December 20, 2021

Aptose Provides Update on APTO-253 Program

-- Clinical development of the MYC repressor APTO-253 will be discontinued --

-- Company will focus on advancing kinome inhibitor pipeline --

SAN DIEGO and TORONTO, Dec. 20, 2021 (GLOBE NEWSWIRE) -- Aptose Biosciences Inc. ("Aptose") (NASDAQ: APTO, TSX: APS) today announced its decision to discontinue further clinical development of APTO-253. The decision follows prioritization of the company's other more advanced pipeline candidates, as well as an internal review of the product profile and performance to date of APTO-253, including a clinical hold placed by the U.S. Food & Drug Administration.

"We plan to enter the new year 2022 focused exclusively on the swift development of our kinome inhibitors HM43239 and luxeptinib, both of which recently have demonstrated encouraging clinical activity in challenging hematologic malignancies," said William G. Rice, Ph.D., Chairman, President and Chief Executive Officer. "APTO-253 remains an interesting product that has demonstrated MYC repression, which creates optionality across the wider oncology spectrum. Moving forward, we plan to explore available strategic alternatives for this compound."

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 under development for hematologic malignancies: HM43239, an oral, myeloid kinome inhibitor in an international Phase 1/2 trial in patients with relapsed or refractory acute myeloid leukemia (AML), and luxeptinib, an oral, dual lymphoid and myeloid kinome inhibitor in a Phase 1 a/b trial in patients with relapsed or refractory B cell malignancies who have failed or are intolerant to standard therapies, and in a separate Phase 1 a/b trial in patients with relapsed or refractory AML or high risk myelodysplastic syndrome (MDS). For more 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, the clinical development plans, the clinical potential and favorable properties of HM43239, luxeptinib and APTO-253; and the exploration of strategic alternatives for APTO-253; 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; the potential impact of the COVID-19 pandemic 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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