UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **November 1, 2024**

Xenetic Biosciences, Inc.

(Exact name of registrant as specified in charter)

Nevada	**001-37937**	**45-2952962**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

945 Concord Street **Framingham, Massachusetts**	**01701**
(Address of principal executive offices)	(Zip Code)

(781) 778-7720
(Registrant's telephone number, including area code)

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.001 par value per share	XBIO	The Nasdaq Stock Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 1.01. Entry into a Material Definitive Agreement.

On November 1, 2024, Xenetic Biosciences, Inc. (the "Company") and The Scripps Research Institute ("Scripps Research") entered into a Second Amendment to Research Funding and Option Agreement (the "Amendment"), pursuant to which the Company amended that certain Research Funding and Option Agreement, dated March 17, 2023, by and between the Company and Scripps (the "Original Agreement"), in order to extend the term of the Original Agreement for an additional twelve (12) month period and to provide Scripps Research additional funding in an aggregate amount of up to approximately $400,000 to fund continuing research relating to advancing the pre-clinical development of the Company's DNase oncology platform technology. The research funding is payable by the Company to Scripps Research on a monthly basis in accordance with a negotiated budget, which provides for an initial payment of approximately $65,000 on the date of the Amendment and subsequent monthly payments of approximately $65,000 over a 5-month period. All other terms of the Original Agreement remain unchanged.

The foregoing summary of the Amendment is not complete and is qualified in its entirety by reference to the full text of the Amendment, which the Company intends to file with the Securities and Exchange Commission as an exhibit to its Annual Report on Form 10-K for the year ending December 31, 2024.

Item 7.01. Regulation FD Disclosure.

On November 7, 2024, the Company issued a press release announcing that it has entered into the Amendment, a copy of which is attached hereto as Exhibit 99.1.

The press release attached to this report as Exhibit 99.1 is furnished pursuant to this Item 7.01 and shall not be deemed filed in this or any other filing of the Company under the Securities Exchange Act of 1934, as amended, unless expressly incorporated by specific reference in any such filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press Release dated November 7, 2024.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

XENETIC BIOSCIENCES, INC.

By: /s/ James Parslow
Name: James Parslow
Title: Interim Chief Executive Officer and Chief Financial Officer

Date: November 7, 2024

Exhibit 99.1

Xenetic Biosciences, Inc. Extends Research and Development Collaboration with The Scripps Research Institute to Advance DNase Platform

Company is advancing DNase-based oncology program towards clinical proof-of-concept studies in multiple indications

FRAMINGHAM, MA – (November 7, 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 extended its previously announced Research Funding and Option Agreement (the "Agreement") with The Scripps Research Institute ("TSRI") to advance the development of the Company's program on the combination of systemic DNase and CAR T-cell therapies. Xenetic's systemic DNase I candidate is undergoing preclinical evaluation in combination with anti-CD19 CAR-T and anti-EGFR CAR-T cells in models of CD19-expressing hematological cancers and EGFR-expressing metastatic melanoma. Previous studies at TSRI showed that co-administration of DNase I with CAR T cells significantly reduces tumor burden, decreases the number of metastatic foci, and substantially prolongs survival compared to the CAR-T cell monotherapy groups. Degrading of NETs by DNase I increases the amount of tumor-infiltrating T and CAR-T cells and reduces the immunosuppressive effects of the tumor microenvironment (TME).

Collected preclinical data highlights the critical role of NETs in modulating CAR-T cell efficacy and we believe provides a compelling rationale for incorporating DNase I as an adjunctive treatment to improve therapeutic responses in patients undergoing CAR-T cell therapy.

Xenetic's DNase-based oncology platform is designed to target neutrophil extracellular traps (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 TME 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.

"Scripps has continued to be a valued partner of ours and we are pleased to extend our collaboration agreement to further explore the potential of our DNase-based oncology platform. We are grateful we are able to continue to leverage the knowledge and expertise of the team at Scripps to potentially expand and broaden the utility of our proprietary platform technology," commented James Parslow, Interim Chief Executive Officer and Chief Financial Officer of Xenetic.

Under the terms of the Scripps Research agreement, in addition to advancing Xenetic's existing intellectual property, Xenetic has an option to acquire an exclusive license to any new intellectual property arising from the DNase research program. Xenetic is executing on its plans to advance its DNase-based oncology program towards Phase 1 clinical development for the treatment of pancreatic carcinoma and other locally advanced or metastatic solid tumors.

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 at www.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", "confidence in", "potential", "making", and other words of similar meaning, including, but not limited to: all statements regarding the collaboration agreement with Scripps, including regarding us continuing to leverage the knowledge and expertise of the team at Scripps to potentially expand and broaden the utility of our proprietary platform technology; and expectations regarding our DNase-based oncology platform, including statements regarding: advancing DNase-based oncology program towards clinical proof-of-concept studies in multiple indications; focusing on advancing innovative immuno-oncology technologies addressing hard to treat oncology indications; advancing the development of the Company's program on the combination of systemic DNase and CAR T-cell therapies; our belief that preclinical data that highlights the critical role of NETs in modulating CAR-T cell efficacy provides a compelling rationale for incorporating DNase I as an adjunctive treatment to improve therapeutic responses in patients undergoing CAR-T cell therapy; plans to advance our DNase-based oncology program towards Phase 1 clinical development for the treatment of pancreatic carcinoma and other locally advanced or metastatic solid tumors; the DNase platform improving outcomes of existing treatments, including immunotherapies, by targeting neutrophil extracellular traps (NETs), which are involved in cancer progression; 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. All 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) unexpected costs, charges or expenses resulting from our manufacturing and collaboration agreements; (2) unexpected costs, charges or expenses resulting from the licensing of the DNase platform; (3) uncertainty of the expected financial performance of the Company following the licensing of the DNase platform; (4) failure to realize the anticipated potential of the DNase or PolyXen technologies; (5) the ability of the Company to obtain funding and implement its

business strategy; and (6) 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 conflicts in Ukraine and 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.

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