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

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934

(Amendment No.__)

Filed by the Registrant Filed by a Party other than the Registrant

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Check the appropriate box:

- o Preliminary Proxy Statement
- o Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- o Definitive Proxy Statement
- x Definitive Additional Materials
- " Soliciting Material Pursuant to § 240.14a-12

XENETIC BIOSCIENCES, INC.

(Name of Registrant as Specified In Its Charter)

N/A

(Name of Person(s) Filing Proxy Statement if Other Than the Registrant)

Payment of Filing Fee (Check the appropriate box)

- ý No fee required.
- o Fee paid previously with preliminary materials.
- o Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11.

Explanatory Note

On December 11, 2025, Xenetic Biosciences, Inc. (the "Company") issued the following press release, which contains information relating to the Company's 2025 Annual Meeting of Stockholders.



Xenetic Biosciences, Inc. Announces Adjournment of 2025 Annual Meeting

Adjourns 2025 Annual Meeting of Stockholders

Urges Stockholders Who Have Not Voted To Get Votes In

FRAMINGHAM, MA – (December 11, 2025) – Xenetic Biosciences, Inc. (NASDAQ: XBIO) ("Xenetic" or the "Company"), a biopharmaceutical company focused on advancing innovative immuno-oncology technologies addressing difficult to treat cancers, today announced that its 2025 Annual Meeting of Stockholders (the "Annual Meeting") was convened and adjourned without any business conducted due to lack of the required quorum.

A quorum is necessary to hold the Annual Meeting. There were fewer than a majority of the outstanding shares entitled to vote present, either in person or by proxy, at the Annual Meeting. The Annual Meeting therefore had no quorum and was adjourned to allow additional time to solicit additional proxies on behalf of the Company's board of directors. The Annual Meeting will reconvene at 10:00 a.m. Eastern Time on Thursday, January 8, 2026, and will continue to be held virtually.

Stockholders who have already submitted a proxy or voted do not need to vote again, as proxies and votes previously submitted in respect of the Annual Meeting will remain valid at the reconvened Annual Meeting unless properly revoked. The record date for determining stockholders eligible to vote at the reconvened Annual Meeting remains October 15, 2025.

Stockholders as of the October 15, 2025 record date who have not yet voted are encouraged to vote online at www.proxyvote.com or by telephone at 1-800-690-6903. Please vote by 11:59 p.m. Eastern Time on January 7, 2026.

If you hold your shares of the Company's common stock in an account at a brokerage firm, bank, dealer or other similar organization, you may be subject to an earlier voting deadline and you should carefully review any materials received from the organization holding those shares regarding how to vote to ensure your vote is counted.

A copy of the Company's definitive proxy statement for the Annual Meeting is available to stockholders on www.proxyvote.com and on the Company's website at www.xeneticbio.com.

Xenetic stockholders as of the close of business on the October 15, 2025 record date for the Annual Meeting, or their legal proxy holders, will be able to attend the reconvened Annual Meeting by visiting http://www.virtualshareholdermeeting.com/XBIO2025.

Stockholder Questions

If you have any questions or require any assistance in voting your shares, please call Okapi Partners LLC at 877-629-6355.

Important Information

This press release may be deemed to be solicitation material in respect of the Annual Meeting to be reconvened and held on Thursday, January 8, 2026. In connection with the Annual Meeting, the Company filed a definitive proxy statement with the Securities and Exchange Commission ("SEC") on October 31, 2025. BEFORE MAKING ANY VOTING DECISION, THE COMPANY URGES ITS STOCKHOLDERS TO READ THE PROXY STATEMENT AND ANY OTHER RELEVANT DOCUMENTS FILED WITH THE SEC BECAUSE THEY CONTAIN IMPORTANT INFORMATION ABOUT THE ANNUAL MEETING. The definitive proxy statement was sent or made available to stockholders entitled to vote at the Annual Meeting on or about October 31, 2025. No changes have been made to the proposals to be voted on by stockholders at the Annual Meeting. A copy of the definitive proxy statement and any other materials filed by the company with the SEC can be obtained free of charge at the SEC's website at www.sec.gov or the company's website at www.xeneticbio.com.

About Xenetic Biosciences

Xenetic Biosciences, Inc. is a biopharmaceutical company focused on advancing innovative immuno-oncology technologies addressing difficult to treat cancers. The Company's proprietary DNase technology 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", "continues", "warrants", and other words of similar meaning, including, but not limited to, all statements regarding our focus on advancing innovative immuno-oncology technologies addressing difficult to treat cancers, 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. 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) 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; (6) risks and uncertainties as to the outcome and timing of the strategic review process being conducted by the Board and a special independent committee thereof, including the possibility that the Board may decide not to undertake a strategic alternative following the evaluation process, the Company's inability to consummate any proposed strategic alternative resulting from the review due to, among other things, market, regulatory and other factors, the potential for disruption to our business resulting from the review process, and potential adverse effects on the Company's stock price from the announcement, suspension or consummation of the evaluation process and the results thereof, as well as risks and uncertainties related to the potential impacts of consummation of a strategic transaction on the Company's current business operations, anticipated business strategy and product development plans; 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, 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.

Contact:

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