Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2026

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number: 001-37937

XENETIC BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

Nevada	**45-2952962**
(State or other jurisdiction of incorporation or organization)	**(IRS Employer Identification No.)**

945 Concord Street
Framingham, Massachusetts 01701
(Address of principal executive offices and zip code)

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

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 (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days: Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files): Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		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. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act): Yes ☐ No ☒

As of May 8, 2026, the number of outstanding shares of the registrant's common stock was 2,291,056.

XENETIC BIOSCIENCES, INC.
FORM 10-Q
QUARTERLY PERIOD ENDED MARCH 31, 2026

PART I – FINANCIAL INFORMATION

ITEM 1 - FINANCIAL STATEMENTS

XENETIC BIOSCIENCES, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS

	March 31, 2026 (Unaudited)	December 31, 2025
ASSETS		
Current assets:		
Cash	$ 7,347,255	$ 7,883,632
Prepaid expenses and other	247,815	166,294
Total current assets	7,595,070	8,049,926
Other assets	313,921	313,921
Total assets	$ 7,908,991	$ 8,363,847
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 558,808	$ 258,109
Accrued expenses and other current liabilities	399,431	709,916
Total current liabilities	958,239	968,025
Total liabilities	958,239	968,025
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, 10,000,000 shares authorized		
Series B, $0.001 par value: 1,454,545 shares issued and outstanding as of March 31, 2026 and December 31, 2025	1,454	1,454
Common stock, $0.001 par value; 10,000,000 shares authorized as of March 31, 2026 and December 31, 2025; 2,293,757 shares issued as of March 31, 2026 and December 31, 2025; 2,291,056 shares outstanding as of March 31, 2026 and December 31, 2025	2,294	2,294
Additional paid in capital	212,306,163	212,294,851
Accumulated deficit	(200,331,713)	(199,875,331)
Accumulated other comprehensive income	253,734	253,734
Treasury stock	(5,281,180)	(5,281,180)
Total stockholders' equity	6,950,752	7,395,822
Total liabilities and stockholders' equity	$ 7,908,991	$ 8,363,847

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

XENETIC BIOSCIENCES, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

	Three Months Ended March 31,	
	2026	**2025**
Revenue:		
Royalty revenue	$ 806,923	$ 593,261
Total revenue	806,923	593,261
Operating costs and expenses:		
Research and development	(661,443)	(879,029)
General and administrative	(647,597)	(656,641)
Total operating costs and expenses	(1,309,040)	(1,535,670)
Loss from operations	(502,117)	(942,409)
Other (expense) income:		
Other (expense) income	(21)	78
Interest income, net	45,756	39,190
Total other income, net	45,735	39,268
Net loss	$ (456,382)	$ (903,141)
Basic and diluted net loss per share	$ (0.20)	$ (0.59)
Weighted-average shares of common stock outstanding, basic and diluted	2,291,056	1,542,139

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

XENETIC BIOSCIENCES, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited)

THREE MONTHS ENDED MARCH 31, 2026

	Preferred Stock		Common Stock						
	Number of Shares	Par Value ($0.001)	Number of Shares	Par Value ($0.001)	Additional Paid in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Treasury Stock	Total Stockholders' Equity
Balance as of January 1, 2026	1,454,545	$ 1,454	2,293,757	$ 2,294	$ 212,294,851	$ (199,875,331)	$ 253,734	$ (5,281,180)	$ 7,395,822
Share-based expense	–	–	–	–	11,312	–	–	–	11,312
Net loss	–	–	–	–	–	(456,382)	–	–	(456,382)
Balance as of March 31, 2026	1,454,545	$ 1,454	2,293,757	$ 2,294	$ 212,306,163	$ (200,331,713)	$ 253,734	$ (5,281,180)	$ 6,950,752

THREE MONTHS ENDED MARCH 31, 2025

	Preferred Stock		Common Stock						
	Number of Shares	Par Value ($0.001)	Number of Shares	Par Value ($0.001)	Additional Paid in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Treasury Stock	Total Stockholders' Equity
Balance as of January 1, 2025	1,804,394	$ 1,804	1,544,840	$ 1,545	$ 208,225,748	$ (197,194,471)	$ 253,734	$ (5,281,180)	$ 6,007,180
Share-based expense	–	–	–	–	19,251	–	–	–	19,251
Net loss	–	–	–	–	–	(903,141)	–	–	(903,141)
Balance as of March 31, 2025	1,804,394	$ 1,804	1,544,840	$ 1,545	$ 208,244,999	$ (198,097,612)	$ 253,734	$ (5,281,180)	$ 5,123,290

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

XENETIC BIOSCIENCES, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Three Months Ended March 31,	
	2026	**2025**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (456,382)	$ (903,141)
Adjustments to reconcile net loss to net cash used in operating activities:		
Share-based expense	11,312	19,251
Changes in operating assets and liabilities:		
Prepaid expenses and other	(81,521)	108,334
Accounts payable, accrued expenses and other liabilities	(9,786)	(226,336)
Net cash used in operating activities	(536,377)	(1,001,892)
Net change in cash	(536,377)	(1,001,892)
Cash at beginning of period	7,883,632	6,165,568
Cash at end of period	$ 7,347,255	$ 5,163,676
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid for interest	$ –	$ –

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

1. The Company

Background

Xenetic Biosciences, Inc. ("Xenetic" or the "Company"), incorporated in the state of Nevada and based in Framingham, Massachusetts, is a biopharmaceutical company focused on advancing innovative immune-oncology technologies addressing difficult to treat cancers. The Company's proprietary Deoxyribonuclease ("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.

As used in this Quarterly Report on Form 10-Q ("Quarterly Report"), unless otherwise indicated, all references herein to "Xenetic," the "Company," "we" or "us" refer to Xenetic Biosciences, Inc. and its wholly-owned subsidiaries.

The Company, directly or indirectly, through its wholly-owned subsidiaries, Hesperix S.A. ("Hesperix") and Xenetic Biosciences (U.K.) Limited ("Xenetic UK"), and the wholly-owned subsidiaries of Xenetic UK, Lipoxen Technologies Limited ("Lipoxen"), Xenetic Bioscience, Incorporated and SymbioTec, GmbH ("SymbioTec"), own various United States ("U.S.") federal trademark registrations and applications along with unregistered trademarks and service marks, including but not limited to XCART™, OncoHist™, PolyXen™, ErepoXen™, and ImuXen™, which may be used throughout this Quarterly Report. All other company and product names may be trademarks of the respective companies with which they are associated.

Going Concern and Management's Plan

Management evaluates whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern within one year after the date that the financial statements are issued. The Company has incurred substantial losses since its inception and expects to continue to incur operating losses in the near-term. The Company believes that its existing resources will be adequate to fund the Company's operations for a period of at least twelve months from the date of the issuance of these financial statements. In addition, the Company raised $4.0 million in an underwritten offering of common stock in October 2025. However, the Company anticipates it will need additional capital in the long-term to pursue its business initiatives. While the Company believes it will continue to have access to capital resources through possible public or private equity offerings, debt financings, corporate collaborations, related party funding, or other means to continue as a going concern, the terms, timing and extent of any future financing will depend upon several factors, including the achievement of progress in its product development programs, its ability to identify and enter into licensing or other strategic arrangements, its continued listing on the Nasdaq Stock Market ("Nasdaq"), and factors related to financial, economic, geo-political, industry and market conditions, many of which are beyond its control. The capital markets for the biotech industry can be highly volatile, which make the terms, timing and extent of any future financing uncertain.

Recent Developments

The Company and its board of directors (the "Board") have initiated a formal strategic review process with the assistance of outside financial and legal advisors. The Company is considering a wide range of alternatives to maximize shareholder value, including, but not limited to, the sale of all or part of the Company or its assets or a business combination, including a "reverse merger", share exchange or similarly structured transaction. An independent committee of the Board has engaged in discussions with third parties regarding potential transactions. Any such completed transaction could have a significant impact on the Company's stockholders, including if the transaction would result in the current investors of the counterparty holding a substantial majority of the Company's outstanding common stock following consummation of the potential transaction. Given the current stage of such discussions, at this time there is no way to quantify the potential impact of a transaction, if any. There is no deadline or definitive timetable set for the completion of the strategic alternatives process, and there can be no assurance any proposal will be made or accepted, any agreement will be executed, or any transaction will be consummated in connection with this review. In addition, if the Company does enter into definitive agreements with respect to a potential transaction, the Company expects that consummation of the potential transaction would be subject to a number of conditions, including approval by the Company's stockholders and Nasdaq, and other customary conditions, which would be out of the Company's control and may never be satisfied. The Company remains committed to advancing its DNase technology and does not intend to make further announcements regarding the review process unless and until the Board approves a specific transaction or otherwise determines that further disclosure is appropriate.

2. Risks and Uncertainties

Impact of Global Events and Conflicts on Operations

The short and long-term implications of geopolitical events and global conflicts, including those in Ukraine and the Middle East are difficult to predict at this time. The imposition of current and future sanctions and counter sanctions may have an adverse effect on the economic markets generally and could impact our business, financial condition, and results of operations.

3. Summary of Significant Accounting Policies

Preparation of Interim Financial Statements

The accompanying condensed consolidated interim financial statements were prepared by the Company pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC") and, in the opinion of management, include all normal and recurring adjustments necessary to present fairly the results of the interim periods shown. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles have been condensed or omitted pursuant to such SEC rules and regulations. Management believes that the disclosures made are adequate to make the information presented not misleading. The results for the interim periods are not necessarily indicative of results for the full year. The condensed consolidated financial statements contained herein should be read in conjunction with the consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2025 filed with the SEC on March 12, 2026, and amended on April 24, 2026.

Principles of Consolidation

The condensed consolidated financial statements of the Company include the accounts of Hesperix, Xenetic UK and Xenetic UK's wholly-owned subsidiaries: Lipoxen, Xenetic Bioscience, Incorporated, and SymbioTec. Certain of the Company's subsidiaries require guarantees of support from Xenetic. While all intercompany balances and transactions have been eliminated in consolidation, the Company has $0.2 million of cash collateralizing these guarantees.

Segment Information

The Company is required to disclose significant segment expenses that are regularly provided to the chief operating decision maker ("CODM"), a description of other segment items by reportable segment, and any additional measures of a segment's profit or loss used by the CODM when deciding how to allocate resources. The Company is principally engaged in pre-clinical research and development activities to advance its DNase technology. Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the CODM, who is the Company's Chief Executive Officer, in making decisions on how to allocate resources and assess performance. The Company views its operations and manages its business as a single operating segment. The Company's measure of segment profit or loss is net loss. The CODM manages and allocates to the operations of the Company on a total company basis. Managing and allocating resources on a consolidated basis enables the CODM to assess the overall level of resources available and how best to deploy these resources across functions, therapeutic areas and research and development projects that are in line with the Company's long-term company-wide strategic goals. Consistent with this decision-making process, the CODM uses consolidated financial information for purposes of evaluating performance, forecasting future period financial results, allocating resources and setting incentive targets. The following table is representative of the significant expense categories regularly provided to the CODM when managing the Company's single reporting segment. A reconciliation to the condensed consolidated net loss for the three months ended March 31, 2026 and 2025 is as follows:

	Three Months Ended March 31,	
	2026	**2025**
Revenue	$ 806,923	$ 593,261
Program expenses[(1)]	658,229	875,798
Non-program expenses[(2)]	511,055	422,515
Salaries and wages	128,444	218,106
Other segment items[(3)]	(34,423)	(20,017)
Net loss	$ (456,382)	$ (903,141)

(1) Includes external research and development.
(2) Includes information technology, legal, intellectual property and other general and administrative expenses.
(3) Includes stock-based compensation expense, interest income and other expense (income).

Basic and Diluted Net Loss per Share

The Company computes basic net loss per share by dividing net loss applicable to common stockholders by the weighted-average number of shares of the Company's common stock outstanding during the period. The Company computes diluted net loss per share after giving consideration to the dilutive effect of stock options that are outstanding during the period, except where such non-participating securities would be anti-dilutive.

For the three months ended March 31, 2026 and 2025, basic and diluted net loss per share are the same for each respective period due to the Company's net loss position. Potentially dilutive, non-participating securities have not been included in the calculations of diluted net loss per share, as their inclusion would be anti-dilutive.

4. Significant Strategic Collaborations

Takeda Pharmaceutical Co. Ltd. (together with its wholly-owned subsidiaries, "Takeda")

In October 2017, the Company granted to Takeda the right to grant a non-exclusive sublicense to certain patents related to the Company's PolyXen technology that were previously exclusively licensed to Takeda in connection with products related to the treatment of blood and bleeding disorders. Royalty payments of approximately $0.8 million and $0.6 million were recorded as revenue during the three months ended March 31, 2026 and 2025, respectively, and are based on single digit royalties on net sales of certain covered products. The Company's policy is to recognize royalty payments as revenue when they are reliably measurable, which is upon receipt of reports from Takeda. The Company receives these reports in the quarter subsequent to the actual sublicensee sales. At the time the revenue was received, there were no remaining performance obligations and all other revenue recognition criteria were met.

Catalent Pharma Solutions LLC ("Catalent")

On June 30, 2022, the Company entered into a Statement of Work (the "SOW") with Catalent to outline the general scope of work, timeline, and pricing pursuant to which Catalent will provide certain services to the Company to perform current Good Manufacturing Practices manufacturing of the Company's recombinant protein, human DNase I. The parties agreed to enter into a Master Services Agreement that will contain terms and conditions to govern the project contemplated by the SOW and that will supersede the addendum to the SOW containing Catalent's standard terms and conditions. The Company has paid Catalent approximately $3.0 million through March 31, 2026, of which $28,000 and $53,000 has been recognized as an advance payment and is included in prepaid expenses and other current assets as of March 31, 2026 and December 31, 2025, respectively, and approximately $0.1 million has been recognized as a liability and is included in accrued expenses and other current liabilities as of both March 31, 2026 and December 31, 2025. In addition, approximately $0.3 million has been recognized as long-term within other assets as of both March 31, 2026 and December 31, 2025.

Scripps Research Institute ("Scripps Research")

On March 17, 2023, the Company and Scripps Research entered into a Research Funding and Option Agreement (the "Agreement"), pursuant to which the Company has agreed to provide Scripps Research an aggregate of up to $0.9 million to fund research relating to advancing the pre-clinical development of the Company's DNase technology. Under the Agreement, the Company has the option to acquire a worldwide exclusive license to Scripps Research's rights in the Technology or Patent Rights (as defined in the Agreement), as well as a non-exclusive, royalty-free, non-transferrable license to make and use TSRI Technology (as defined in the Agreement) solely for the Company's internal research purposes during the performance of the research program contemplated by the Agreement. During the second quarter of 2024, the Company amended the Agreement to extend the term to October 31, 2024 with no additional funding required.

On November 1, 2024, the Company and Scripps Research entered into a Second Amendment to the Agreement (the "Second Amendment") extending the term of the 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. The research funding was payable by the Company to Scripps Research on a monthly basis in accordance with a negotiated budget, which provided for an initial payment of approximately $65,000 on the date of the Second Amendment and subsequent monthly payments of approximately $65,000 over a 5-month period. All other terms of the Agreement remain unchanged.

Effective May 1, 2025, the Company and Scripps Research entered into a Third Amendment to the Agreement (the "Third Amendment"), pursuant to which the Company expanded the services to be performed under the Agreement and provided Scripps Research additional funding in an aggregate amount of up to approximately $0.4 million to fund continuing research. The research funding was payable by the Company to Scripps Research on a monthly basis in accordance with a negotiated budget, which provided for an initial payment of approximately $70,000 on the date of the Third Amendment and subsequent monthly payments of approximately $70,000 over a 5-month period. All other terms of the Agreement remained unchanged.

Effective November 1, 2025, the Company and Scripps Research entered into a Fourth Amendment to the Agreement (the "Fourth Amendment"), pursuant to which the Company extended and expanded the services to be performed under the Agreement and provided Scripps Research with additional funding in an aggregate amount of up to approximately $0.3 million. The research funding was payable by the Company to Scripps Research on a monthly basis in accordance with a negotiated budget, which provided for an initial payment of approximately $85,000 on the effective date of the Fourth Amendment and subsequent monthly payments of approximately $85,000 over a 3-month period. All other terms of the Agreement remained unchanged.

Effective March 1, 2026, the Company and Scripps Research entered into a Fifth Amendment to the Agreement (the "Fifth Amendment"), pursuant to which the Company extended and expanded the services to be performed under the Agreement and agreed to provide Scripps Research additional funding in an aggregate amount of up to approximately $0.5 million. 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 $80,000 on the effective date of the Fifth Amendment and subsequent monthly payments of approximately $80,000 over a 5-month period. All other terms of the Agreement remain unchanged.

The Company paid Scripps Research approximately $2.0 million under the Agreement through March 31, 2026, of which approximately $0.1 million was included in accounts payable as of March 31, 2026 and $0.2 million was included in accrued expenses and other current liabilities as of December 31, 2025.

University of Virginia ("UVA")

On December 21, 2023, the Company entered into a Research Funding and Material Transfer Agreement with UVA (the "UVA Agreement") to advance the development of our systemic DNase program. Under the terms of the UVA Agreement, in addition to advancing our existing intellectual property, the Company has an option to acquire an exclusive license to any new intellectual property arising from the DNase research program. Allan Tsung, MD, a member of the Company's Scientific Advisory Board and Chair of the Department of Surgery at the UVA School of Medicine, will oversee the research conducted under the UVA Agreement. In November 2024, the Company and UVA entered into an amendment to extend the UVA Agreement through December 2025. UVA produced preclinical and translational data under the UVA Agreement and has investigated combinations of DNase I with immunotherapies in models of primary and metastatic colorectal cancer. The Company is currently in discussions with UVA concerning potential expansion of the scope of work under the UVA Agreement. The Company paid UVA approximately $0.6 million under the UVA Agreement through March 31, 2026, of which approximately $77,000 was recorded within accounts payable as of March 31, 2026 and approximately $31,000 was recorded within accrued expenses and other current liabilities as of December 31, 2025.

Other Agreements

The Company has also entered into various research, development, license and supply agreements with Serum Institute of India ("Serum Institute"), PJSC Pharmsynthez ("Pharmsynthez") and SynBio LLC ("SynBio"), a wholly owned subsidiary of Pharmsynthez. The Company and its collaborative partners continue to engage in research and development activities with no resultant commercial products through March 31, 2026. No amounts were recognized as revenue related to the Serum Institute, Pharmsynthez or SynBio agreements during the three months ended March 31, 2026 and 2025, respectively.

5. Fair Value Measurements

Accounting Standards Codification Topic 820, *Fair Value Measurement,* defines fair value as the price that would be received to sell an asset or be paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company applies the following fair value hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement. Level 1 inputs are unadjusted quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date. Level 2 utilizes quoted market prices in markets that are not active, broker or dealer quotations, or alternative pricing sources with reasonable levels of price transparency. Level 3 inputs are unobservable inputs for the asset or liability in which there is little, if any, market activity for the asset or liability at the measurement date. As of March 31, 2026 and December 31, 2025, the carrying amounts of the Company's financial instruments approximate fair value due to their short maturities. There were no financial instruments classified as Level 3 in the fair value hierarchy during the three months ended March 31, 2026 and 2025.

6. Stockholders' Equity

Warrants

The Company has warrants to purchase approximately 800 shares of the Company's common stock outstanding as of both March 31, 2026 and December 31, 2025. These warrants have an exercise price of $29.09 per share of common stock and expire on July 3, 2026. None of these warrants were exercised or forfeited during the three months ended March 31, 2026 and 2025.

7. Share-Based Expense

Total share-based expense related to stock options was approximately $11,000 and $19,000 during each of the three months ended March 31, 2026 and 2025, respectively.

Share-based expense is classified in the condensed consolidated statements of operations as follows:

	Three Months Ended March 31,	
	2026	**2025**
Research and development expenses	$ –	$ –
General and administrative expenses	11,312	19,251
	$ 11,312	$ 19,251

Employee Stock Options

No employee stock option awards to purchase shares of common stock were granted or exercised during the three months ended March 31, 2026 and 2025. During the three months ended March 31, 2026 and 2025, options to purchase 102 shares of common stock and 25,836 shares of common stock expired, respectively. The Company recognized a total of approximately $11,000 and $19,000 of share-based expense related to employee stock options during each of the three months ended March 31, 2026 and 2025.

Non-Employee Stock Options

There were no non-employee options outstanding as of both March 31, 2026 and December 31, 2025. There were no non-employee stock options granted or exercised during the three months ended March 31, 2026 and 2025. No non-employee stock option grants expired during the three months ended March 31, 2026 and 2025. The Company did not recognize any share-based expense related to non-employee stock options during the three months ended March 31, 2026 and 2025.

8. Income Taxes

During the three months ended March 31, 2026 and 2025, there was no provision for income taxes as the Company incurred losses during both periods. Deferred tax assets and liabilities reflect the net tax effect of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The Company records a valuation allowance against its deferred tax assets as the Company believes it is more likely than not the deferred tax assets will not be realized. The valuation allowance against deferred tax assets was approximately $39.9 million and $39.8 million as of March 31, 2026 and December 31, 2025, respectively.

As of March 31, 2026 and December 31, 2025, the Company did not record any unrecognized tax positions.

9. Related Party Transactions

The Company has entered into various research, development, license and supply agreements with PeriNess Ltd. (“PeriNess”), Serum Institute and Pharmsynthez, each a related party whose relationship has not materially changed from that disclosed in the Company’s Annual Report on Form 10-K for the year ended December 31, 2025 filed with the SEC on March 12, 2026, as amended on April 24, 2026. The Company has paid PeriNess approximately $0.3 million to date under this contract through March 31, 2026. As of March 31, 2026 and December 31, 2025, approximately $50,000 was recorded as an advanced payment and included in prepaid expenses and other current assets. In addition, approximately $9,000 and $8,000 was reflected in accounts payable on the March 31, 2026 and 2025 consolidated balance sheet, respectively. No amounts were incurred in connection with agreements with Serum Institute and Pharmsynthez during the three months ended March 31, 2026 and 2025.

During the first quarter of 2025, the Company entered into a Consulting Agreement with Dr. Dmitry Genkin, Chairman of our Board, to provide consulting services related to the Company’s DNase-based oncology program. This agreement was effective January 1, 2025 and the Company has paid Dr. Genkin approximately $0.5 million through March 31, 2026, of which approximately $30,000 was reflected within accounts payable as of both March 31, 2026 and December 31, 2025. Dr. Genkin does not receive any fees for his service as a member of the Board.

10. Subsequent Events

The Company performed a review of events subsequent to the balance sheet date through the date the financial statements were issued and determined that there were no such events requiring recognition or disclosure in the financial statements.

ITEM 2 – MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Section 27A of the Securities Act of 1933, as amended. All statements contained in this Quarterly Report other than statements of historical fact, including statements regarding our future results of operations and financial position, our business strategy and plans, future revenues, projected costs, prospects and our objectives for future results of operations and financial position, our business strategy and plans, future revenues, projected costs, prospects and our objectives for future operations, are forward-looking statements.

These forward-looking statements include, but are not limited to, statements concerning: anticipated effects of geopolitical events, including the conflicts in Ukraine and the Middle East and associated sanctions imposed by the United States ("U.S.") and other countries in response; our plans to develop our proposed drug candidates; the uncertainty surrounding government actions, as well as any changes to existing or newly proposed legislation that may affect the healthcare regulatory space; our expectations regarding the nature, timing and extent of collaboration arrangements; the expected results pursuant to collaboration arrangements, including the receipts of royalty and other future payments that may arise pursuant to collaboration arrangements; the outcome of our plans to obtain regulatory approval of our drug candidates; the outcome of our plans for the commercialization of our drug candidates; our plans to advance innovative immune-oncology technologies addressing difficult to treat oncology indications; expectations regarding our Deoxyribonuclease ("DNase") technology, such as regarding the DNase technology being in development for the treatment of solid tumors and being aimed at improving outcomes of existing treatments, including immunotherapies, by targeting neutrophil extracellular traps ("NETs"); our expectations to focus our efforts and resources on advancing the DNase technology into the clinic as an adjunctive therapy for pancreatic carcinoma and locally advanced or metastatic solid tumors; and our expectations regarding our PolyXen® platform and any partnerships with respect thereto.

In some cases, these statements may be identified by terminology such as "may," "will," "would," "could," "should," "expect," "plan," "anticipate," "believe," "estimate," "seek," "approximately," "intend," "predict," "potential," "projects," "upcoming", "opportunity", "target" or "continue," or the negative of such terms and other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements contained herein are reasonable, we cannot guarantee future results, the levels of activity, performance or achievements. These statements involve known and unknown risks and uncertainties that may cause our or our industry's results, levels of activity, performance or achievements to be materially different from those expressed or implied by forward-looking statements.

The Management's Discussion and Analysis of Financial Condition and Results of Operations (the "MD&A") should be read together with our condensed consolidated financial statements and related notes included elsewhere in this Quarterly Report. This Quarterly Report, including the MD&A, contains trend analysis and other forward-looking statements. Any statements in this Quarterly Report that are not statements of historical facts are forward-looking statements. These forward-looking statements made herein are based on our current expectations, involve a number of risks and uncertainties and should not be considered as guarantees of future performance.

Some factors that could cause actual results to differ materially include without limitation:

- risks and uncertainties as to the outcome and timing of the strategic review process being conducted by the Company's board of directors (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;
- uncertainty of the expected financial performance of the Company;
- failure to realize the anticipated potential of the DNase technology;
- our ability to implement our business strategy;
- our failure to maintain compliance with the continued listing requirements of the Nasdaq Stock Market ("Nasdaq");
- our need to raise additional working capital in the future for the purpose of further developing our pipeline and to continue as a going concern;
- our ability to finance our business;
- our ability to successfully execute, manage and integrate key acquisitions and mergers;
- product development and commercialization risks, including our ability to successfully develop the DNase technology;
- the impact of adverse safety outcomes and clinical trial results for our therapies;
- our ability to secure and maintain a manufacturer for our technologies;
- the impact of new therapies and new uses of existing therapies on the competitive environment;
- our ability to successfully commercialize our current and future drug candidates;
- our ability to achieve milestone and other payments associated with our current and future co-development collaborations and strategic arrangements;
- our reliance on consultants, advisors, vendors and business partners to conduct work on our behalf;
- the impact of new technologies on our drug candidates and our competition;
- changes in laws or regulations of governmental agencies;
- interruptions or cancellation of existing contracts;
- impact of competitive products and pricing;
- product demand and market acceptance and risks;
- the presence of competitors with greater financial resources;
- continued availability of supplies or materials used in manufacturing at the current prices;
- the ability of management to execute plans and motivate personnel in the execution of those plans;
- our ability to attract and retain key personnel;
- costs, diversion and other adverse effects of the actions of activist shareholders;
- adverse publicity related to our products or the Company itself;

- adverse claims relating to our intellectual property;
- the adoption of new, or changes in, accounting principles;
- the costs inherent with complying with statutes and regulations applicable to public reporting companies, such as the Sarbanes-Oxley Act of 2002;
- other new lines of business that the Company may enter in the future;
- general economic and business conditions, as well as inflationary trends and financial market instability or disruptions to the banking system due to bank failures;
- the impact of natural disasters or public health emergencies, such as the COVID-19 global pandemic, and geopolitical events, such as the conflicts in Ukraine and the Middle East, and related sanctions and other economic disruptions or concerns, on our financial condition and results of operations; and
- other factors set forth in the Risk Factors section of our Annual Report on Form 10-K and in subsequent filings with the Securities and Exchange Commission ("SEC").

These factors are not necessarily all of the important factors that could cause actual results to differ materially from those expressed in the forward-looking statements in this Quarterly Report. Other unknown or unpredictable factors also could have material adverse effects on our future results, including, but not limited to, those discussed in the section titled "Risk Factors." The forward-looking statements in this Quarterly Report are made only as of the date of this Quarterly Report, and we do not undertake any obligation to publicly update any forward-looking statements to reflect subsequent events or circumstances. We intend that all forward-looking statements be subject to the safe-harbor provisions of the Private Securities Litigation Reform Act of 1995.

BUSINESS OVERVIEW

We are a biopharmaceutical company focused on advancing innovative immuno-oncology technologies addressing difficult to treat cancers. Our proprietary DNase technology is designed to improve outcomes of existing treatments, including immunotherapies, by targeting NETs, which are involved in cancer progression. We are currently focused on advancing our systemic DNase program into the clinic as an adjunctive therapy for pancreatic carcinoma and locally advanced or metastatic solid tumors.

We incorporate our patented and proprietary technologies into drug candidates currently under development with biotechnology and pharmaceutical industry collaborators to create what we believe will be the next-generation biologic drugs with improved pharmacological properties over existing therapeutics. Our drug candidates have resulted from our research activities or that of our collaborators and are in the development stage. As a result, we continue to commit a significant amount of our resources to our research and development activities and anticipate continuing to do so for the near future. To date, none of our drug candidates have received regulatory marketing authorization or approval in the U.S. by the Food and Drug Administration nor in any other countries or territories by any applicable agencies. We are receiving ongoing royalties pursuant to a license of our legacy PolyXen technology to an industry partner. Although we hold a broad patent portfolio, the focus of our internal efforts during the three months ended March 31, 2026, was on the advancement of our DNase technology.

Recent Developments

We and our Board have initiated a formal strategic review process with the assistance of outside financial and legal advisors. We are considering a wide range of alternatives to maximize shareholder value, including, but not limited to, the sale of all or part of the Company or its assets or a business combination, including a "reverse merger". An independent committee of the Board has engaged in discussions with third parties regarding potential transactions. Any such completed transaction could have a significant impact on our stockholders, including if the transaction would result in the current investors of the counterparty holding a substantial majority of our outstanding common stock following consummation of the potential transaction. Given the current stage of such discussions, at this time there is no way to quantify the potential impact of a transaction, if any. There is no deadline or definitive timetable set for the completion of the strategic alternatives process, and there can be no assurance any proposal will be made or accepted, any agreement will be executed, or any transaction will be consummated in connection with this review. In addition, if we do enter into definitive agreements with respect to a potential transaction, we expect that consummation of the potential transaction would be subject to a number of conditions, including approval by our stockholders and Nasdaq, and other customary conditions, which would be out of our control and may never be satisfied. We remain committed to advancing our DNase technology and do not intend to make further announcements regarding the review process unless and until the Board approves a specific transaction or otherwise determines that further disclosure is appropriate.

Impact of the Global Events and Conflicts on Our Operations

The short and long-term implications of geopolitical events and global conflicts, including those in Ukraine and the Middle East are difficult to predict at this time. The imposition of current and future sanctions and counter sanctions may have an adverse effect on the economic markets generally and could impact our business, financial condition, and results of operations.

RESULTS OF OPERATIONS

Comparison of Quarter Ended March 31, 2026 and 2025

The comparison of our historical results of operations for the fiscal quarter ended March 31, 2026 to the fiscal quarter ended March 31, 2025 is as follows:

Description	Quarter Ended March 31, 2026	Quarter Ended March 31, 2025	Increase (Decrease)	Percentage Change
Revenue:				
Royalty revenue	$ 806,923	$ 593,261	$ 213,662	36.0
Operating costs and expenses:				
Research and development	(661,443)	(879,029)	(217,586)	(24.8)
General and administrative	(647,597)	(656,641)	(9,044)	(1.4)
Total operating costs and expenses	(1,309,040)	(1,535,670)	(226,630)	(14.8)
Loss from operations	(502,117)	(942,409)	(440,292)	(46.7)
Other (expense) income:				
Other (expense) income	(21)	78	(99)	(126.9)
Interest income, net	45,756	39,190	6,566	16.8
Net loss	$ (456,382)	$ (903,141)	$ (446,759)	(49.5)

Revenue

Revenue for the three months ended March 31, 2026 increased by approximately $0.2 million, or 36.0%, to approximately $0.8 million from approximately $0.6 million for the three months ended March 31, 2025. This increase represented an increase in royalty revenue related to our sublicense agreement with Takeda Pharmaceuticals Co. Ltd. as compared to the same period in 2025 primarily due to royalties recognized from certain countries during the first quarter of 2026 compared to the same period in 2025.

Research and Development Expenses

Research & development ("R&D") expenses for the three months ended March 31, 2026 decreased by approximately $0.2 million, or 24.8%, to approximately $0.7 million from approximately $0.9 million in the comparable quarter in 2025. The table below sets forth the R&D costs incurred by the Company by category of expense for the quarters ended March 31, 2026 and 2025:

	Quarter Ended	
Category of Expense	**March 31, 2026**	**March 31, 2025**
Outside services and contract research organizations	$ 658,229	$ 875,798
Other	3,214	3,231
Total research and development expense	$ 661,443	$ 879,029

The decrease in outside services and contract research organizations expense was primarily due to a decrease in pre-clinical and exploratory study costs both partially offset by an increase in manufacturing development efforts during the three months ended March 31, 2026 compared to the same period in 2025.

General and Administrative Expenses

General and administrative expenses for the three months ended March 31, 2026 decreased by approximately $9,000, or 1.4%, to approximately $648,000 from approximately $657,000 in the comparable quarter in 2025. The decrease was primarily due to a decrease in personnel costs and share-based expense related to our interim Chief Executive Officer substantially offset by an increase in legal expense related to our strategic review process during the first quarter of 2026 compared to the same period in 2025.

Other (Expense) Income

Other expense was approximately $21 for the three months ended March 31, 2026 compared to approximately $78 of other income for the comparable quarter in 2025. This increase in other expense was primarily related to unfavorable changes in foreign currency exchange rates during the three months ended March 31, 2026 as compared to the same period in 2025.

Interest Income, net

Interest income, net increased to approximately $46,000 during the three months ended March 31, 2026 as compared to approximately $39,000 for the same period in the prior year. This increase is primarily due to higher average invested funds during the three months ended March 31, 2026 as compared to the same period in 2025.

Liquidity and Capital Resources

We incurred a net loss of approximately $456,000 for the three months ended March 31, 2026. We had an accumulated deficit of approximately $200.3 million at March 31, 2026, as compared to an accumulated deficit of approximately $199.9 million at December 31, 2025. Working capital was approximately $6.6 million at March 31, 2026, and approximately $7.1 million at December 31, 2025, respectively. During the three months ended March 31, 2026, our working capital decreased by approximately $445,000 primarily due to our net loss for the three months ended March 31, 2026.

Our principal source of liquidity consists of cash. At March 31, 2026, we had approximately $7.3 million in cash and $1.0 million in current liabilities. At December 31, 2025, we had approximately $7.9 million in cash and $1.0 million in current liabilities. We have historically relied upon sales of our equity securities to fund our operations.

We evaluate whether there are conditions or events, considered in the aggregate that raise substantial doubt about our ability to continue as a going concern within one year after the date that the financial statements are issued. We have incurred substantial losses since our inception, and we expect to continue to incur operating losses in the near-term. We believe that our existing resources will be adequate to fund our operations for a period of at least twelve months from the date of the issuance of these financial statements. In addition, the Company raised net proceeds of approximately $4.0 million in an underwritten public offering of common stock in October 2025. However, we anticipate we will need additional capital in the long-term to pursue our business initiatives. While we believe that we will continue to have access to capital resources through possible public or private equity offerings, debt financings, corporate collaborations, related party funding, or other means to continue as a going concern, the terms, timing and extent of any future financing will depend upon several factors, including the achievement of progress in our product development programs, our ability to identify and enter into licensing or other strategic arrangements, our continued listing on Nasdaq, and factors related to financial, economic, geo-political, industry and market conditions, many of which are beyond our control. The capital markets for the biotech industry can be highly volatile, which make the terms, timing and extent of any future financing uncertain.

Cash Flows from Operating Activities

Cash flows used in operating activities for the three months ended March 31, 2026 totaled approximately $0.5 million, which was primarily due to our net loss for the period and, to a lesser extent, a decrease in accounts payable, accrued expenses and other liabilities. Cash flows used in operating activities for the three months ended March 31, 2025 totaled approximately $1.0 million, which was primarily due to our net loss for the period and, to a lesser extent, a decrease in accounts payable, accrued expenses and other liabilities due to payments made in accordance with severance arrangements.

Cash Flows from Investing Activities

There were no cash flows from investing activities for the three months ended March 31, 2026 and 2025.

Cash Flows from Financing Activities

There were no cash flows from financing activities for the three months ended March 31, 2026 and 2025.

Contractual Obligations and Commitments

As of March 31, 2026, there were no material changes in our contractual obligations and commitments from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2025, filed with the SEC on March 12, 2026, as amended on April 24, 2026.

Off Balance Sheet Arrangements

We do not have any off-balance sheet financing arrangements that have or are reasonably likely to have a current or future material effect on our financial condition, change in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures, or capital resources.

Recent Accounting Standards

See Note 3 in our Annual Report on Form 10-K for the year ended December 31, 2025, filed with the SEC on March 12, 2026, as amended on April 24, 2026, for a discussion of recent accounting standards.

Critical Accounting Estimates

Our condensed consolidated financial statements are prepared in accordance with U.S. generally accepted accounting principles. The preparation of our condensed consolidated financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities, revenue, costs and expenses. We base our estimates and assumptions on historical experience and other factors that we believe to be reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. The result of these evaluations forms the basis for making judgments about the carrying values of assets and liabilities and the reported amount of expenses that are not readily apparent from other sources. Because future events and their effects cannot be determined with certainty, actual results and outcomes may differ materially from our estimates, judgments and assumptions. There have been no material changes in our critical accounting estimates from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2025, filed with the SEC on March 12, 2026, as amended on April 24, 2026.

ITEM 3 – QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are not required to provide the information required by this Item because we are a “smaller reporting company” (as defined in Rule 12b-2 of the Exchange Act).

ITEM 4 – CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Interim Chief Executive Officer (Principal Executive Officer) and Chief Financial Officer (Principal Financial Officer), evaluated the effectiveness of our disclosure controls and procedures as defined in Rules 13a-15(e) or 15d-15(e) under the Exchange Act, as of the end of the period covered by this Quarterly Report.

Based on this evaluation, our management, including our Interim Chief Executive Officer and Chief Financial Officer, concluded that as of the end of the period covered by this Quarterly Report, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our Interim Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during the period covered by this Quarterly Report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

ITEM 1 – LEGAL PROCEEDINGS

We are not currently subject to any material legal proceedings, nor, to our knowledge, is any material legal proceeding threatened against us. From time to time, we may be a party to litigation and subject to claims incident to the ordinary course of business. Although the results of litigation and claims cannot be predicted with certainty, we currently believe that the final outcome of these ordinary course matters will not have a material adverse effect on our business. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

ITEM 1A – RISK FACTORS

There have been no material changes to the risk factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2025 filed with the SEC on March 12, 2026, as amended on April 24, 2026.

ITEM 2 – UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

None.

ITEM 3 – DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4 – MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5 – OTHER INFORMATION

During the quarter ended March 31, 2026, no director or officer adopted or terminated any Rule 10b5-1 trading arrangement or non-Rule 10b5-1 trading arrangement, as each term is defined in Item 408(a) of Regulation S-K.

ITEM 6 – EXHIBITS

The following exhibits are incorporated herein by reference or filed as part of this report.

EXHIBIT NUMBER	DESCRIPTION
31.1*	Certification of James Parslow, Interim Principal Executive Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of James Parslow, Principal Financial Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certifications of James Parslow, Interim Principal Executive Officer and Principal Financial Officer, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101*	The following financial statements from the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2026, formatted in inline XBRL, include: (i) Condensed Consolidated Balance Sheets, (ii) Condensed Consolidated Statements of Operations, (iii) Condensed Consolidated Statements of Stockholders' Equity, (iv) Condensed Consolidated Statements of Cash Flows and (v) the Notes to the Condensed Consolidated Financial Statements.
104*	Cover Page Interactive Data File (formatted in inline XBRL and included in Exhibit 101).

* Filed herewith.

** Exhibit 32.1 is being furnished and shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section, nor shall such exhibits be deemed to be incorporated by reference in any registration statement or other document filed under the Securities Act of 1933, as amended or the Securities Exchange Act of 1934, as amended, except as otherwise stated in such filing.

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, thereunto duly authorized.

XENETIC BIOSCIENCES, INC.

May 12, 2026

By: /s/ JAMES PARSLOW
James Parslow
Interim Chief Executive Officer and Chief Financial Officer
(Principal Executive Officer, Principal Financial Officer and Principal Accounting Officer)

EXHIBIT 31.1

I, James Parslow, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Xenetic Biosciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 12, 2026

By: /s/ James Parslow
James Parslow
Interim Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

I, James Parslow, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Xenetic Biosciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 12, 2026

By: /s/ James Parslow
James Parslow
Chief Financial Officer
(Principal Financial and Principal Accounting Officer)

EXHIBIT 32.1

CERTIFICATION

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. §1350), James Parslow, Interim Chief Executive Officer and Chief Financial Officer of Xenetic Biosciences, Inc. (the "Company"), hereby certifies that, to the best of his knowledge:

The Company's Quarterly Report on Form 10-Q for the period ended March 31, 2026, to which this Certification is attached as Exhibit 32.1 (the "Periodic Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

The information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 12, 2026

In Witness Whereof, the undersigned have set their hands hereto as of the 12th day of May 2026.

/s/ James Parslow
James Parslow
Interim Chief Executive Officer & Chief Financial Officer

This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Xenetic Biosciences, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.