September 9, 2021

Xenetic Biosciences, Inc. Receives Notice of Allowance for XCART(TM) Patent

Allowance bolsters intellectual property portfolio for differentiated personalized CAR T platform technology, XCART

FRAMINGHAM, MA / ACCESSWIRE / September 9, 2021 /Xenetic Biosciences, Inc. (NASDAQ:XBIO) ("Xenetic" or the "Company"), a biopharmaceutical company focused on advancing XCART™, a personalized CAR T platform technology engineered to target patient- and tumor-specific neoantigens, today announced the United States Patent and Trademark Office (USPTO) has issued Xenetic a Notice of Allowance for U.S. patent application number 16/983,491 entitled, "*Articles and Methods Directed to Personalized Therapy of Cancer*," covering the co-administration of XCART-derived CAR T cells together with a personalized vaccine designed to enhance the effectiveness of the CAR T therapy.

"We believe our XCART platform technology has the potential to offer cancer patients substantial benefits over the existing standard of care and currently approved CAR T therapies. This is the first patent allowance of many that we expect to receive that will protect our XCART technology platform. We have pending patent applications that we expect will result in additional allowed claims for this important technology, and we expect to file additional applications as we generate data during our development program," commented Jeffrey Eisenberg, Chief Executive Officer of Xenetic. "This notice of allowance is a noteworthy milestone for our XCART program and demonstrates our overall commitment to protecting the innovation of our significantly differentiated, proprietary approach to personalized CAR T therapy."

The XCART technology platform is a significantly differentiated, proprietary approach to personalized CAR T lymphoma therapy targeting tumor-specific neoantigens that target independently of CD19 or other surface antigens that are common to both normal and malignant B-cells. It was designed to utilize an established screening technique to identify polypeptide domains that selectively bind to the unique B-cell receptor (BCR) on the surface of an individual lymphoma patient's malignant B-cell clones. This BCR-selective targeting domain is engineered into the antigen-binding domain of a chimeric antigen receptor (CAR), creating the possibility of a CAR T treatment that should only recognize a given patient's malignant B-cell clones. XCART is currently in pre-clinical development for the treatment of Non-Hodgkin lymphoma and progressing toward IND-enabling studies.

This Notice of Allowance concludes the substantive examination of this patent application and will result in the issuance of a U.S. patent after administrative processes are completed.

The U.S. patent scheduled to issue from this application will expire in 2038.

About Xenetic Biosciences

Xenetic Biosciences, Inc. is a biopharmaceutical company focused on progressing XCART™, a personalized CAR T platform technology engineered to target patient-specific tumor neoantigens. The Company is advancing cell-based therapeutics targeting the unique B-cell receptor on the surface of an individual patient's malignant tumor cells for the treatment of B-cell lymphomas. XCART™ has the potential to fuel a robust pipeline of therapeutic assets targeting high-value oncology indications.

Additionally, Xenetic is leveraging PolyXen®, its proprietary drug delivery platform, to partner with biotechnology and pharmaceutical companies. PolyXen® has demonstrated its ability to improve the half-life and other pharmacological properties of next-generation biologic drugs. The Company receives royalty payments under an exclusive license arrangement in the field of blood coagulation disorders.

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 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," and other words of similar meaning, including, but not limited to, statements regarding: our belief that the XCART™ platform technology has the potential to offer cancer patients substantial benefits over the existing standard of care and currently approved CAR T therapies; our expectation that this first patent allowance will be one of many and will protect our XCART™ technology platform; our expectation that our pending patent applications will result in additional allowed claims for our XCART™ technology; our expectations regarding filing additional applications; anticipation that a U.S. patent will be issued to the Company after administrative processes are completed, and that such U.S. patent will expire in 2038; our plans to initially apply the XCART™ technology to advance cell-based therapeutics by targeting the unique B-cell receptor on the surface of an individual patient's malignant tumor cells for the treatment of B-cell lymphomas; our expectations that XCART™ has the potential to fuel a robust pipeline of therapeutic assets targeting high-value oncology indications; our plans to leverage PolyXen® by partnering with biotechnology and pharmaceutical companies; and our expectation regarding receipt of royalty payments under the exclusive license agreement with Takeda Pharmaceuticals Co. Ltd. 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 realize the anticipated potential of the XCART™ or PolyXen® technology; (2) the ability of

the Company to implement its business strategy; and (3) 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 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 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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SOURCE: Xenetic Biosciences, Inc.