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Aptose Exercises Early Option for CG-806 License From CrystalGenomics

CG-806 pan-FLT3 / pan-BTK inhibitor for hematologic cancers

SAN DIEGO and SEOUL, South Korea, May 07, 2018 (GLOBE NEWSWIRE) -- Aptose Biosciences Inc. (NASDAQ:APTO) (TSX:APS) and CrystalGenomics, Inc. (KOSDAQ:083790) today announced that Aptose exercised its option under the 2016 Option Agreement to exclusively license CG-806, a first-in-class, non-covalent pan-inhibitor of the Bruton's tyrosine kinase (BTK) and FMS-like tyrosine kinase 3 (FLT3) from CrystalGenomics, Inc. CG-806 is being developed as a highly potent, oral small molecule for acute myeloid leukemia (AML), B-Cell malignancies and other hematologic malignancies.

With the early exercise of the option, Aptose owns global rights to develop and commercialize CG-806 for all indications outside of Korea and China – the Licensed Territory. The exercise triggers a payment of US \$2.0 million to CrystalGenomics. CrystalGenomics is eligible for regulatory and sales milestone payments, as well as royalties on product sales in the Licensed Territory.

Aptose has been conducting Investigational New Drug (IND) enabling studies with CG-806, as well as numerous preclinical studies. When tested against fresh bone marrow samples from patients with AML, CG-806 demonstrated superior potency and range of activity relative to all other FLT3 inhibitors evaluated. Likewise, CG-806 demonstrated superiority over ibrutinib when tested against samples from CLL patients. The superior potency and breadth of activity against patient-derived hematologic malignancy cells is due to the ability of CG-806 to target all wild type (WT) and all known mutant forms of FLT3 and BTK, and to suppress multiple signaling pathways that can rescue hematologic cancers from other agents. Once-daily oral dosing of CG-806 in murine xenograft models of human hematologic malignancies demonstrated tumor eradication in the absence of observable toxicity, and dose range finding studies have shown CG-806 to have a robust safety profile. Aptose expects to submit an IND in late 2018 and initiate clinical trials immediately thereafter.

"CG-806 has the potential to serve as a transformational agent for AML, chronic lymphocytic leukemia (CLL) and other hematologic malignancies," said William G. Rice, Ph.D., Chairman, President and Chief Executive Officer of Aptose. "Recent pre-clinical studies, just highlighted at the 2018 AACR Annual Meeting, demonstrated CG-806's superior potential to other FLT3 inhibitors on AML patient samples and superior potential to ibrutinib on CLL patient samples."

"Aptose has made the clinical development of CG-806 a priority, and we are pleased to be working with them," said Joong Myung Cho, Ph.D., Chairman and Chief Executive Officer of CrystalGenomics. "Aptose and its clinical advisors clearly recognize the potential of CG-806

as an exciting therapeutic option for patients with AML, CLL and other malignancies.”

About CrystalGenomics

CrystalGenomics, Inc. is a commercial stage biopharmaceutical company focused in the structure-based drug discovery and development of novel therapeutics in unmet medical need areas of inflammation, oncology, and infectious disease. In addition to several drug programs in the R&D pipeline, the Company has an osteoarthritis drug on the market and, has recently added commercial manufacturing capabilities through acquisitions. For more information, please visit: www.cgxinc.com or www.crystalgenomics.com. CrystalGenomics, Inc. is listed on KOSDAQ (083790).

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 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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