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Xenetic Biosciences Provides Update on Patent Portfolio Development

- Substantial geographic expansion of patent portfolio for PolyXen™ platform technology since 2014 -

LEXINGTON, Mass.--(BUSINESS WIRE)-- 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, today provided an update to the progress of its patent portfolio development.

Since 2014, the Company has broadened its patent portfolio geographically, into key markets including areas of Europe, Asia and North America, including the United States. Current patents include the manufacturing and conjugation chemistry of Xenetic's PolyXen™ platform technology for creating proprietary, next-generation protein therapeutics by attaching polysialic acid ("PSA"), a biodegradable polymer found in living systems, to existing protein or peptide therapeutics, which can improve their pharmacological properties. Xenetic has also successfully obtained patent coverage for its proprietary polysialated protein therapeutics in the United States and globally.

M Scott Maguire, Xenetic's Chief Executive Officer, stated, "Our focus remains on delivering shareholder value by leveraging our PolyXen platform technology with additional collaborations like our deal with Shire PLC on their SHP656 program, and advancing our lead product in clinical development, XBIO-101, for the treatment of endometrial cancer and triple negative breast cancer. We have worked diligently to continue to build our robust patent estate which includes 200 issued patents in order to provide substantial coverage for potentially safe and well tolerated therapy options for patients across a variety of indications."

Xenetic's IP for its PolyXen technology platform provides protection on average into 2027 - 2029.

About PolyXen™

PolyXen™ is a patent-protected platform technology for creating proprietary, next-generation protein therapeutics by attaching polysialic acid ("PSA"), a biodegradable polymer found in living systems, to existing protein or peptide therapeutics, which can improve their pharmacological properties.

Attachment of PSA ("polysialylation") to a therapeutic increases its apparent size, which reduces systemic clearance rates, while shielding the protein from other degradation pathways. The PolyXen™ platform permits optimization of a target therapeutic's

pharmacological properties, by controlling the amount, size, and sites of attachment of the PSA polymers.

In clinical and preclinical settings, therapeutic proteins polysialylated with the PolyXen™ platform have been shown to have extended circulating half-life, improved thermodynamic stability and resistance to proteases, while retaining pharmacological activity. Numerous human clinical trials to date have shown no evidence of PSA- induced immunogenicity.

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. Xenetic's proprietary drug development platforms include PolyXen™, which enables next-generation biologic drugs by improving their half-life and other pharmacological properties. Xenetic's lead investigational product candidates include oncology therapeutic XBIO-101 (sodium cridanimod) for the treatment of progesterone resistant endometrial cancer (EC), and a polysialylated form of erythropoietin for the treatment of anemia in pre-dialysis patients with chronic kidney disease.

Xenetic is also working together with Shire plc (formerly Baxalta, Baxter Incorporated and Baxter Healthcare) to develop a novel series of polysialylated blood coagulation factors, including a next generation Factor VIII. This collaboration relies on Xenetic's PolyXen technology to conjugate polysialic acid (“PSA”) to therapeutic blood-clotting factors, with the goal of improving the pharmacokinetic profile and extending the active life of these biologic molecules. Shire is a significant stockholder of the Company, having invested $10 million in the Company during 2014. The agreement is an exclusive research, development and license agreement which grants Shire a worldwide, exclusive, royalty-bearing license to Xenetic's PSA patented and proprietary technology in combination with Shire's proprietary molecules designed for the treatment of blood and bleeding disorders. Under the agreement, Xenetic may receive regulatory and sales target payments for total potential milestone receipts of up to $100 million plus royalties on sales. Additionally, Xenetic has previously received strategic investments from OPKO Health (Nasdaq: OPK), Serum Institute of India Limited and Pharmsynthez.

Xenetic is also developing a broad pipeline of clinical candidates for next-generation biologics and novel oncology therapeutics in a number of orphan disease indications. For more information, please visit the Company's website at www.xeneticbio.com and connect on Twitter, LinkedIn, Facebook and Google+.

Forward-Looking Statements

This press release contains "forward-looking statements," as that term is defined under the Private Securities Litigation Reform Act of 1995 (PSLRA), which statements may 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 expected benefits of NGS cancer panels, the ability to accurately determine the heritable factors increasing the risk of cancer, permitting tailored treatment, screening and prevention of cancer in patients, as well as other non-historical statements about our expectations, beliefs or intentions regarding our business, technologies and products, financial condition, strategies or prospects. Many factors could cause our actual

activities or results to differ materially from the activities and results anticipated in forward-looking statements. These factors include those described in our filings with the Securities and Exchange Commission, as well as the risks inherent in funding, developing and obtaining regulatory approvals of new, commercially-viable and competitive products and treatments. 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 products 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 we do not undertake any obligation to update forward-looking statements. We intend that all forward-looking statements be subject to the safe-harbor provisions of the PSLRA.

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