and three months ended February 28, 2014
(Tabular amounts are in 000s)

Standards and Interpretations Adopted in Fiscal 2015

There were no new accounting standards adopted during the three months ended March 31, 2015.

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.

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 seven months ended December 31, 2014.

(a) Cash and cash equivalents:

Cash and cash equivalents consists of cash of \$311 thousand (December 31, 2014 - \$293 thousand) and funds deposited into high interest savings accounts totalling \$12.317 million (December 31, 2014 - \$14.072 million). The current interest rate earned on these deposits is between 1.2% and 1.25% (December 31, 2014 – 1.2-1.25%).

(b) Investments:

As at March 31, 2015 and December 31, 2014, short term investments consist of guaranteed investment certificates with Canadian financial institutions having high credit ratings. Short-term investments include twelve investments (December 31, 2014 – twelve investments) with maturity dates from April 22, 2015 to June 19, 2016 (December 31, 2014 – April 22, 2015 to June 19, 2016), bearing an interest rate from 1.50% to 2.10% (May 31, 2014 – 1.56% to 1.85%) per annum. Included in the investments balance are \$8.1 million in investments that mature in fiscal 2016.

5. Financial instruments

(a) Financial instruments

The Company has classified its financial instruments as follows:

	As at	As at
	March 31, 2015	December 31, 2014
Financial assets		
Cash and cash equivalents (consisting of deposits in high interest savings accounts), measured at amortized cost	\$ 12,628	\$ 14,365
Investments, consisting of guaranteed investment certificates, measured at amortized cost	16,243	16,180
Financial liabilities		
Accounts payable, measured at amortized cost	554	256
Accrued liabilities, measured at amortized cost	1,931	1,662
Convertible promissory notes, measured at amortized cost	277	410

At March 31, 2015, there are no significant differences between the carrying values of these amounts and their estimated market values.

APTOSE BIOSCIENCES INC.
NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)

Three months ended March 31, 2015 and three months ended February 28, 2014
(Tabular amounts are in 000s)

(b) Financial risk management

The Company has exposure to credit risk, liquidity 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, debt or partnering transactions. The Company manages its liquidity risk by continuously monitoring forecasts and actual cash flows.

(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.

Financial instruments potentially exposing the Company to foreign exchange risk consist principally of accounts payable and accrued liabilities. The Company holds minimal amounts of U.S. dollar denominated cash, purchasing on an as needed basis to cover U.S. dollar denominated payments. At March 31, 2015, U.S. dollar denominated accounts payable and accrued liabilities amounted to US\$740 thousand (December 31, 2014 - US\$565 thousand). Assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the U.S. dollar would result in an increase or decrease in loss for the year and comprehensive loss of US\$74 thousand (December 31, 2014- US\$57 thousand). 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.

Continuity of common shares and warrants

	Common shares		Warrants	
	Number (In thousands)	Amount	Number (In thousands)	Amount
Balance, May 31, 2014	10,388	\$ 212,938	1,630	\$ 1,857
Warrant exercises	1,231	7,814	(1,231)	(1,166)
Warrant expiry	-	-	(190)	(190)
Option exercises	36	345	-	-
Promissory note conversion	45	162	-	-
Balance, December 31, 2014	11,700	\$ 221,259	209	\$ 501
Warrant exercises (a)	8	33	(8)	(8)
Option exercises	117	1,018	-	-
Promissory note conversion	42	150	-	-
Balance, March 31, 2015	11,867	\$ 222,460	201	\$ 493

APTOSE BIOSCIENCES INC.
NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)
Three months ended March 31, 2015 and three months ended February 28, 2014
(Tabular amounts are in 000s)

(a) Exercise of Warrants

Warrants exercised during the three months ended March 31, 2015:

(in thousands)	Number	Proceeds
August 2011 warrants (i)	8	\$ 25
Total	8	\$ 25

In addition to the cash proceeds received, the original fair value related to these warrants of \$8 thousand was transferred from warrants to share capital. This resulted in a total amount of \$33 thousand credited to share capital.

Summary of outstanding warrants:

(in thousands)	March 31, 2015	December 31, 2014
August 2011 warrants (i)	81	89
June 2013 private placement warrants (ii)	47	47
December 2013 broker warrants (iii)	73	73
Number of warrants outstanding, end of period	201	209

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

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

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

(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.

	Three months ended March 31, 2015	Three months ended February 28, 2014
Balance, beginning of period	\$ 21,653	\$ 21,280
Exercise of convertible promissory notes	10	-
Expiry of vested stock options	-	27
Balance, end of period	\$ 21,663	\$ 21,307

(c) Continuity of stock options

	Three months ended March 31, 2015	Three months ended February 28, 2014
Balance, beginning of period	\$ 4,078	\$ 1,983
Stock based compensation	959	349
Exercise of stock options	(476)	(20)
Expiry of vested stock options	-	(27)
Balance, end of period	\$ 4,561	\$ 2,285

APTOSE BIOSCIENCES INC.
NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)
Three months ended March 31, 2015 and three months ended February 28, 2014
(Tabular amounts are in 000s)

(d) 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, 2015 and February 28, 2014 calculated as follows:

	Three months ended	
	March 31, 2015	February 28, 2014
Issued common shares, beginning of period	11,700	3,521
Effect of public offering	-	1,061
Effect of overallocation	-	106
Effect of warrant and option exercises	71	418
Effect of promissory note conversions	23	-
	11,794	5,106

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 three months ended March 31, 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.

7. Stock options

(a) Stock options transactions for the period:

	Three months ended March 31, 2015		Three months ended February 28, 2014	
	Number of Options	Weighted average exercise price	Number of Options	Weighted average exercise price
Outstanding, Beginning of period	1,374	\$ 5.95	417	\$ 6.00
Granted	128	6.81	141	7.31
Exercised	(117)	4.62	(6)	3.72
Expired	(1)	5.49	(1)	24.85
Outstanding, end of period	1,384	\$ 6.14	551	6.36

(b) Stock options outstanding at March 31, 2015:

Range of exercise prices	Options outstanding		Options exercisable	
	Number of Options	Weighted average remaining contractual life (years)	Number of Options	Weighted average exercise price
\$ 2.16 - \$ 3.48	120	7.3	120	\$ 2.78
\$ 3.49 - \$ 5.70	645	9.1	36	5.70
\$ 5.71 - \$ 9.36	614	9.1	212	7.95
\$ 9.37 - \$118.80	5	2.9	5	63.26
	1,384	8.9	373	\$ 6.73

APTOSE BIOSCIENCES INC.
NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)
Three months ended March 31, 2015 and three months ended February 28, 2014
(Tabular amounts are in 000s)

(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:

	Three months ended March 31, 2015	Three months ended February 28, 2014
Exercise price	\$ 6.77-7.14	\$ 6.96-7.32
Grant date share price	\$ 6.77-7.14	\$ 6.96-7.32
Risk free interest rate	1.5%	1.5%
Expected dividend yield	—	—
Expected volatility	113%	135%
Expected life of options	5 years	5 years
Weighted average fair value of options granted in the period	\$ 5.46	\$ 6.38

Stock options granted by the Company during the three months ended March 31, 2015 vest 50%, 25% and 25% on each of the next three anniversaries.

Stock options granted by the Company during the three months ended February 28, 2014 consisted of 70,834 options that vested 50% upon issuance and 25% on each of the next two anniversaries and 70,417 options which vest 50%, 25% and 25% on each of the next three anniversaries.

Refer to note 10 for a breakdown of stock option expense by function.

The Company has reserved up to 1,780,000 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, 2015.

8. Additional cash flow disclosures

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

	Three months ended	
	March 31, 2015	February 28, 2014
Prepaid expenses and other assets	\$ (108)	\$ (7)
Accounts payable	298	107
Accrued liabilities	269	(275)
	\$ 459	\$ (175)

9. Other expenses

Components of research and development expenses:

	Three months ended	
	March 31, 2015	February 28, 2014
Small molecule program costs	\$ 860	\$ 519
Stock based compensation	19	15
Deferred share unit costs	-	59
Depreciation of equipment	5	4
	\$ 884	\$ 597

APTOSE BIOSCIENCES INC.
NOTES TO CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS (Unaudited)
Three months ended March 31, 2015 and three months ended February 28, 2014
(Tabular amounts are in 000s)

Components of general and administrative expenses:

	Three months ended	
	March 31, 2015	February 28, 2014
Stock based compensation	\$ 940	\$ 334
General and administrative excluding salaries	1,069	520
Salaries	753	780
Deferred share unit costs	-	136
Depreciation of equipment	7	1
	\$ 2,769	\$ 1,771

10. Commitments, contingencies and guarantees.

(in thousands)	Less than 1 year	1-3 years	3-5 years	Total
Operating leases	\$ 594	988	506	\$ 2,088

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 \$2.1 million over the related service period. Of this amount, \$117 thousand has been paid and \$120 thousand has been accrued at March 31, 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 2015 the Company entered into an agreement with the Moores Cancer Center at the University of California San Diego (UCSD) to provide pharmacology lab services to the Company. Dr. Stephen Howell is the Acting Chief Medical Officer of Aptose and is also a Professor of Medicine at UCSD and will be overseeing the laboratory work. The research services will be provided from April 1, 2015 to March 31, 2016 for an annual fee of USD\$154,456 to be paid to UCSD in monthly installments.

This transaction is in the normal course of business and will be measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

13. Subsequent Events

Subsequent to the quarter end, 18 thousand warrants were exercised into 18 thousand common shares of the Company at a price of \$6.60 per share for proceeds of \$121 thousand.

In the month of April the Company converted \$9.7 million Canadian dollars into \$7.98 million US dollars. Assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the U.S. dollar would result in an increase or decrease in loss for the year and comprehensive loss of \$798 thousand.

INTERIM MANAGEMENT'S DISCUSSION AND ANALYSIS

For the three months ended March 31, 2015

May 5, 2015

This interim Management's Discussion and Analysis ("MD&A") of Aptose Biosciences Inc. ("Aptose", the "Company", "we", "us" and similar expressions) should be read in conjunction with the Company's unaudited condensed consolidated interim financial statements for the three months ended March 31, 2015 and the three months ended February 28, 2014. The March 31, 2015 interim financial statements and additional information about the Company, including the annual audited financial statements and MD&A for the seven months ended December 31, 2014, and the annual report on form 20-F of the Company for the seven months ended December 31, 2014 can be found on SEDAR at www.sedar.com and EDGAR at www.sec.gov/edgar.shtml.

This MD&A is prepared as of May 5, 2015. It contains certain forward-looking statements that involve known and unknown risks and uncertainties which are beyond the control of the Company. This MD&A should be read in conjunction with the unaudited condensed consolidated interim financial statements of the Company for the three months ended March 31, 2015 which are incorporated by reference herein and form an integral part of this MD&A.

Effective July 17, 2014 the Company changed its fiscal year end from May 31 to December 31. As a result of that change, the current interim period being reported is for the three months ended March 31, 2015, while the prior year comparative period is for the three months ended February 28, 2014.

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 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;
- 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 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;
- our exposure to fluctuations of the Canadian dollar against certain other currencies as we hold our investments in Canadian dollars, while we incur many of our expenses in foreign currencies, primarily the United States dollar;
- the progress of our clinical trials;
- our liability associated with the indemnification of our predecessor and its directors, officers and employees in respect of an arrangement completed in 2007;
- our ability to find and enter into agreements with potential partners;
- our ability to attract and retain key personnel;
- our ability to obtain and maintain patent protection;
- our ability to protect our intellectual property rights and not infringe on the intellectual property rights of others;
- our ability to comply with applicable governmental regulations and standards;
- development or commercialization of similar products by our competitors, many of which are more established and have or have access to greater financial resources than us;
- commercialization limitations imposed by intellectual property rights owned or controlled by third parties;
- potential product liability and other claims;
- our ability to maintain adequate insurance at acceptable costs;
- further equity financing, which may substantially dilute the interests of our existing shareholders;

· *changing market conditions; and*
· *other risks detailed from time-to-time in our on-going quarterly filings, annual information forms, annual reports and annual filings with Canadian securities regulators and the United States Securities and Exchange Commission, and those which are discussed under the heading "Risk Factors" in this document.*

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

CORPORATE UPDATE

Appointment of Dr. Andreeff

On March 23, 2015 we announced the appointment of Michael Andreeff, M.D., Ph.D., Professor of Medicine, Department of Leukemia, Division of Cancer Medicine, The University of TexasMD Anderson Cancer Center (MDACC), to our Scientific Advisory Board. Dr. Andreeff is an experienced researcher in hematopoietic malignancies.

At The Market Facility

In early April, Aptose entered into an at-the-market (ATM) facility for up to US \$20,000,000. The ATM will, along with the effective shelf prospectus that was filed recently in December, provide us with the added flexibility to quickly access the market and raise capital at market price without the need to undertake a larger, more dilutive offering.

PROGRAM UPDATES

APTO-253

Phase Ib Trial

On July 28, 2014 we announced that the U.S. Food and Drug Administration ("FDA") had completed its review and cleared the Investigational New Drug ("IND") application of APTO-253 for the treatment of hematologic malignancies, including acute myeloid leukemia ("AML"), high-risk myelodysplastic syndromes ("MDS"), lymphomas and multiple myeloma. Clearance of the IND allowed us to initiate a Phase Ib, multi-center, open-label, clinical study of APTO-253 in patients with relapsed or refractory hematologic malignancies. The Phase Ib trial will evaluate safety, tolerability, pharmacokinetics, pharmacodynamic responses and efficacy of APTO-253 as a single agent. The trial is expected to enroll 45-60 patients as part of a dose-escalation program and two separate disease-specific single-agent expansion cohorts.

The dose escalation study includes two separate arms: one group of up to 15 patients dedicated to AML and high-risk MDS only and another group of up to 15 patients for lymphomas and multiple myelomas. The two separate arms will allow for a focused look at AML and high-risk MDS and exploration of the effect of APTO-253 on lymphomas and myelomas. They will also provide patient data on two times the number of patients during 2015 than would have been possible with only a single arm study. We have enrolled patients on both arms of the trial.

The primary objectives of the Phase Ib trial are: (i) to further assess safety on a new and optimized dosing schedule, and (ii) to identify the recommended dose for APTO-253 for the upcoming Phase Ib single-agent expansion trials which will include one expansion in AML for up to 15 patients and one expansion in MDS for up to 15 patients, in hematologic malignancies as well as in subsequent Phase 2 combination trials.

We plan to monitor patient Krüppel-like factor 4 ("KLF4") and the product of the embryonic gene Cdx2, the protein CDX2 (" **CDX2**") levels upon entry into the study, throughout the study, and during a post-treatment period. We will not exclude patients based on KLF4 or CDX2 status from participating in this first study as we believe this approach may be useful in further validating our companion diagnostic and observing potential responses among the broader population.

On January 13, 2015 we announced that we had dosed the first patient in the Phase Ib dose-escalation study at Baylor Cancer Center in Dallas. During the quarter we added three additional sites at MD Anderson Cancer Center in Houston, Oregon Health & Sciences University (OHSU) and the University of Michigan. We anticipate providing a potential update on the dose-escalation study during the second half of 2015, completing enrollment of the Phase Ib dose-escalation study by late-2015 or the first half of 2016, starting the single agent expansion cohort studies for this study in 2016 and starting Phase 2 combination studies in 2016.

Beat AML Initiative

We provided an update on the Beat AML Initiative, which is a research initiative among The Leukemia & Lymphoma Society and the Knight Cancer Institute at OHSU to better understand (AML), including identification of possible genetic drivers of AML by conducting a deep genomic sequencing analysis of participating AML patients' samples. We are working with leading investigators at OHSU to evaluate the effectiveness of APTO-253 against fresh isolates from patients with AML and other hematologic malignancies, affording us an opportunity to develop a targeted treatment strategy alone or in combination with other agents. We expect to disclose such research data in or around December 2015 and plan to present it during the 2015 Annual Meeting of the American Society of Hematology.

FINANCING ACTIVITIES

During the three months ended March 31, 2015 we received cash proceeds of \$567 thousand related to stock option and warrant exercises.

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. We currently believe we have capital resources sufficient to fund our research and development and operations for the next twenty four months.

CASH POSITION

At March 31, 2015, we had cash and cash equivalents and investments of \$28.9 million compared to \$30.5 million at December 31, 2014. 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 the Board of Directors. As at March 31, 2015 our cash and cash equivalents consisted of cash of \$311 thousand (December 31, 2014 - \$293 thousand) and funds deposited into high interest savings accounts totaling \$12.317 million (December 31, 2014 - \$14.072 million). Working capital (representing primarily cash, cash equivalents, investments and other current assets less current liabilities) at March 31, 2015 was \$27.1 million (December 31, 2014 - \$29.1 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 March 31, 2015 was \$3.6 million (\$0.30 per share) compared with \$2.4 million (\$0.48 per share) during the three months ended February 28, 2014. The increase in net loss is due increased research and development costs associated with increased clinical activity on APTO-253 and associated activities and higher general and administrative costs associated with higher stock-based compensation costs and expenses related to our NASDAQ listing, prospectus supplement related costs, the expense of relocating our Toronto facilities and other corporate activities.

We utilized cash of \$2.2 million in our operating activities in the three months ended March 31, 2015 compared with \$2.2 million in the three months ended February 28, 2014. The consistency in cash used in operating activities in the current period despite the increased net loss in comparison with the prior year is due to higher non-cash stock based compensation expense in the current year as well as an increase in accounts payable and accrual balances compared with the three months ended February 28, 2014.

At March 31, 2015, we had cash and cash equivalents and investments of \$28.9 million compared to \$30.5 million at December 31, 2014.

Research and Development

Research and development expenses totaled \$884 thousand in the three months ended March 31, 2015 compared to \$597 thousand during the three months ended February 28, 2014. Research and development costs consist of the following:

Components of research and development expenses:

	Three months ended	
	March 31, 2015	February 28, 2014
Small molecule program costs	\$ 860	\$ 519
Stock based compensation	19	15
Deferred share unit costs	-	59
Depreciation of equipment	5	4
	\$ 884	\$ 597

The increase in research and development costs in the three months ended March 31, 2015 compared with the three months ended February 28, 2014 is due primarily to the ongoing Phase 1b clinical trial of APTO-253 in the current year period compared with no ongoing clinical development in the prior year period. In addition we have initiated studies to optimize the formulation of APTO-253 for which no comparable work was ongoing in the prior year. Finally, we incurred costs associated with the clean up and move of our lab facilities in Toronto to new locations in both Toronto and San Diego.

General and Administrative

General and administrative expenses totaled \$2.8 million for the three months ended March 31, 2015 compared to \$1.8 million in the three months ended February 28, 2014. General and administrative expenses consist of the following:

Components of general and administrative expenses:

	Three months ended	
	March 31, 2015	February 28, 2014
General and administrative excluding salaries	\$ 1,069	\$ 520
Salaries	753	780
Stock based compensation	940	334
Deferred share unit costs	-	136
Depreciation of equipment	7	1
	\$ 2,769	\$ 1,771

General and administrative costs excluding salaries are higher in the three months ended March 31, 2015 compared with the three months ended February 28, 2014 due to the following reasons:

- Our NASDAQ listing and related expenses including annual listing fees and increased directors and officer's insurance costs;
- Increased legal and audit fees associated with the filing of a base shelf prospectus supplement;
- Additional rent related to our new office location in San Diego as well as clean up and moving costs related to the Toronto relocation;
- Increased travel costs;
- A depreciation in the Canadian dollar which has resulted in an increase to the cost of our US dollar denominated expenditures.

Salary costs have remained consistent in the three months ended March 31, 2015 compared with the three months ended February 28, 2014.

Stock-based compensation costs increased in the three months ended March 31, 2015 compared with the three months ended February 28, 2014 due to large option grants in April, June and July 2014 which vest 50% during the first year and therefore contribute to higher stock based compensation expense during the first twelve month period.

Deferred share unit costs relate to the marked to market adjustment on outstanding units at February 28, 2014. The outstanding units were settled in April 2014 and no amounts remain outstanding.

Finance Expense

Finance expense for the three months ended March 31, 2015 was \$20 thousand compared with \$78 thousand for the three months ended February 28, 2014. Finance expense for the three months ended March 31, 2015 relates to interest expense of \$20 thousand 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.

Finance expense for the quarter ended February 28, 2014 relates to interest accrued at a rate of 10% as well as accretion expense on the \$918 thousand promissory notes issued in June 2013 and repaid in April 2014 as well as interest on the convertible promissory notes issued in September 2013 as described above..

Finance Income

Finance income totaled \$104 thousand in the three months ended March 31, 2015 compared to \$13 thousand in the three months ended February 28, 2014. Finance income represents interest earned on our cash and cash equivalent and investment balances.

Net loss for the period

For the reasons discussed above, our net loss for the three months ended March 31, 2015 increased to \$3.6 million (\$0.30 per share) compared to \$2.4 million (\$0.48 per share) in the three months ended February 28, 2014.

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		Four months ended	Q4		Q3		Q2		Q1		Q4	
	Mar 31, 2015	Dec 31, 2014	Sept 30, 2014	May 31, 2014	Feb 28, 2014	Nov 30, 2013	Aug 31, 2013	May 31, 2013					
Revenue	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —					
Research and development expense	884	1,093	1,311	1,012	597	791	615	860					
General and administrative expense	2,769	2,588	3,000	3,195	1,771	1,938	451	462					
Net loss	(3,569)	(3,584)	(4,187)	(4,221)	(2,433)	(2,798)	(1,101)	(1,318)					
Basic and diluted net loss per share	\$ (0.30)	\$ (0.31)	\$ (0.36)	\$ (0.49)	\$ (0.48)	\$ (0.77)	\$ (0.31)	\$ (0.37)					
Cash (used in) operating activities	\$ (2,223)	\$ (2,779)	\$ (2,191)	\$ (1,484)	\$ (933)	\$ (904)	\$ (1,273)	\$ (1,336)					

Research and development expenditures in quarters ended February 28, 2014, November 30, 2013 and August 31, 2013 are lower compared with the quarter ended May 31, 2013 due to reduced activity on the APTO-253 clinical program as the Phase I solid tumor trial was completed and we focused on the strategic review and securing additional cash resources. In the quarter ended May 31, 2014, expenditures increased due to the allocation of severance costs related to the former President and COO of the Company to research and development of \$326 thousand. In the four months ended September 30, 2014 and three months ended December 31, 2014 research and development activities increased as we prepared and subsequently launched the APTO-253 Phase Ib clinical trial.

The increased general and administrative expense in the three months ended November 30, 2013 is due to stock option grants during the quarter which vested immediately and resulted in higher than normal stock based compensation expense. In addition costs associated with hiring new executives during the quarter ended November 30, 2013 increased salary-related costs. In the three months ended February 28, 2014, general and administrative expenses were higher due to additional members of management and bonuses as well as increased travel, consulting and legal costs and general and administrative costs continued to trend upwards in calendar 2014 due to additional salary costs and increased levels of corporate activities.

The increase in general and administrative expense in the three months ended May 31, 2014 is due to severance costs associated with the former President and COO of the Company (\$762 thousand), bonus costs, and increased Board, consulting and legal fees associated with activities during the quarter. In the four months ended September 30, 2014, the general and administrative expense is higher due to a four-month vs. three-month period in relation to the change in the financial year of the Company discussed above as well as option grants during the quarter which increased option-related expenses. During the three months ended December 31, 2014, we incurred additional expenses related to our listing on NASDAQ and recognized an increase in expected costs to terminate our current Toronto lease which led to higher general and administrative expenses in the quarter.

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 March 31, 2015, we had contractual obligations requiring annual payments as follows:

(in thousands)	Less than 1 year	1-3 years	3-5 years	Total
Operating leases	\$ 594	988	506	\$ 2,088

As at March 31, 2015, 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 MD&A for the seven months ended December 31, 2014 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.
- We have a history of operating losses. We expect to incur net losses and we may never achieve or maintain profitability.
- 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.
- Clinical trials are long, expensive and uncertain processes and Health Canada or 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 be exposed to fluctuations of the Canadian dollar against certain other currencies because we publish our consolidated financial statements and hold 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 have agreed to indemnify our predecessor, old Lorus and its directors, officers and employees.
- We may not achieve our projected development goals in the time frames we announce and expect.
- 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.
- If we fail to attract and retain key employees, the development and commercialization of our products may be adversely affected.
- 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.
- 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 have no manufacturing capabilities and face supply risks. We depend on third-parties, including a number of sole suppliers, for manufacturing and storage of our product candidates used in our clinical trials. Product introductions may be delayed or suspended if the manufacture of our products is interrupted or discontinued.
- We rely on licensor(s) to maintain patent rights.
- 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.

FINANCIAL INSTRUMENTS

(a) Financial instruments

We have classified our financial instruments as follows:

(in thousands)	March 31, 2015	December 31, 2014
Financial assets:		
Cash and cash equivalents, consisting of high interest savings accounts, measured at amortized cost	\$ 12,628	\$ 14,365
Investments, consisting of guaranteed investment certificates, measured at amortized cost.	16,243	16,180
Financial liabilities:		
Accounts payable, measured at amortized cost	554	256
Accrued liabilities, measured at amortized cost	1,931	1,662
Convertible promissory notes, measured at amortized cost	277	410

At March 31, 2015, 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. The carrying amount of the financial assets represents the maximum credit exposure.

We manage credit risk for our cash and cash equivalents 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, debt or partnering 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.

Financial instruments potentially exposing us to foreign exchange risk consist principally of accounts payable and accrued liabilities. We hold minimal amounts of U.S. dollar denominated cash, purchasing on an as needed basis to cover U.S. dollar denominated payments. At March 31, 2015, U.S. dollar denominated accounts payable and accrued liabilities amounted to US\$740 thousand (December 31, 2014 - US\$565 thousand). Assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the U.S. dollar would result in an increase or decrease in loss for the year and comprehensive loss of US\$74 thousand (December 31, 2014- US\$57 thousand). We do not have any forward exchange contracts to hedge this risk.

We do 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 and commercialization 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 deposits 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 seven months ended December 31, 2014.

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 March 31, 2015 the following expenditures have been incurred:

(in thousands)	Previously disclosed	Additional Costs	Spent to Date	Remaining to be spent
Phase Ib clinical trial	\$ 1,750	\$ 1,600	690	\$ 2,660
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	-	840	1,410
Research and development programs	2,000	-	1,640	360
General and corporate purposes	15,869	-	9,215	6,654
	\$ 29,669	\$ 1,600	12,385	\$ 18,884

We currently anticipate that the direct costs associated with the Phase Ib trial will range between \$3.05 million and \$3.35 million as opposed to the previously disclosed amount of approximately \$1.75-2.0 million. The variance is due to the addition of a separate dose escalation arm to the Phase Ib clinical trial with lymphoma and myeloma patients.

The Phase 2 trials will not be initiated until the results of the Phase Ib are available and only then if the results warrant further clinical investigation. It is currently anticipated that the remaining balances of the research and development programs and general and corporate costs will be allocated in accordance with the previously disclosed use of proceeds.

SUBSEQUENT EVENTS

Subsequent to the quarter end 18 thousand warrants were exercised into 18 thousand common shares of the Company at a price of \$6.60 per share for proceeds of \$121 thousand.

In the month of April the Company converted \$9.7 million Canadian dollars into \$7.98 million US dollars. Assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the U.S. dollar would result in an increase or decrease in loss for the year and comprehensive loss of \$798 thousand.

EVALUATION OF DISCLOSURE CONTROLS AND INTERNAL CONTROLS

There have been no changes in the Company's internal control over financial reporting that occurred during the three months ended March 31, 2015 that have materially affected or are reasonably likely to materially affect the Company's internal controls over financial reporting.

UPDATED SHARE INFORMATION

As at May 5, 2015, we had 11.9 million common shares issued and outstanding. In addition there were 1.4 million common shares issuable upon the exercise of outstanding stock options and a total of 183 thousand common shares issuable upon the exercise of common share purchase warrants and \$288 thousand in promissory notes which could be converted into 80 thousand common shares of Aptose at \$3.60 per share.

ADDITIONAL INFORMATION

Additional information relating to Aptose, including Aptose' December 31, 2014 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.

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 March 31, 2015.
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 January 1, 2015 and ended on March 31, 2015 that has materially affected, or is reasonably likely to materially affect, the issuer’s ICFR.

Date: May 5, 2015

/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 March 31, 2015.
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 January 1, 2015 and ended on March 31, 2015 that has materially affected, or is reasonably likely to materially affect, the issuer’s ICFR.

Date: May 5, 2015

/s/ Gregory K. Chow

Gregory K. Chow
Senior Vice President and Chief Financial
Officer
