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Aptose Presents New Preclinical Data for CG-806 at the 24th Congress of the European Hematology Association

– CG-806 safely and durably suppressed tumor growth in preclinical models –

SAN DIEGO and TORONTO, June 14, 2019 (GLOBE NEWSWIRE) -- Aptose Biosciences Inc. ("Aptose" or the "Company") (NASDAQ: APTO, TSX: APS), a clinical-stage company developing highly differentiated therapeutics targeting the underlying mechanisms of cancer, today announced that new preclinical data for CG-806, its oral, first-in-class pan-FLT3/pan-BTK inhibitor, is being presented in a poster presentation today at the 24th Congress of the European Hematology Association in Amsterdam, the Netherlands.

The poster, ***CG-806, preclinical in vivo efficacy and safety profile as a pan-FLT3 / pan-BTK inhibitor,*** highlights the *in vivo* anti-leukemic efficacy of CG-806 and its GLP toxicology and toxicokinetic profile. In a preclinical MV4-11 FLT3-ITD AML xenograft mouse model, CG-806 suppressed leukemia growth at all doses tested throughout the 28-day period of dosing. After dosing was halted, tumors treated with 10 mg/kg and 30 mg/kg resumed growth but responded again when CG-806 dosing was restarted. In the mice treated with 100 mg/kg, 5 of 11 (45%) were cured through day 120, and in the 300 mg/kg group, 10 of 11 (91%) of the mice were cured. Retreating the "uncured' mice in these two dose groups for an additional 28 days beginning on day 88 led to rapid and robust antitumor response resulting in "cures" in all retreated mice through day 120. In the "re-treated" mice, no drug resistance and no toxicities were observed. GLP 28-day toxicology and TK studies mice and dogs showed no adverse CG-806-related effects on body weight, ophthalmic, respiratory or neurological examinations, clinical pathology (coagulation, clinical chemistry, or urinalysis), organ weight or macroscopic evaluations. No CG-806-related cardiovascular effects were noted in the 28-day GLP toxicology study or in a separate preclinical cardiovascular safety study.

The poster and abstract can be accessed here or at the publications and presentations section of Aptose's website www.aptose.com.

"The wealth of preclinical data supporting CG-806 continues to grow and differentiate the molecule from other drugs on the market or in development," said William G. Rice, Ph.D., Chairman, President and Chief Executive Officer. "We are pleased to have reached the clinic with this compound and are hopeful that clinical testing will prove it to be an effective therapy for hematologic malignancy patients greatly in need of new treatment options."

About CG-806
CG-806 is an oral, first-in-class pan-FLT3/pan-BTK multi-cluster kinase inhibitor in Phase 1 clinical development for hematologic malignancies. This small molecule, in-licensed from

CrystalGenomics Inc. in Seoul, South Korea, demonstrates potent inhibition of wild type and all mutant forms of FLT3 (including internal tandem duplication, or ITD, and mutations of the receptor tyrosine kinase domain and gatekeeper region), cures animals of acute myeloid leukemia (AML) tumors in the absence of toxicity in murine xenograft models, and represents a potential best-in-class therapeutic for patients with AML. Likewise, CG-806 demonstrates potent, non-covalent inhibition of the wild type and Cys481Ser (C481S) mutant forms of the BTK enzyme, as well as other oncogenic pathways operative in B cell malignancies, suggesting CG-806 may be developed for various B cell malignancy patients (including CLL/SLL, FL, MCL, DLBCL and others) that are resistant/refractory/intolerant to covalent BTK inhibitors. Because CG-806 targets key kinases/pathways operative in malignancies derived from the bone marrow, it is in development for B-cell cancers and AML.

About Aptose

Aptose Biosciences is a clinical-stage biotechnology company committed to developing personalized therapies addressing unmet medical needs in oncology, with an initial focus on hematology. 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. The company has two clinical-stage investigational products for hematologic malignancies: CG-806, an oral, first-in-class pan-FLT3/pan-BTK multi-cluster kinase inhibitor, is in a Phase 1 trial in patients with relapsed or refractory B cell malignancies, including chronic lymphocytic leukemia (CLL), small lymphocytic lymphoma (SLL) and non-Hodgkin lymphoma (NHL), who have failed or are intolerant to standard therapies; APTO-253, the only clinical stage agent that directly targets the MYC oncogene and inhibits its expression, is in a Phase 1b clinical trial for the treatment of patients with relapsed or refractory acute myeloid leukemia (AML) or high risk myelodysplastic syndrome (MDS). 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 regarding the clinical potential and favorable properties of 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”, “potential” 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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