July 22, 2019

Xenetic Biosciences, Inc. Closes $15.0 Million Underwritten Public Offering and Completes Acquisition of Innovative CAR T Technology Platform

- ***Innovative XCART technology platform designed to target personalized, patient-specific tumor neoantigens has the potential to transform CAR T cell therapy***
- ***XCART expected to initially target B-cell lymphomas and has the potential to address multiple tumor types with an initial global market opportunity in Non-Hodgkin Lymphoma of over $5 billion annually***

FRAMINGHAM, MA / ACCESSWIRE / July 22, 2019 /Xenetic Biosciences, Inc. (NASDAQ: XBIO) ("Xenetic" or the "Company"), a clinical-stage biopharmaceutical company focused on the discovery, research and development of next-generation biologic drugs and novel orphan oncology therapeutics, announced today that it closed its previously announced $15.0 million underwritten public offering. In conjunction with the closing of the offering, Xenetic completed its previously announced acquisition of the novel CAR T ("Chimeric Antigen Receptor T Cell") platform technology, called "XCART," a proximity-based screening platform capable of identifying CAR constructs that can target patient-specific tumor neoantigens, which has demonstrated proof-of-mechanism in B-cell Non-Hodgkin lymphomas. The XCART technology, developed by The Scripps Research Institute ("Scripps") in collaboration with the Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, is believed to have the potential to significantly enhance the safety and efficacy of cell therapy for B-cell lymphomas by generating patient- and tumor-specific CAR T cells.

"We believe that the XCART technology platform has the capability to expand the potential of CAR T cell therapy, an area driving new breakthroughs in the treatment of cancer. We are incredibly pleased to have closed this acquisition and look forward to leveraging this innovative technology to propel Xenetic into its next phase of growth," commented Jeffrey Eisenberg, Chief Executive Officer of Xenetic. "The XCART platform has demonstrated proof-of-mechanism and promising preclinical evidence of target specificity. We believe this acquisition positions us to drive momentum in the innovation and development of new oncology therapeutics where there remains significant unmet need. Our R&D efforts will initially focus on leveraging the XCART platform to develop cell-based therapeutics for the treatment of B-cell Non-Hodgkin lymphomas, an initial global market opportunity estimated to exceed $5 billion per year." [1]

The XCART technology platform was designed by its originators to utilize an established screening technique to identify peptide ligands that bind specifically to the unique B-cell receptor ("BCR") on the surface of an individual patient's malignant tumor cells. The peptide is then inserted into the antigen-binding domain of a CAR, and a subsequent

transduction/transfection process is used to engineer the patient's T cells into a CAR T format which redirects the patient's T cells to attack the tumor. Essentially, the XCART screening platform is the inverse of a typical CAR T screening protocol wherein libraries of highly specific antibody domains are screened against a given target. In the case of XCART screening, the target is itself an antibody domain, and hence highly specific by its nature. The XCART technology creates the possibility of personalized treatment of lymphomas utilizing a CAR with an antigen-binding domain that should only recognize, and only be recognized by, the unique BCR of a particular patient's B-cell lymphoma.

An expected result for XCART is limited off-tumor toxicities, such as B-cell aplasia. Xenetic's clinical development program will seek to confirm the early preclinical results, and to demonstrate a more attractive safety profile than existing therapies.

Under the terms of the acquisition, Xenetic acquired all outstanding shares of Hesperix S.A., a newly-formed Swiss entity to which all XCART owners and inventors other than Scripps have assigned their rights to XCART, and exclusively licensed Scripps' rights in the technology, in exchange for an aggregate 625,000 shares of Xenetic common stock.

Maxim Group LLC served as the strategic advisor to Xenetic and provided a fairness opinion to the special committee of the Board of Directors of Xenetic in connection with the acquisition.

About the Offering

Under the terms of the underwriting agreement, Xenetic sold 2,300,000 shares of its common stock (or pre-funded warrants to purchase common stock in lieu thereof) and also issued warrants to purchase up to an aggregate of 2,300,000 shares of the Company's common stock. Each share of common stock was sold together with one warrant to purchase one share of common stock at a combined price to the public of $6.50 per share and warrant. The gross proceeds to Xenetic from the underwritten public offering were approximately $15.0 million before deducting underwriting fees and other offering expenses.

Xenetic also has granted to the underwriter a 45-day option to purchase up to an additional 345,000 shares of common stock and/or warrants to purchase up to 345,000 shares of common stock, at the public offering price less discounts and commissions. On July 19, 2019, the underwriter exercised its overallotment option with respect to 160,000 warrants resulting in additional proceeds of $1,600.

The warrants are immediately exercisable at a price of $13.00 per share of common stock and will expire five years from the date of issuance. The warrants are expected to begin trading on the Nasdaq Capital Market on July 19, 2019 or as soon thereafter as practicable, under the symbol "XBIOW." The warrants also provide that if the weighted-average price of common stock on any trading day on or after 30 days after issuance is lower than the then-applicable exercise price per share, each warrant may be exercised, at the option of the holder, on a cashless basis for one share of common stock.

Maxim Group LLC acted as sole book-running manager in connection with the offering.

This press release does not constitute an offer to sell or the solicitation of an offer to buy, nor will there be any sales of these securities in any jurisdiction in which such offer, solicitation

or sale would be unlawful prior to registration or qualification under the securities laws of such jurisdiction. A prospectus relating to the shares of common stock, pre-funded warrants and warrants was filed by Xenetic Biosciences, Inc. with the SEC. Copies of the prospectus relating to the underwritten offering can be obtained at the SEC's website at www.sec.gov or from Maxim Group LLC, 405 Lexington Avenue, New York, NY 10174, Attention: Syndicate Department, or via email at syndicate@maximgrp.com or telephone at (212) 895-3745.

About Xenetic Biosciences

Xenetic Biosciences, Inc. is a clinical-stage biopharmaceutical company focused on the discovery, research and development of next-generation biologic drugs and novel orphan oncology therapeutics. The Company recently announced its acquisition of the XCART platform, a novel CAR T technology engineered to target personalized, patient-specific tumor neoantigens. The Company plans to initially apply the XCART technology to develop cell-based therapeutics for the treatment of B-cell lymphomas.

Additionally, Xenetic's proprietary drug development platform, PolyXen™, enables next-generation biologic drugs by improving their half-life and other pharmacological properties. The Company has ongoing business development activities to explore partnerships utilizing its PolyXen delivery platform.

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

FORWARD-LOOKING STATEMENTS

This press release contains forward-looking statements for purposes of 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," and other words of similar meaning, including statements regarding the capability of the XCART technology to expand the potential of CAR T cell therapy; the benefits of the acquisition; the Company's plans to initially apply the XCART technology to develop cell-based therapeutics for the treatment of B-cell lymphomas; and the Company's business development activities to explore partnerships utilizing its PolyXen delivery platform. 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 or results to differ materially from the activities and results anticipated in forward-looking statements. Important factors that could cause actual results to differ materially from such plans, estimates or expectations include, among others, (1) unexpected costs, charges or expenses resulting from the acquisition; (2) uncertainty of the expected financial performance of the Company following completion of the acquisition; (3) failure to realize the anticipated benefits of the acquisition; (4) the ability of the Company to implement its business strategy; and (5) 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, periodic 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, 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 and litigation, 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.

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[1] Market Reports World GLOBAL NON-HODGKIN LYMPHOMA THERAPEUTICS MARKET - SEGMENTED BY TYPE OF TREATMENT - GROWTH, TRENDS AND FORECASTS (2018 - 2023); BioPharm Insight Surveillance, Epidemiology, and End Results (SEER) 9 registries, National Cancer Institute, 2017.

SOURCE: Xenetic Biosciences, Inc.

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https://www.accesswire.com/552723/Xenetic-Biosciences-Inc-Closes-150-Million-Underwritten-Public-Offering-andCompletes-Acquisition-of-Innovative-CAR-T-Technology-Platform