



APTOSE BIOSCIENCES REPORTS RESULTS FOR THE FOUR MONTHS ENDED SEPTEMBER 30, 2014

SAN DIEGO AND TORONTO – November 4, 2014 – Aptose Biosciences Inc. (NASDAQ: APTO, TSX: APS) (“Aptose” or the “Company”) today reported financial results for the four months ended September 30, 2014 and provided a corporate update. Unless specified otherwise, all amounts are in Canadian dollars.

Effective July 15, 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 four months ended September 30, 2014, while the prior year comparative period is for the three months ended August 31, 2013 and therefore not directly comparable to the current four-month period. The current fiscal year will be from June 1, 2014 to December 31, 2014.

The net loss for the four months ending September 30, 2014 was \$4.2 million, or (\$0.36) per share, compared with a net loss of \$1.1 million, or (\$0.31) per share, for the three months ended August 31, 2013. Total cash and cash equivalents and short term investments as of September 30, 2014 totaled \$33.1 million.

“The four-month period ended September 30, 2014 has been marked by significant corporate achievement,” said William G. Rice, Ph.D., Chairman, President and Chief Executive Officer. “Our listing on the NASDAQ Exchange is a major milestone for the Company and caps off a year of solid execution under a new leadership team. We are now well-positioned to advance our lead program APTO-253 into later stage clinical development.”

Corporate Highlights

- On September 2, 2014 the Company announced a name change to Aptose Biosciences Inc. Aptose reflects the Company’s focus as an oncology research and development organization advancing new therapeutics and molecular diagnostics that are based on insights into the genetic profiles of certain cancers and patient populations.
- On September 8, 2014 Aptose announced that Stephen B. Howell, M.D. would act in the capacity of Chief Medical Officer. Dr. Howell is a renowned medical oncologist and leader in the development of novel drugs and drug delivery systems for the treatment of cancer and in the discovery of the molecular and genetic mechanisms underlying drug resistance. Dr. Howell joined the Aptose team as a medical consultant to provide expert clinical guidance.
- During the four months ended September 30, 2014 Aptose received cash proceeds of \$6.6 million related to warrant exercises. This additional capital further strengthened the balance sheet and demonstrated strong support from the Company’s investor base.
- Subsequent to September 30, 2014, on October 23, 2014 the Company announced that its common shares began trading on the NASDAQ Capital Market under the symbol “APTO”. Aptose will continue to trade on the Toronto Stock Exchange under the symbol “APS”.

APTO-253 Update

Phase 1b Trial

- On July 28, 2014 Aptose 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 allows the Company to initiate a Phase 1b, multi-center, open-label, clinical study of APTO-253 in patients with relapsed or refractory hematologic malignancies. The Phase 1b 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 study will include two separate arms: one group of up to 15 patients dedicated to AML only and high-risk MDS and another group of up to 15 patients for lymphomas and multiple myelomas. The additional arm will allow a focused look at AML and high-risk MDS, will allow exploration of the effect of APTO-253 on lymphomas and myelomas, and will provide patient data on two times the number of patients during 2015 than would have been possible with a single arm study.
- The primary objectives of this Phase 1b 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 2 single-agent trials in hematologic malignancies, and in subsequent Phase 2 combination trials.
- Aptose plans to monitor patient KLF4 and CDX2 levels upon entry into the study, throughout the study, and during a post-treatment period. Aptose will not exclude patients based on Krüppel-like factor 4 (KLF4) or CDX2 status from participating in this first study as it believes this approach may be useful in further validating Aptose's companion diagnostic and observing potential responses among the broader population.
- The Company anticipates dosing the first patient imminently in the Phase 1b dose-escalation study, providing a potential update on the dose-escalation study during the first half of 2015, completing enrollment of the Phase 1b dose-escalation study by late-2015, starting the expansion cohort studies for this study in 2016; and starting Phase 2 combination studies in 2016.

Beat AML Collaboration

- On September 29, 2014 the Company announced, along with the Knight Cancer Institute at Oregon Health & Science University (OHSU) and The Leukemia & Lymphoma Society (LLS), that Aptose has joined the Beat AML collaboration in order to profile Aptose's lead investigational anticancer therapeutic APTO-253 against primary cells from AML patient samples. The collaboration is intended to provide further insights into the genetic profile of patients likely to benefit from APTO-253 therapy and to identify promising treatment combinations that may further increase therapeutic efficacy. Beat AML is a groundbreaking research initiative focused on accelerating the development of new therapeutics for AML that brings together industry and academic collaborators led by top scientists within the Knight Cancer Institute in collaboration with the LLS.

American Society of Hematology

- Aptose will present an abstract on APTO-253 at the upcoming 56th American Society of Hematology (ASH) annual meeting in San Francisco, California which will be held in December 2014.

FINANCIAL RESULTS

Net loss for the four months ended September 30, 2014 was \$4.2 million (\$0.36 per share) compared with \$1.1 million (\$0.31 per share) during the three months ended August 31, 2013. The increase in net loss is due to the comparison of a four-month period in the current period with a three-month period in the prior year, in addition to increased research and development costs associated with increased clinical activity on APTO-253 and higher general and administrative costs associated with higher stock-based compensation and increased corporate activities including the Company's name change, share consolidation and NASDAQ listing.

Research and development expenses totaled \$1.3 million in the four months ended September 30, 2014 compared to \$615 thousand during the three months ended August 31, 2013. Research and development costs consist of the following:



Components of research and development expenses:

| <i>(amounts in 000's of Canadian Dollars)</i> | Four months ended September 30, 2014 | Three months ended August 31, 2013 |
|---|---|---------------------------------------|
| Program costs | \$ 1,272 | \$ 578 |
| Stock-based compensation | 37 | 33 |
| Depreciation of equipment | 2 | 4 |
| | \$ 1,311 | \$ 615 |

The increase in research and development costs in the four months ended September 30, 2014 compared with the three months ended August 31, 2013 is due to a four-month period compared with a three-month period in the prior year, as well as increased costs associated with APTO-253 and research, clinical and manufacturing activities as the Company prepares to launch a Phase I clinical trial. In the prior year period there were minimal research and development activities ongoing.

General and administrative expenses totaled \$3.0 million for the four months ended September 30, 2014 compared to \$451 thousand in the three months ended August 31, 2013. General and administrative expenses consist of the following:

Components of general and administrative expenses:

| <i>(amounts in 000's of Canadian Dollars)</i> | Four months ended September 30, 2014 | Three months ended August 31, 2013 |
|---|---|---------------------------------------|
| General and administrative excluding salaries | \$ 1,111 | \$ 255 |
| Salaries | 836 | 141 |
| Stock-based compensation | 1,047 | 55 |
| Depreciation of equipment | 6 | - |
| | \$ 3,000 | \$ 451 |

General and administrative costs excluding salaries are higher in the four months ended September 30, 2014 due to a four-month period compared with a three-month period ended August 31, 2013. In addition, in the current period, the Company had higher legal and patent costs associated with corporate activities (including the name change, share consolidation and NASDAQ listing), as well as re-branding costs associated with Aptose's name change and new website and higher levels of administrative costs associated with additional employees.

Salary costs have increased in the four-month period ended September 30, 2014 compared with the three-month period ended August 31, 2013 due to an additional month in the period as well as the addition of senior executives who were not employed at Aptose in the three months ended August 31, 2013.

Stock-based compensation costs increased in the four months ended September 30, 2014 compared with the three months ended August 31, 2013 due to option grants during the four-month period compared with no option grants in the three-month period in the prior year.

Aptose utilized cash of \$3.9 million in operating activities in the four months ended September 30, 2014 compared with \$933 thousand in the three months ended August 31, 2013. The increase in cash used in operating activities during the four-month period is primarily related to an increased net loss as well as a reduction in accounts payable and accrual balances compared with the three months ended August 31, 2013.

At September 30, 2014 Aptose had cash and cash equivalents and short-term investments of \$33.1 million compared to \$30.4 million at May 31, 2014.



Subsequent to the four months ended September 30, 2014, the Board of Directors approved a 1-for-12 share consolidation which became effective October 1, 2014. The share consolidation affected all of Aptose's common shares, stock options and warrants outstanding at the effective time. Fractional shares were not issued. Prior to consolidation there were approximately 139 million shares outstanding and following the share consolidation, there are approximately 11.6 million common shares outstanding. Similarly, prior to consolidation, Aptose had approximately 17.1 million stock options and 2.6 million warrants to purchase common shares outstanding. Following the share consolidation, there are approximately 1.4 million stock options and 218 thousand warrants to purchase common shares outstanding.

For further details and to view Aptose's May 31, 2014 Audited Consolidated Financial Statements and Management's Discussion and Analysis, please see Aptose's filings on www.sedar.com and on www.aptose.com.

Aptose Biosciences Inc.

Condensed Consolidated Interim Statements of Loss and Comprehensive Loss

(unaudited)

| | Four months ended Sep. 30, 2014 | Three months ended Aug. 31, 2013 |
|--|--|--|
| <i>(amounts in 000's of Canadian Dollars except for per common share data)</i> | | |
| REVENUE | \$ - | \$ - |
| EXPENSES | | |
| Research and development | 1,311 | 615 |
| General and administrative | 3,000 | 451 |
| Operating expenses | 4,311 | 1,066 |
| Finance expense | 37 | 36 |
| Finance income | (161) | (1) |
| Net financing expense (income) | (124) | 35 |
| Net loss and total comprehensive loss for the period | 4,187 | 1,101 |
| Basic and diluted loss per common share | \$ 0.36 | \$ 0.31 |
| Weighted average number of common shares outstanding used in the calculation of basic and diluted loss per common share (000's) | 11,610 | 3,521 |

CONFERENCE CALL AND WEBCAST

Aptose will host a conference call to discuss results for the four months ended September 30, 2014 on Tuesday, November 4, 2014 at 5:00 p.m. EDT. Participants can access the conference call by dialing 1-888-231-8191 (North American toll free number) or 647-427-7450 (local). The conference call will be available via a live webcast at <http://www.newswire.ca/en/webcast/detail/1435873/1595769>, and will also be available through a link on the Investor Relations section of Aptose's website at



<http://www.aptose.com/events/>. Please log on to the webcast at least 10 minutes prior to the start of the call to ensure time for any software downloads that may be required. An archived version of the webcast will be available on the Company's website for 30 days. An audio replay of the webcast will be available approximately two hours after the conclusion of the call for 30 days by dialing 1-855-859-2056, using the passcode 28685150.

NOTE

The information contained in this news release is unaudited.

About Aptose

Aptose Biosciences is a clinical-stage biotechnology company committed to discovering and developing personalized therapies addressing unmet medical needs in oncology. Aptose is advancing new therapeutics focused on novel cellular targets on the leading edge of cancer research, coupled with companion diagnostics to identify the optimal patient population for our products. The Company's small molecule cancer therapeutics pipeline includes products designed to provide enhanced efficacy with existing anti-cancer therapies and regimens without overlapping toxicities. Aptose Biosciences Inc. is listed on NASDAQ under the symbol APTO and on the TSX under the symbol APS.

This press release contains forward-looking statements within the meaning of Canadian and U.S. securities laws. Such statements include, but are not limited to, statements relating to Aptose's plans, objectives, expectations and intentions and other statements including words such as "continue", "expect", "intend", "will", "should", "would", "may", and other similar expressions. Such statements reflect our current views with respect to future events and are subject to risks and uncertainties and are necessarily 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 described in this press release. Such expressed or implied factors include, among others: changes in our stock price; our ability to meet listing requirements; our ability to obtain the capital required for research and operations; the inherent risks in early stage drug development including demonstrating efficacy; development time/cost and the regulatory approval process; 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; changing market conditions; stock market volatility; and other risks detailed from time-to-time in our ongoing quarterly filings, annual information forms, annual reports and annual filings with Canadian securities regulators and the United States Securities and Exchange Commission.

Should one or more of these risks or uncertainties materialize, or should the assumptions set out in the section entitled "Risk Factors" in our filings with Canadian securities regulators and the United States Securities and Exchange Commission 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 press release 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.



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