November 14, 2017

Aptose Reports Results for the Third Quarter Ended September 30, 2017

Conference Call and Webcast at 5pm EST Today

SAN DIEGO and TORONTO, Nov. 14, 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 September 30, 2017 and reported on corporate developments. Unless specified otherwise, all amounts are in Canadian dollars.

The net loss for the quarter ended September 30, 2017 was $3.3 million ($0.14 per share) compared with $4.0 million ($0.31 per share) in the quarter ended September 30, 2016. Total cash and cash equivalents and investments as of September 30, 2017 were $13.6 million (or $10.9 million US dollars) which, based on current operations, provide the Company with sufficient resources to fund research and development and operations into Q4 2018.

“During the third quarter, we made important progress with both of our novel small molecule compounds for the treatment of certain hematologic malignancies,” said William G. Rice, Ph.D., Chairman, President and Chief Executive Officer. “We’ve completed manufacture of high quality drug substance and explored multiple formulations of CG’806, our oral first-in-class pan-FLT3/pan-BTK inhibitor. We triggered PK and dose range finding studies with CG’806 in order to prepare the agent for advancement into the clinic for patients with acute myeloid leukemia and certain B-cell malignancies. We also generated renewed excitement about the potential for APTO-253, a clinical-stage compound that effectively inhibits expression of the c-Myc oncogene, and we believe we have effectively addressed the formulation and manufacturing setbacks that led to a clinical hold for APTO-253. Our goal is to return APTO-253 to the clinic for the treatment of patients with AML or MDS.”

Corporate Highlights

- **Successful completion of APTO-253 formal root causestudie**s - Aptose successfully completed Formal Root Cause Studies for the manufacturing setback related to the clinical batch supply that failed stability testing and established a Corrective and Prevention Action (CAPA) plan.

- **Manufacture of APTO-253 clinical supply has begun -** The Company has initiated the process to manufacture a cGMP clinical supply that will be required for a potential return of APTO-253 to the clinic. Upon manufacture of the new clinical supply, Aptose plans to perform stability, sterility, mock infusion, animal bridging and blood compatibility studies. Following completion of those studies, we would plan to submit

findings to the FDA to seek release of the clinical hold and allow return of APTO-253 to the open Phase 1b trial in patients with acute myeloid leukemia (AML) or myelodysplastic syndrome (MDS).

- **CG'806 manufacturing and preclinical testing progress**– Aptose produced a highly purified batch of drug substance (API) to support pharmacokinetic (PK), formulation evaluation and dose range finding studies of CG'806. The PK and formulation evaluation studies have been completed, and the dose range finding preclinical studies are expected to begin before or shortly after year-end. Separately, the Company has initiated the process to manufacture multi-kilogram batches of GLP-grade API for use in the formal GLP/IND-enabling animal toxicity studies.

- **Intellectual property protection for CG'806** – During the third quarter, Aptose continued to strengthen its patent portfolio. In September, Aptose and partner CrystalGenomics announced that the United States Patent and Trademark Office issued U.S. Patent No. 9,758,508 which claims numerous compounds, including the CG'806 compound, pharmaceutical compositions comprising the CG'806 compound, and methods of treating various diseases. The patent is expected to provide protection until the end of 2033. In August, Aptose received notice allowing U.S. Patent Application No. 14/655,954. The allowed '954 application claims numerous compounds, including the CG'806 compound, pharmaceutical compositions comprising the CG'806 compound, and methods of treating various diseases caused by abnormal or uncontrolled activation of protein kinase in a mammal by administering a compound, including the CG'806 compound.

- **Strengthened financial position –** The Company recently announced that it entered into a Common Shares Purchase Agreement with Aspire Capital Fund, LLC ("Aspire Capital") to sell up to US$15.5 million of common shares to Aspire Capital. Under the terms of the agreement, Aspire Capital made an initial investment of US$500,000 to purchase APTO common shares at US $1.40 per share on October 31, 2017. In addition, Aspire Capital has committed to purchase up to an additional US$15.0 million of APTO common shares, at Aptose's request from time to time during a 30 month period beginning on the effective date of a registration statement related to the transaction, and at prices based on the market price at the time of each sale. Under terms of the agreement, the Company also issued 321,429 common shares to Aspire Capital as consideration for Aspire Capital entering into the Purchase Agreement.

Financial Results

The results of operations for the three and nine months ended September 30, 2016 and 2017 are presented below:

	Three months ended September 30,		**Nine months ended September 30,**	
(in thousands)	**2017**	2016	**2017**	2016
Revenues	**$ -**	$ -	**$ -**	$ 0
Research and development expenses	**1,744**	2,164	**5,501**	7,772
General and administrative expenses	**1,652**	1,932	**5,586**	6,883
Net finance income (loss)	**(86)**	(79)	**(181)**	46
Net loss for the period	**3,310**	4,017	**10,906**	14,701

Foreign currency translation loss	**531**	-	**1,019**	-
Comprehensive loss for the period	**3,841**	4,017	**11,925**	14,701
Basic and diluted loss per common share	**$ 0.14**	$ 0.31	**$ 0.52**	$ 1.19

The decrease in the net loss during the three and nine months ended September 30, 2017 compared with the three and nine months ended September 30, 2016 results mostly from our decision in January 2017 to refocus our resources on our CG'806 development program and towards determining the root cause of the manufacturing issue with the APTO-253 program. Expenses were lower due to the cancellation of the LALS/Moffitt collaboration, lower costs associated with the APTO-253 program, and offset by increased development activities related to the CG'806 development program which were nominal in comparable periods, other than the license fee that was paid in June 2016 to acquire an option on the CG'806 technology.

Research and Development

Components of research and development expenses

The research and development expenses for the three and nine months ended September 30, 2016 and 2017 are as follows:

	Three months ended September 30,		Nine months ended September 30,	
(in thousands)	**2017**	2016	**2017**	2016
CrystalGenomics Option Fee	**$ -**	$ -	**$ -**	$ 1,294
Program costs – CG '806	**799**	78	**1,818**	97
Program costs – APTO-253	**476**	1,129	**2,029**	3,003
Program costs – LALS/Moffitt	**-**	347	**-**	1,296
Salaries	**402**	527	**1,390**	1,811
Stock-based compensation	**56**	71	**222**	236
Depreciation of equipment	**11**	12	**42**	35
	$ 1,744	$ 2,164	**$ 5,501**	$ 7,772

The changes in research and development expenses in the three months ended September 30, 2017 as compared to the three months ended September 30, 2016 result from the following:

- An increase in research and development activities related to our CG'806 development program. Activities in the period ended September 30, 2017 included formulation studies and PK studies and the manufacturing of a first batch of the drug substance to be used in dose range finding studies. CG'806 program expenses were nominal in the comparative period as the technology was licensed to us in June 2016;
- Reduced expenditures on the APTO-253 program. In the period ended September 30, 2017, we completed the root cause analysis and determined the cause of the manufacturing issue, established a Corrective and Prevention Action (CAPA) plan to ensure the clinical supply can be manufactured in a reliable manner, and instructed a contract manufacturing organization (CMO) to initiate all activities required to manufacture a new clinical supply. In the comparative period, we were actively manufacturing a clinical batch and preparing to return APTO-253 to the clinic;
- Savings from cancellation of the LALS/Moffitt collaboration which was active in the

three months ended September 30, 2016. There were no costs related to this program in the period ended September 30, 2017; and
- Lower salaries expense mostly related to reduced headcount.

The changes in research and development expenses in the nine months ended September 30, 2017 as compared to the nine months ended September 30, 2016 result from the following:

- In the comparative nine month period, we paid US$1.0 million ($1.3 million) to CrystalGenomics, Inc. for an option fee related to the CG'806 technology and in that period began research and development activities for this program.
- An increase in R&D activities on our CG'806 program as described above;
- A decrease in R&D activities on our APTO-253 program as described above;
- Savings from cancellation of the LALS/Moffitt collaboration as described above; and
- Lower salaries expense mostly related to severance payments made in the three months ended March 31, 2016 when research headcount was reduced and savings resulting from the reduced headcount.

General and Administrative

Components of general and administrative expenses

The general and administrative expenses for the three and nine months ended September 30, 2016 and 2017 are as follows:

	Three months ended September 30,		Nine months ended September 30,	
(in thousands)	**2017**	2016	**2017**	2016
General and administrative excluding salaries	**$ 894**	$ 733	**$ 2,591**	$ 2,688
Salaries	**605**	858	**2,336**	2,656
Stock-based compensation	**138**	320	**614**	1,476
Depreciation of equipment	**15**	21	**45**	63
	$ 1,652	$ 1,932	**$ 5,586**	$ 6,883

General and administrative expenses excluding salaries, increased in the three months ended September 30, 2017, compared with the three months ended September 30, 2016. The increase is mostly the result of higher investor relations, professional fees and travel costs in the period ended September 30, 2017. Salaries expenses in the three months ended September 30, 2017, decreased in comparison with the nine months ended September 30, 2016, due mostly to the reduced headcount.

General and administrative expenses excluding salaries, decreased in the nine months ended September 30, 2017, compared with the nine months ended September 30, 2016. The decrease is mostly the result of lower travel costs, consulting and rent costs in the first six months of the fiscal year related to cost containment initiatives taken in the prior fiscal year and offset by higher investor relations, professional fees and travel costs in the three months ended September 30, 2017. Salary expenses in the nine months ended September 30, 2017, decreased in comparison with the nine months ended September 30, 2016, due mostly to the reduced headcount.

Stock-based compensation decreased in the three and nine months ended September 30,

2017, compared with the three and nine months ended September 30, 2016, due to significant option forfeitures in the three months ended March 31, 2017 and also due to grants in the prior periods having a greater fair value than the grants issued in the three and nine months ended September 30, 2017, and therefore contributing to higher stock-based compensation in the three and nine months period ended September 30, 2016.

Conference Call and Webcast

Aptose will host a conference call today, Tuesday, November 14, 2017 at 5:00 p.m. EST to discuss results for the three months ended September 30, 2017. Participants can access the conference call by dialing (844) 882-7834 (North American toll free number) and (574) 990-9707 (International) and using conference ID # 98696700. The conference call can be accessed here and will also be available through a link on the Investor Relations section of Aptose's website at ir.aptose.com. 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 seven days by dialing (855) 859-2056, using the conference ID # 98696700.

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 potential development of APTO-253, the potential return of APTO-253 to the clinic, 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.

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