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Aptose Biosciences Doses First Patient in Re-Initiation of Phase 1b Clinical Study of APTO-253 in Relapsed or Refractory Hematological Malignancies

SAN DIEGO and TORONTO, Nov. 26, 2018 (GLOBE NEWSWIRE) -- Aptose Biosciences Inc. (NASDAQ: APTO, TSX: APS), a clinical-stage company developing highly differentiated therapeutics targeting the underlying mechanisms of cancer, today announced that dosing has commenced in the first patient in its Phase 1b clinical study of APTO-253 in patients with relapsed or refractory hematologic malignancies. APTO-253 is the only known clinical-stage molecule that can directly inhibit expression of the MYC oncogene, shown to reprogram survival signaling pathways in cells and thereby transform cells and contribute to drug resistance in many malignancies, including acute myeloid leukemia (AML).

"We are pleased to announce the successful re-initiation of patient dosing in our clinical trial with APTO-253, our first-in-class inhibitor of the MYC oncogene that has the potential to benefit a large patient population across various therapeutic areas, and we look forward to providing updates moving forward," commented William G. Rice, Ph.D., Chairman, President and CEO. "As the clinical protocol requires only one patient at each of the two lowest dose levels, we have and will continue to carefully select patients for those first two dose levels. Relapsed/refractory AML patients tend to be acutely sick, and we seek to complete those two lower dose levels with a favorable tolerability profile. Indeed, we hope this thoughtful approach will allow expeditious escalation to higher dose levels and may provide greater benefit to the AML patients."

About the APTO-253 Clinical Trial

The Phase 1b, multicenter, open-label, dose-escalation clinical trial of APTO-253 is designed to assess the safety, tolerability, pharmacokinetics and pharmacodynamic responses and establish the recommended Phase 2 dose and efficacy of APTO-253 as a single agent. APTO-253 will be administered once weekly, over a 28-day cycle. The study is expected to enroll up to 20 patients with relapsed or refractory acute myeloid leukemia (AML) and high-risk myelodysplastic syndromes (MDS) patients. The study is designed to then transition, as appropriate, to single-agent expansion cohorts in AML and MDS, followed by combination studies. More information can be found at www.clinicaltrials.gov.

About APTO-253

APTO-253 is a clinical-stage, small molecule, targeted therapeutic agent that inhibits expression of the MYC oncogene, leading to cell cycle arrest and programmed cell death (apoptosis) in human-derived solid tumor and hematologic cancer cells. The MYC oncogene is overexpressed in hematologic cancers, including acute myeloid leukemia (AML). Aptose

researchers have reported the ability of APTO-253 to induce cell death, or apoptosis, in multiple blood cancer cell lines including AML, as well as in vitro synergy with various classes of conventional approved and investigational therapies for AML or myelodysplastic syndromes (MDS). New findings reveal that APTO-253 might also serve certain solid tumor patients with BRCA1/2 mutations, but without causing toxicity to the normal bone marrow functions.

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. 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 MDS. CG-806 is an oral, first-in-class pan-FLT3/pan-BTK multi-cluster kinase inhibitor being developed to treat AML and certain B cell malignancies. 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 APTO-253, the Phase 1b APTO-253 clinical trial, and statements relating to the Company's plans, objectives, expectations and intentions and other statements including words such as "continue", "expect", "intend", "will", "hope" "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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