May 11, 2017

Aptose Reports Results for the First Quarter Ended March 31, 2017

SAN DIEGO and TORONTO, May 11, 2017 (GLOBE NEWSWIRE) -- Aptose Biosciences Inc. (“Aptose” or the “Company”) (NASDAQ:APTO) (TSX:APS), a clinical-stage company developing highly differentiated therapeutics that target the underlying mechanisms of cancer, today announced financial results for the three months ended March 31, 2017 and reported on corporate developments. Unless specified otherwise, all amounts are in Canadian dollars.

The net loss for the quarter ended March 31, 2017 was $4.4 million ($0.25 per share) compared with $5.1 million ($0.42 per share) in the quarter ended March 31, 2016. Total cash and cash equivalents and investments as of March 31, 2017 were $12.0 million (or $9.0 million US dollars) which, based on information currently available, provides the Company with sufficient resources to fund research and development and operations into Q2 2018.

“We, along with some of the nation’s leading hematology researchers, continue to generate compelling data on CG’806, an oral first-in-class pan-FLT3/BTK inhibitor that we plan to develop for patients with FLT3-driven acute myeloid leukemia and certain B-cell malignancies,” said William G. Rice, Ph.D., Chairman, President and Chief Executive Officer. “Preclinical data presented at AACR this past week demonstrated the ability of CG’806 to potently inhibit all mutant forms of FLT3 tested and to completely eradicate tumors in AML xenograft models in the absence of toxicities. Though early, we believe these data begin to position CG’806 as a best-in-class pan-FLT3 inhibitor for the treatment of AML. In addition, CG’806 is a potent non-covalent inhibitor of the wild type and C481S mutant forms of BTK, and we plan to develop CG806 in parallel for patients with B cell malignancies resistant and intolerant to covalent BTK inhibitors. We are working towards advancing this molecule into clinical trials within a year.”

Corporate Highlights

- In January 2017, Aptose announced the prioritization of its resources toward the development of CG’806, an oral preclinical compound being developed for patients with FLT3-driven acute myeloid leukemia (AML) and certain BTK-driven B-cell malignancies.

- CG’806 was the subject of two poster presentations at the 2017 AACR Hematologic Malignancies meeting held in Boston this past week (May 6-9).

  ° The first poster included data from studies conducted at The University of Texas MD Anderson Cancer Center, in which CG’806 demonstrated superior potency relative to competitive agents, against hematologic malignancy cell lines driven by various WT or

mutant forms of FLT3. In addition, once daily oral dosing of CG'806 in a murine model achieved sustained micromolar plasma concentration over a 24 hour period, and was accompanied by complete elimination of AML FLT3-ITD tumors in the absence of toxicity.

° The second poster included highlighted studies conducted at Oregon Health & Science University (OHSU) and through a collaboration with the Beat AML Initiative, in which CG'806 demonstrated the ability to potently kill primary malignant cells in samples from patients with various hematologic malignancies including AML, CLL and others.

- Separately, Aptose has begun formal studies on APTO-253, a phase 1 stage compound for AML, in an effort to define the root cause of recent manufacturing setbacks related to the intravenous formulation, and to restore the molecule to a state supporting clinical development and potential partnering. APTO-253, which effectively inhibits expression of the c-Myc oncogene, is a potential treatment for AML.

Financial Results

Our net loss for the three months ended March 31, 2017 was $4.4 million ($0.25 per share) compared with $5.1 million ($0.42 per share) during the three months ended March 31, 2016.

The decrease in the net loss during the three months ended March 31, 2017 compared with the three months ended March 31, 2016 is primarily related to savings from cancelling the LALS/Moffitt collaboration, lower stock-based compensation, and offset by development activities related to the CG'806 development program which started in the second half of 2016.

We utilized cash of $3.5 million in our operating activities in the three months ended March 31, 2017 compared with $4.5 million in the three months ended March 31, 2016. The decrease in cash used in operating activities in the current period is due mostly to increased accounts payable and accrual balances during the three months ended March 31, 2017.

Research and Development

Research and development expenses totaled $2.3 million in the three months ended March 31, 2017 compared with $2.3 million in the three months ended March 31, 2016. Research and development costs consist of the following:

	Three months ended	
(in thousands)	**March 31, 2017**	March 31, 2016
Program costs – APTO-253	**$ 1,102**	$ 1,040
Program costs – CG'806	**540**	-
Program costs – LALS/Moffitt	**-**	485
Salaries	**566**	722
Stock-based compensation	**68**	56
Depreciation of equipment	**19**	12
	$ 2,295	$ 2,315

Expenditures for the three months ended March 31, 2017 were comparable to the expenses incurred in the three months ended March 31, 2016. Higher program costs associated with the Company's CG'806 program were offset by lower costs associated related to the cancellation of the LALS/Moffitt collaboration. Lower salaries expense was primarily related to severance payments made in the three months ended March 31, 2016 due to a reduction in Research & Development FTE.

General and Administrative

General and administrative expenses totaled $2.1 million in the three months ended March 31, 2017, compared to $2.6 million in the three months ended March 31, 2016. General and administrative costs consist of the following:

	Three months ended	
(in thousands)	**March 31, 2017**	March 31, 2016
General and administrative excluding salaries	**$ 942**	$ 1,133
Salaries	**1,135**	975
Stock-based compensation	**13**	479
Depreciation of equipment	**11**	21
	$ 2,101	$ 2,608

General and administrative expenses excluding salaries, decreased in the three months ended March 31, 2017, compared with the three months ended March 31, 2016, mostly the result of lower travel, consulting and rent costs in the current year related to cost containment initiatives taken in the prior fiscal year. Salary charges in the three months ended March 31, 2017, increased slightly in comparison with the three months ended March 31, 2016, due to severance payments made in the current period that will result in savings in the following fiscal quarters.

Stock-based compensation decreased in the three months ended March 31, 2017, compared with the three months ended March 31, 2016, due to large forfeitures in the current period and also due to grants in prior periods having a greater fair value than the grants issued in the three months ended March 31, 2017, and therefore contributing to higher stock-based compensation in the prior year period.

Finance Expense

	Three months ended	
	March 31, 2017	March 31, 2016
Foreign exchange loss	**-**	196
	$ -	$ 196

Foreign exchange loss in the three months ended March 31, 2016, is the result of a decrease in the value of US dollar denominated cash and cash equivalents balances during the period due to an appreciation of the Canadian dollar compared to the US dollar. During this period the Company's functional currency was the Canadian dollar.

Finance Income

	Three months ended	
	March 31, 2017	March 31, 2016
Interest income	**$ 11**	$ 47
Foreign exchange gain	**30**	**-**
	$ 41	$ 47

Interest income represents interest earned on our cash and cash equivalent and investment balances. Foreign exchange gains in the three months ended March 31, 2017, are the result of an appreciation of the Canadian dollar compared to the US dollar. During this period the Company's functional currency was the US dollar.

Effective January 1, 2017, the Company changed its functional currency to US dollars given the prevalence of US dollar denominated activities over time. The Company's historic source of financing, with the exception of the recent at-the-market equity facility, has been in Canadian dollars and the Company still has a majority of its shareholders in Canada. For this reason the Company has chosen to keep the presentation currency as Canadian.

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 March 31, 2017**	Three months ended March 31, 2016
REVENUE	**$ -**	$ -
EXPENSES		
Research and development	**2,295**	2,315
General and administrative	**2,101**	2,608
Operating expenses	**4,396**	4,923
Finance expense	**-**	196
Finance income	**(41)**	(47)
Net financing income	**(41)**	149
Net loss for the period	**4,355**	5,072
Other comprehensive loss		
Items that may subsequently be reclassified to earnings:		
Foreign currency translation loss	**123**	-
Comprehensive loss for the period	**4,478**	**5,072**
Basic and diluted loss per common share	**$ 0.25**	**$ 0.42**

The press release, the financial statements and the management's discussion and analysis for the quarter ended March 31, 2017 will be available on SEDAR at www.sedar.com and EDGAR at www.sec.gov/edgar.shtml

Conference Call and Webcast

Aptose will host a conference call to discuss results for the three months ended March 31, 2017 today, Thursday May 11, 2017 at 5:00 p.m. EDT. Participants can access the conference call by dialing (844) 882-7834 (North American toll free number) and (574) 990-9707 (International) and using passcode 13003413. The conference call can also be

accessed at http://edge.media-server.com/m/p/bfhzuofp and will also be available through a link on the Investor Relations section of Aptose's website at ir.aptose.com. Please log onto 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 along with a transcript 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 7 days by dialing (855) 859-2056, using the passcode 13003413.

Note

The information contained in this news release is unaudited.

About Aptose

Aptose Biosciences is a clinical-stage biotechnology company committed to 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. The Company's small molecule cancer therapeutics pipeline includes products designed to provide single agent efficacy and to enhance the efficacy of other anti-cancer therapies and regimens without overlapping toxicities. For further information, please visit www.aptose.com.

Forward Looking Statements

This press release contains forward-looking statements within the meaning of Canadian and U.S. securities laws, including, but not limited to, statements relating to the expected cash runway of the Company, the clinical potential and favorable properties of CG'806, the clinical trials for CG'806, the clinical development and potential partnering of APTO-253, the focus of resources on CG'806, and statements relating to the Company'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 factors could include, among others: 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 and economic conditions; inability of new manufacturers to produce acceptable batches of GMP in sufficient quantities; unexpected manufacturing defects; 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.

For further information, please contact:

Aptose Biosciences
Greg Chow, CFO
647-479-9828
gchow@aptose.com

SMP Communications
Susan Pietropaolo
201-923-2049
susan@smpcommunications.com

Source: Aptose Biosciences Inc.