October 23, 2023

Aptose to Hold Clinical Update and KOL Data Review of AML Drug Tuspetinib on Monday, October 30th

SAN DIEGO and TORONTO, Oct. 23, 2023 (GLOBE NEWSWIRE) -- Aptose Biosciences Inc. (“Aptose” or the “Company”) (NASDAQ: APTO, TSX: APS), a clinical-stage precision oncology company developing highly differentiated oral kinase inhibitors to treat hematologic malignancies, today announced that the Company will provide a clinical update on Monday, October 30, 2023 at 8:30 AM Eastern Time, in conjunction with poster presentations at the European School of Haematology (ESH) 6th International Conference: Acute Myeloid Leukemia "Molecular and Translational": Advances in Biology and Treatment, being held October 29-31, 2023, in Estoril, Portugal.

The webcast event will include a comprehensive review of up-to-date clinical data for Aptose’s lead compound tuspetinib and will feature Naval Daver, MD, Professor, Director Leukemia Research Alliance Program, Department of Leukemia, The University of Texas MD Anderson Cancer Center, Houston, TX. Dr. Daver is the lead investigator on Aptose’s APTIVATE trial and is recognized for significant achievements in the development of novel AML treatments, including several combination therapies.

Tuspetinib (TUS), a once-daily oral tablet, is a precision targeted myeloid kinase inhibitor that suppresses a select handful of kinases known to drive the proliferation of acute myeloid leukemia (AML) but avoids other kinases that can compromise safety. Tuspetinib as a single agent was well-tolerated and highly active among relapsed or refractory (R/R) AML patients with a diversity of adverse genotypes and delivered a 42% CR/CRh across evaluable venetoclax (VEN) naïve patients at the 80mg daily RP2D. Tuspetinib also is being studied in combination with venetoclax (VEN) in the APTIVATE international Phase 1/2 expansion trial in R/R AML patients. The TUS/VEN doublet has been well tolerated and achieved multiple responses in patients who previously failed venetoclax (Prior-VEN failure AML), including Prior-VEN failure patients who also previously failed FLT3 inhibitors, all of whom represent emerging populations of high unmet medical need. Notably, tuspetinib targets venetoclax resistance mechanisms that may re-sensitize Prior-VEN failure patients to venetoclax.

Aptose Clinical Update Details

Date & Time: Monday, October 30, 2023, 8:30 AM ET

Participant Webcast Link: here (https://lifescievents.com/event/aptose/)

The slides will be available on Aptose’s websitehereand the webcast of the presentation will be archived shortly after the conclusion of the event.

Poster Presentations

As announced prior, the Aptose poster presentations at ESH are listed below. Note that the poster presentations will include additional data not found in the abstracts. The posters accepted for presentation are listed below and can be viewed beginning October 29, 2023, on site at the ESH poster exhibit hall and online on the Aptose website here.

- ***Tuspetinib Myeloid Kinase Inhibitor Safety and Efficacy as Monotherapy and Combined with Venetoclax in Phase 1/2 Trial of Patients with Relapsed or Refractory (R/R) Acute Myeloid Leukemia (AML)***

- ***Tuspetinib Oral Myeloid Kinase Inhibitor Creates Synthetic Lethal Vulnerability to Venetoclax***

About Aptose

Aptose Biosciences is a clinical-stage biotechnology company committed to developing precision medicines 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 oral kinase inhibitors under development for hematologic malignancies: tuspetinib (HM43239), an oral, myeloid kinase inhibitor being studied as monotherapy and in combination therapy in the APTIVATE international Phase 1/2 expansion trial in patients with relapsed or refractory acute myeloid leukemia (AML); and luxeptinib (CG-806), an oral, dual lymphoid and myeloid kinase inhibitor in Phase 1 a/b stage development for the treatment of patients with relapsed or refractory hematologic malignancies. For more information, please visit www.aptose.com.

Forward-Looking Statements

This press release may contain forward-looking statements within the meaning of Canadian and U.S. securities laws, including, but not limited to, statements relating to the Company's growth, plans, objectives, expectations and intentions, statements on the clinical potential of tuspetinib 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.

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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