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Xenetic Biosciences, Inc. Enters into Materials Transfer Agreement with Tokyo Medical University for the Advancement of Its DNase-Based Oncology Platform

Xenetic to supply recombinant DNase I to Tokyo Medical University for evaluation as a treatment of Ewing sarcoma in unique preclinical model

FRAMINGHAM, MA / ACCESSWIRE / October 17, 2024 /Xenetic Biosciences, Inc. (NASDAQ:XBIO) ("Xenetic" or the "Company"), a biopharmaceutical company focused on advancing innovative immuno-oncology technologies addressing hard to treat oncology indications, today announced it has entered into a Materials Transfer Agreement with Tokyo Medical University to advance the development of its systemic DNase program.

Under the terms of the agreement, Professor Takuro Nakamura of the Department of Experimental Pathology, Institute of Medical Science at Tokyo Medical University will lead the research program evaluating the effects of human recombinant DNase I (rhDNase I) when given in combination with chemotherapy in a proprietary immunocompetent preclinical mouse model of Ewing sarcoma. Professor Takuro Nakamura's proprietary immunocompetent Ewing sarcoma model encompasses the biological characteristics, morphology and gene expression profiles of human Ewing sarcoma and has demonstrated translational relevance.

Ewing sarcoma is an aggressive orphan pediatric cancer that grows in bones or soft tissues, accounting for between 2 to 3 percent of all childhood cancers. There is a lack of effective treatment options for children with recurrent and metastatic disease where the five-year survival rate is only 20 to 30 percent for patients that have relapsed.

Clinical studies conducted at Tel Aviv Medical Center between 2010 and 2021[1] showed that the formation of neutrophil extracellular traps (NETs) in the tumor microenvironment of Ewing sarcoma is an independent prognostic factor, with a clear association between NETs burden and poor prognosis. According to research from these clinical studies, elevated levels of NETs at diagnosis predicted a poor response to neoadjuvant chemotherapy, relapse, and death from the disease.

Xenetic's proprietary recombinant DNase I is an enzyme that digests NETs in tumor microenvironment. The preclinical studies are designed to evaluate the efficacy of DNase to reduce NETs burden and to increase the efficacy of chemotherapy given in an adjuvant setting.

James Parslow, Interim Chief Executive Officer and Chief Financial Officer of the Company

stated, "As part of our overall development strategy, we aim to leverage relationships like the one established with Tokyo Medical University. Our commitment to the DNase program remains steadfast, and we are pleased to enter into this agreement to further expand our growing body of data."

About DNase-Based Oncology Platform

Xenetic's DNase-based oncology platform is designed to target NETs, which are weblike structures composed of extracellular chromatin coated with histones and other proteins. In cancer, NETs are expelled by activated neutrophils into the tumor microenvironment and blood, thereby promoting cancer spread and local and systemic immunosuppression. Reduction of NETs burden via application of Xenetic's proprietary recombinant human DNase I has been shown to improve efficacy of immunotherapy, adoptive cell therapy and chemotherapy in preclinical animal models.

About Xenetic Biosciences

Xenetic Biosciences, Inc. is a biopharmaceutical company focused on advancing innovative immune-oncology technologies addressing hard to treat cancers. The Company's DNase platform is designed to improve outcomes of existing treatments, including immunotherapies, by targeting neutrophil extracellular traps (NETs), which are involved in cancer progression. Xenetic is currently focused on advancing its systemic DNase program into the clinic as an adjunctive therapy for pancreatic carcinoma and locally advanced or metastatic solid tumors.

For more information, please visit the Company's website atwww.xeneticbio.com and connect on X , LinkedIn , and Facebook .

Forward-Looking Statements

This press release contains forward-looking statements that we intend to be subject to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. All statements contained in this press release other than statements of historical facts may constitute forward-looking statements within the meaning of the federal securities laws. These statements can be identified by words such as "expects," "plans," "projects," "will," "may," "anticipates," "believes," "should," "intends," "estimates," "remain," "focus", and other words of similar meaning, including, but not limited to, all statements regarding the Materials Transfer Agreement with Tokyo Medical University, including the design of preclinical studies, our aim to leverage relationships like the one established with Tokyo Medical University, our commitment to the DNase program, and our expectations that such agreement will further expand our growing body of data, and all statements regarding expectations for our DNase-base oncology platform, including statements regarding our focus on advancing innovative immune-oncology technologies addressing hard to treat cancers, the DNase platform improving outcomes of existing treatments, NETs, and our focus on advancing our systemic DNase program into the clinic as an adjunctive therapy for pancreatic carcinoma and locally advanced or metastatic solid tumors. Any forward-looking statements contained herein are based on current expectations and are subject to a number of risks and uncertainties. Many factors could cause our actual activities, performance, achievements, or results to differ materially from the activities and results anticipated in

forward-looking statements. Important factors that could cause actual activities, performance, achievements, or results to differ materially from such plans, estimates or expectations include, among others, (1) failure to achieve the expected outcomes and realize the anticipated benefits from our collaboration agreements, including the agreement with Tokyo Medical University; (2) unexpected costs, charges or expenses resulting from our manufacturing and collaboration agreements, including the agreement with Tokyo Medical University; (3) unexpected costs, charges or expenses resulting from the licensing of the DNase platform; (4) uncertainty of the expected financial performance of the Company following the licensing of the DNase platform; (5) failure to realize the anticipated potential of the DNase or PolyXen technologies; (6) the ability of the Company to obtain funding and implement its business strategy; and (7) other risk factors as detailed from time to time in the Company's reports filed with the SEC, including its annual report on Form 10-K, periodic quarterly reports on Form 10-Q, current reports on Form 8-K and other documents filed with the SEC. The foregoing list of important factors is not exclusive. In addition, forward-looking statements may also be adversely affected by general market factors, general economic and business conditions, including potential adverse effects of public health issues, such as the COVID-19 outbreak, and geopolitical events, such as the Russian invasion of Ukraine and conflict in the Middle East, on economic activity, competitive product development, product availability, federal and state regulations and legislation, the regulatory process for new product candidates and indications, manufacturing issues that may arise, patent positions, litigation, and shareholder activism, among other factors. The forward-looking statements contained in this press release speak only as of the date the statements were made, and the Company does not undertake any obligation to update forward-looking statements, except as required by law.

Contact:

JTC Team, LLC
Jenene Thomas
(908) 824-0775
xbio@jtcir.com

[1] https://onlinelibrary.wiley.com/doi/full/10.1111/cas.15992

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