

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

Form 10-K/A
Amendment No. 2

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.
For the fiscal year ended December 31, 2024

☐ TRANSITION REPORTS 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
(State or other jurisdiction of
incorporation or organization)

45-2952962
(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)

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

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

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act: Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act: Yes ☐ No ☒

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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive- based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant as of June 28, 2024, the last business day of the registrant's most recently completely second fiscal quarter, based upon the closing price of the registrant's common stock on the Nasdaq Capital Market on that date of \$4.07, was approximately \$5,301,818. For purposes of this computation, all officers, directors, and 10% beneficial owners of the registrant are deemed to be affiliates. Such determination should not be deemed to be an admission that such officers, directors or 10% beneficial owners are, in fact, affiliates of the registrant.

As of April 18, 2025, the number of outstanding shares of the registrant's common stock was 1,542,139.

DOCUMENTS INCORPORATED BY REFERENCE

None

EXPLANATORY NOTE

The Registrant is filing this Amendment No. 2 on Form 10-K/A (this “Amendment”) to amend its Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2024, originally filed with the Securities and Exchange Commission (“SEC”) on March 18, 2025, as amended by that Amendment No. 1 on Form 10-K/A filed with the SEC on April 29, 2025 (as amended, the “Original Filing”). We are filing this Amendment solely to add a new paragraph under the heading “Equity Award Grant Practices” in Item 11 of Part III and to include certain required XBRL tagging with respect thereto, which was inadvertently omitted in the Original Filing.

Part III, Item 11 of the Original Filing is being amended and restated in its entirety by this Amendment. In addition, pursuant to Rule 12b-15 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), Part IV, Item 15 of the Original Filing is being amended to contain the currently dated certifications pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, which are attached hereto as Exhibit 31.5 and Exhibit 31.6, respectively. Because no financial statements are included in this Amendment and this Amendment does not contain or amend any disclosure with respect to Items 307 and 308 of Regulation S-K, paragraphs 3, 4, and 5 of the certifications have been omitted.

Except as described above, this Amendment does not amend or otherwise update any other information in the Original Filing. Accordingly, this Amendment should be read in conjunction with the Original Filing. In addition, this Amendment does not reflect events that may have occurred subsequent to the date of the Original Filing.

As used in this Amendment, unless otherwise indicated, all references herein to “Xenetic,” the “Company,” “we” or “us” refer to Xenetic Biosciences, Inc. and its wholly owned subsidiaries.

XENETIC BIOSCIENCES, INC.
2024 ANNUAL REPORT ON FORM 10-K

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PART III

ITEM 11 – EXECUTIVE COMPENSATION

Summary Compensation Table – 2023 - 2024

The following table sets forth, for the years ended December 31, 2024 and 2023, the compensation information for James Parslow, our Interim Chief Executive Officer and Chief Financial Officer, Jeffrey Eisenberg, our former Chief Executive Officer and Dr. Curtis Lockshin, our former Chief Scientific Officer. We refer to Messrs. Parslow, Eisenberg, and Lockshin herein, collectively, as our “named executive officers.”

Name and Principal Position	Year	Salary (\$)	Option Awards ⁽¹⁾ (\$)	Non-Equity Incentive Plan Compensation (2) (\$)	All Other Compensation (\$)	Total (\$)
James Parslow, <i>Interim Chief Executive Officer & Chief Financial Officer</i>	2024	\$ 378,378	\$ 67,280	\$ –	\$ 35,510 ⁽³⁾	\$ 481,168
	2023	\$ 329,175	\$ 33,932	\$ 33,411	\$ 37,214	\$ 433,732
Jeffrey F. Eisenberg, <i>Former Chief Executive Officer</i>	2024	\$ 201,843	\$ –	\$ –	\$ 471,300 ⁽⁴⁾	\$ 673,143
	2023	\$ 404,250	\$ 67,863	\$ 58,617	\$ 32,764	\$ 563,494
Dr. Curtis Lockshin, <i>Former Chief Scientific Officer</i>	2024	\$ 166,992	\$ –	\$ –	\$ 387,091 ⁽⁵⁾	\$ 554,083
	2023	\$ 329,175	\$ 33,932	\$ 33,411	\$ 39,298	\$ 435,816

(1) The amounts represent the aggregate grant date fair value of stock options granted in the applicable fiscal year, computed in accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic 718, excluding the effect of estimated forfeitures. Assumptions used in the calculation of this amount are set forth in Note 10 to our audited consolidated financial statements included in Item 8 of the Original Filing. Mr. Parslow was granted options to purchase 20,000 shares during 2024.

(2) Represents incentive compensation payments earned.

(3) Includes \$21,710 for health and welfare plans and \$13,800 employer matching 401(k) contribution. Does not include a retention bonus earned in 2025 as further described within [“Employment Agreements with our Named Executive Officers”](#) below.

(4) Includes \$454,559 of severance related to salary and benefit continuation as further described within [“Employment Agreements with our Named Executive Officers”](#) below, \$8,090 for health and welfare plans and \$8,651 employer matching 401(k) contribution.

(5) Includes \$369,994 of severance related to salary and benefit continuation as further described within [“Employment Agreements with our Named Executive Officers”](#) below, \$10,625 for health and welfare plans and \$6,472 employer matching 401(k) contribution.

401(k) Plan

The Company provides all full-time employees, including our named executive officers, with the opportunity to participate in a defined contribution 401(k) plan. Our 401(k) plan is intended to qualify under Section 401 of the Internal Revenue Code so that employee pre-tax contributions and income earned on such contributions are not taxable to employees until withdrawn. Employees may elect to defer up to 80 percent of their eligible compensation (not to exceed the statutorily prescribed annual limit) in the form of elective deferral contributions to our 401(k) plan. Our 401(k) plan also has a “catch-up contribution” feature for employees aged 50 or older (including those who qualify as “highly compensated” employees) who can defer amounts over the statutory limit that applies to all other employees. The 401(k) plan matches 100% of employee contributions up to a maximum of 4% of employees’ salary. Matching contributions are fully vested at the time of contribution.

Outstanding Equity Awards at Fiscal Year-End – 2024

The following table sets forth certain information with respect to outstanding equity awards held by our named executive officers at December 31, 2024.

Name	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options, Exercisable	Number of Securities Underlying Unexercised Options, Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested	Market Value of Shares or Units of Stock That Have Not Vested (\$)
James Parslow	1,459 ⁽¹⁾	–	548.40	4/3/2027	–	–
	8,000 ⁽²⁾	–	13.10	12/4/2029	–	–
	5,000 ⁽³⁾	–	26.00	3/18/2031	–	–
	4,583 ⁽⁴⁾	417 ⁽⁴⁾	11.20	3/24/2032	–	–
	3,333 ⁽⁵⁾	6,667 ⁽⁵⁾	3.88	12/11/2033	–	–
	5,000 ⁽⁶⁾	15,000 ⁽⁶⁾	3.99	6/18/2034	–	–
Jeffrey F. Eisenberg	1,042 ⁽⁷⁾	–	253.20	5/16/2025	–	–
	23,000 ⁽⁸⁾	–	13.10	5/16/2025	–	–
	10,000 ⁽⁹⁾	–	26.00	5/16/2025	–	–
	10,000 ⁽¹⁰⁾	–	11.20	5/16/2025	–	–
	20,000 ⁽¹¹⁾	–	3.88	5/16/2025	–	–
Curtis Lockshin	127 ⁽¹²⁾	–	550.80	9/6/2025	–	–

(1) Vested one-third upon the first anniversary of the grant date, one-third upon the second anniversary of the grant date and one-third upon the third anniversary of the grant date.

(2) Vested one-third upon the first anniversary of the grant date, one-third upon the second anniversary of the grant date and one-third upon the third anniversary of the grant date.

(3) Vested one-third upon the first anniversary of the grant date and the remaining two-thirds over eight equal quarterly installments commencing June 18, 2022 and ending on March 18, 2024.

(4) Vests one-third upon the first anniversary of the grant date and the remaining two-thirds over eight equal quarterly installments commencing June 24, 2023 and ending on March 24, 2025.

(5) Vests one-third upon the first anniversary of the grant date and the remaining two-thirds over eight equal quarterly installments commencing March 11, 2025 and ending on December 11, 2026.

(6) Vests one-fourth upon grant date, one-fourth on the first anniversary of the grant date, one-fourth upon the second anniversary of the grant date and one-fourth upon the third anniversary of the grant date.

(7) Vested one-third upon the first anniversary of the grant date, one-third upon the second anniversary of the grant date and one-third upon the third anniversary of the grant date.

(8) Vested one-third upon the first anniversary of the grant date, one-third upon the second anniversary of the grant date and one-third upon the third anniversary of the grant date.

(9) Vested one-third upon the first anniversary of the grant date and the remaining two-thirds over eight equal quarterly installments commencing June 18, 2022 and ending on March 18, 2024.

(10) Fully vested upon termination of employment.

(11) Fully vested upon termination of employment.

(12) Vested one-third upon the first anniversary of the grant date, one-third upon the second anniversary of the grant date and one-third upon the third anniversary of the grant date.

Pay Versus Performance Disclosure

The following tables and related disclosures provide information about (i) the “total compensation” of our CEO, and our other named executive officers (the “Other NEOs” or the “Non-CEO NEOs”) as presented in the Summary Compensation Table within this proxy statement, (ii) the “compensation actually paid” to our CEO and our Other NEOs, as calculated pursuant to the SEC’s pay-versus-performance rules, (iii) certain financial performance measures, and (iv) the relationship of the “compensation actually paid” to those financial performance measures.

This disclosure has been prepared in accordance with Item 402(v) of Regulation S-K under the Securities Exchange Act of 1934, as amended, and does not necessarily reflect value actually realized by the executives or how our compensation committee evaluates compensation decisions in light of company or individual performance.

Year	Summary Compensation Table Total for CEO ⁽¹⁾ ($\text{\$}$)	Compensation Actually Paid to CEO ⁽¹⁾⁽²⁾⁽³⁾ ($\text{\$}$)	Summary Compensation Table Total for Former CEO ⁽¹⁾ ($\text{\$}$)	Compensation Actually Paid to Former CEO ⁽¹⁾⁽²⁾⁽³⁾ ($\text{\$}$)	Value of Initial Fixed \$100 Investment Based on Total Shareholder Return ⁽⁴⁾ ($\text{\$}$)	Net Loss ($\text{\$}$)
2024	\$ 481,168	\$ 469,659	\$ 673,144	\$ 622,644	\$ 30.93	\$ (3,960,275)
2023	\$ —	—	\$ 563,494	\$ 560,385	\$ 16.91	\$ (4,134,578)
2022	\$ —	—	\$ 632,827	\$ 425,619	\$ 13.98	\$ (6,552,353)

Year	Average Summary Compensation Table for Non-CEO NEOs ⁽¹⁾ ($\text{\$}$)	Average Compensation Actually Paid to Non-CEO NEOs ⁽¹⁾⁽²⁾⁽³⁾ ($\text{\$}$)	Value of Initial Fixed \$100 Investment Based on Total Shareholder Return ⁽⁴⁾ ($\text{\$}$)	Net Loss ($\text{\$}$)
2024	\$ 554,083	\$ 521,224	\$ 30.93	\$ (3,960,275)
2023	\$ 434,774	\$ 433,219	\$ 16.91	\$ (4,134,578)
2022	\$ 472,180	\$ 377,162	\$ 13.98	\$ (6,552,353)

(1) Effective May 16, 2024, James Parslow was appointed Interim CEO. Prior to that time, Jeffrey Eisenberg was the CEO for 2024, 2023 and 2022. The Non-CEO NEOs for whom average compensation is presented in this table for 2024 is Dr. Curtis Lockshin. The Non-CEO NEOs for whom average compensation is presented in this table for 2023 and 2022 are James Parslow and Dr. Curtis Lockshin.

(2) The amounts shown as Compensation Actually Paid have been calculated in accordance with Item 402(v) of Regulation S-K and do not reflect compensation actually realized or received by the Company’s NEOs. These amounts reflect total compensation as set forth in the Summary Compensation Table for each year, adjusted as described in footnote 3 below.

(3) Compensation Actually Paid reflects the exclusions and inclusions for the CEO and the Non-CEO NEOs set forth below. Amounts excluded, which are set forth in the table below in the “Minus Stock and Option Awards from Summ. Comp. Table” columns below, represent the Stock Awards and Option Awards reported in the Stock Awards and Option Awards columns of the Summary Compensation Table for each applicable year. Amounts added back to determine Compensation Actually Paid are made up of the following components as applicable: (i) the fair value as of the end of the fiscal year of outstanding and unvested equity awards granted in that year; (ii) the change in fair value during the year of equity awards granted in prior years that remained outstanding and unvested at the end of the year; (iii) the fair value as of the vesting date of equity awards that were granted and vested in that year, if any and (iv) the change in fair value during the year through the vesting date of equity awards granted in prior years that vested during that year. The fair value at the end of the prior year of awards granted in any prior year that failed to meet applicable vesting conditions during the covered year are subtracted in 2024. There were no such awards that failed to meet applicable vesting conditions for the CEOs or the Non-CEO NEOs in 2022 or 2023. Equity values are calculated in accordance with ASC Topic 718.

Year	Summary Comp. Table Total for CEO	Minus Stock and Option Awards from Summ. Comp. Table	Plus Year-End Equity Value of Unvested Awards Granted During Year	Plus Change in Value of Unvested Awards Granted in Prior Years	Plus Change in Value of Unvested Awards Granted in Prior Years	Plus Change in Value of Prior Years' Awards Vested During Year	Comp. Actually Paid to CEO
2024	\$ 481,168	\$ 67,280	\$ 49,007	\$ (1,622)	\$ 16,193	\$ (7,807)	\$ 469,659

Year	Summary Comp. Table Total for Former CEO	Minus Stock and Option Awards from Summ. Comp. Table	Plus Year-End Equity Value of Unvested Awards Granted During Year	Plus Change in Value of Unvested Awards Granted in Prior Years	Plus Change in Value of Prior Years' Awards Vested During Year	Comp. Actually Paid to Former CEO
2024	\$ 673,144	\$ —	\$ —	\$ (64,967)	\$ 14,467	\$ 622,644
2023	\$ 563,494	\$ 67,863	\$ 59,661	\$ 1,103	\$ 3,990	\$ 560,385
2022	\$ 632,827	\$ 98,882	\$ 20,922	\$ (37,387)	\$ (91,861)	\$ 425,619

Year	Avg. Summary Comp. Table Total for Other NEOs	Minus Avg. Stock and Option Awards from Summ. Comp. Table	Plus Avg. Year- End Equity Value of Unvested Awards Granted During Year	Plus Avg. Change in Value of Unvested Awards Granted in Prior Years	Plus Avg. Change in Value of Prior Year's Awards Vested During Year	Average Comp. Actually Paid to Other NEOs
2024	\$ 554,083	\$ —	\$ —	\$ (33,544)	\$ 685	\$ 521,224
2023	\$ 434,774	\$ 33,932	\$ 29,830	\$ 552	\$ 1,995	\$ 433,219
2022	\$ 472,180	\$ 49,441	\$ 10,461	\$ (18,693)	\$ (37,345)	\$ 377,162

For the equity values included in the above tables, the valuation assumptions used to calculate fair values of stock options were materially different from those disclosed at the time of the grant of the stock options. The assumptions used in determining fair value of the stock options that vested during 2022, 2023 and 2024, or that were outstanding as of December 31, 2022, December 31, 2023 or December 31, 2024, as applicable, are as follows:

	Options Vested During Year or Outstanding on December 31 of:		
	2024	2023	2022
Expected Volatility	74.42% - 112.22%	105.80% - 121.52%	123.60% - 135.86%
Risk-Free Interest Rate	3.45% - 5.41%	3.54% - 4.80%	2.15% - 4.05%
Expected Dividend Yield	0%	0%	0%
Expected Term (in years)	0.5 - 5.46	3.63 - 5.82	3.5 - 5.12

(4) Total Shareholder Return illustrates the value, as of the last day of the indicated fiscal year of an investment of \$100 in Xenetic common stock on December 31, 2021.

Description of Relationship Between NEO Compensation Actually Paid and Company Total Shareholder Return (“TSR”) and Net Loss

The Compensation Actually Paid to our CEO and the average of Compensation Actually Paid to our Non-CEO NEOs increased in 2024, which corresponded to the increase in the Company’s TSR and decrease in Net Loss in 2024. The Compensation Actually Paid for both our former CEO and Non-CEO NEOs in 2024 increased primarily due to severance commitments incurred in 2024. The CEO and Non-CEO NEOs Non-Equity Incentive Plan Compensation is determined based on our strategic, financial and operating performance objectives that have been established by the Compensation Committee. While not directly tied to stock price performance and/or net loss, these performance objectives have been established as core drivers of TSR.

Employment Agreements with our Named Executive Officers

Employment Agreement with Mr. Parslow

We entered into an employment agreement with Mr. Parslow effective as of April 3, 2017 (the “Parslow Employment Agreement”). The Parslow Employment Agreement does not provide for a specified term of employment and Mr. Parslow’s employment will be on an at-will basis. Mr. Parslow received an initial annual base salary of \$265,000 and is eligible to earn an annual cash incentive bonus, which is set at a target aggregate bonus amount of 35% of Mr. Parslow’s base salary, upon achievement of certain individual and/or Company performance goals set by the Compensation Committee. Mr. Parslow is also eligible to participate in the Company’s employee benefit, welfare and other plans, as may be maintained by the Company from time to time, on a basis no less favorable than those provided to other similarly-situated executives of the Company. Mr. Parslow is also subject to certain customary confidentiality, non-solicitation and non-competition provisions.

If Mr. Parslow’s employment is terminated by the Company without “cause” (as defined in the Parslow Employment Agreement) or Mr. Parslow resigns for “good reason” (as defined in the Parslow Employment Agreement), he will be entitled to receive (i) one year of his then current base salary, paid over time in accordance with the Company’s payroll practices then in effect and (ii) payment of premiums for continued health benefits under COBRA for up to one year.

On May 16, 2024, the Board appointed Mr. Parslow to the position of Interim Chief Executive Officer, in addition to his role as the Company’s Chief Financial Officer. In connection with the foregoing, on June 18, 2024, the Company and Mr. Parslow entered into an amendment (the “Parslow Employment Amendment”) to the Parslow Employment Agreement, to provide for, effective as of May 16, 2024: (i) certain changes to Mr. Parslow’s title and responsibilities; (ii) an increase in Mr. Parslow’s base salary to \$400,000; (iii) a \$100,000 cash retention bonus if Mr. Parslow remains employed with the Company for a ten month period; and (iv) a stock option grant to Mr. Parslow to purchase 20,000 shares of common stock of the Company with an exercise price equal to the fair market value of the Company’s common stock on the effective date of the Parslow Employment Amendment. Such option grant shall be issued pursuant to the terms and conditions of the Company’s Amended and Restated Equity Incentive Plan, and shall vest one-fourth on the grant date and one-fourth upon the first, second and third anniversaries of the grant date, provided Mr. Parslow remains employed with the Company on the applicable vesting date. All other terms of the Parslow Employment Agreement remain in full force and effect.

Employment Agreement with Mr. Eisenberg

The Company entered into an employment agreement with Mr. Eisenberg effective as of December 1, 2016, which agreement was amended and restated on October 26, 2017 (as amended, the “Amended Agreement”) pursuant to which Mr. Eisenberg was previously employed as the Chief Executive Officer of the Company. The Amended Agreement was for an initial term of one year, and automatically renewed for successive one year periods unless either party gave notice to the other no later than 90 days prior to the expiration of the then-applicable term; provided, however, that we could terminate the Amended Agreement at any time. Mr. Eisenberg’s annual salary under the Amended Agreement was \$300,000, and was subject to annual review and upward adjustment only by the Compensation Committee of the Board. Mr. Eisenberg was eligible to receive a bonus equal to 50% of his annual salary based on the attainment of certain individual and/or Company goals established by the Board or a committee thereto, and if Mr. Eisenberg’s employment was terminated by us without “Cause” (as defined in the Amended Agreement) or if he resigned for “Good Reason” (as defined in the Amended Agreement), he would be entitled to receive (i) within thirty days following the date of termination, an amount equal to one times his then current base salary, (ii) a pro-rated annual bonus and (iii) payment of premiums for continued health benefits under COBRA for up to twelve months. Mr. Eisenberg was also eligible to participate in our employee benefit, welfare and other plans, as may be maintained by us from time to time, on a basis no less favorable than those provided to other similarly situated executives of the Company. Mr. Eisenberg was also subject to certain customary confidentiality, non-solicitation and non-competition provisions.

The Company entered into a confidential separation agreement and release with Mr. Eisenberg on June 19, 2024 in connection with his separation of employment from the Company that was effective as of May 16, 2024 pursuant to which Mr. Eisenberg became eligible to receive the payments and benefits described above in connection with a termination without “Cause” and also received full vesting of all outstanding unvested options to purchase shares of common stock of the Company.

Employment Agreement with Dr. Lockshin

The Company previously entered into an employment agreement with Dr. Lockshin effective as of January 1, 2017 (the “Lockshin Employment Agreement”) pursuant to which Dr. Lockshin was previously employed as the Chief Scientific Officer of the Company. The Lockshin Employment Agreement did not provide for a specified term of employment and Dr. Lockshin’s employment was on an at-will basis. Dr. Lockshin received an initial annual base salary of \$250,000 and was eligible to earn an annual performance-based cash incentive bonus, which was set at a target aggregate bonus amount of 35% of Dr. Lockshin’s base salary, upon achievement of certain individual and/or Company performance goals established by the Board or a committee thereto. Dr. Lockshin was also eligible to participate in the Company’s employee benefit, welfare and other plans, as may be maintained by the Company from time to time, on a basis no less favorable than those provided to other similarly-situated executives of the Company. Dr. Lockshin was also subject to certain customary confidentiality, non-solicitation and non-competition provisions.

If Dr. Lockshin’s employment was terminated by the Company without “Cause” (as defined in the Lockshin Employment Agreement) or Dr. Lockshin terminated his employment for “Good Reason” (as defined in the Lockshin Employment Agreement) and Dr. Lockshin executed and did not revoke a general release of claims against the Company, then he would be entitled to receive (i) one year of his then current base salary, paid over time in accordance with the Company’s payroll practices then in effect and (ii) payment of premiums for continued health benefits under COBRA for up to twelve months.

The Company entered into a confidential separation agreement and release with Dr. Lockshin on June 19, 2024 in connection with his separation of employment from the Company that was effective as of May 16, 2024 pursuant to which Dr. Lockshin became eligible to receive the payments and benefits described above in connection with a termination without “Cause”.

Potential Payments Upon Termination or Change of Control

Our named executive officers may be entitled to payments upon termination or change of control. The details of such payments are included in the description of their employment agreements above.

Equity Award Grant Practices

We do not currently have any policies or procedures that require us to grant equity awards, including stock options, to executive officers on specified dates. Equity awards to executive officers are granted at such times as determined in the discretion of the Compensation Committee. Neither the Compensation Committee nor the Board of Directors takes material nonpublic information into account when determining the timing and terms of equity awards, including stock options, and we do not time the disclosure of material nonpublic information for the purpose of affecting the value of executive compensation. During 2024, we did not grant any equity awards to any of our NEOs within four business days prior to or one business day after making any filing on Forms 10-K, 10-Q or 8-K (other than a current report on Form 8-K disclosing a new material option award grant under Item 5.02(e) of that form) that disclosed any material non-public information.

Director Compensation

Each of our non-employee, independent directors is currently entitled to receive an annual retainer of \$43,000, payable in equal quarterly installments, an option to acquire 2,500 shares of the Company's common stock upon initial appointment to the Board, and an additional option to acquire 2,500 shares each year thereafter on the date of the Company's annual meeting of stockholders. All members of our Board are reimbursed for their usual and customary expenses incurred in connection with their service on the Board, including out-of-pocket expenses, transportation, and airfare on the Company's business.

Director Compensation Table

As an employee director during fiscal year 2024, Mr. Eisenberg did not receive any compensation for his Board service during the last completed year. The following table sets forth information for the year ended December 31, 2024 regarding the compensation awarded to, earned by or paid to our non-employee directors:

Name	Fees Earned or Paid in Cash (\$)	Stock Awards (\$)	Option Awards ⁽¹⁾⁽²⁾ (\$)	All Other Compensation (\$)	Total (\$)
Dr. Grigory Borisenko	43,000	—	8,721	—	51,721
Firdaus Jal Dastoor	43,000	—	8,721	—	51,721
Dr. Dmitry Genkin ⁽³⁾	—	—	—	—	—
Dr. Roger Kornberg	43,000	—	8,721	—	51,721
Mr. Moshe Mizrahy ⁽³⁾	—	—	—	—	—
Dr. Alexey Vinogradov	43,000	—	8,721	—	51,721

(1) The amounts represent the aggregate grant date fair value of stock options granted during 2024, computed in accordance with FASB ASC Topic 718. For a discussion of the assumptions and methodology used to calculate the value of our stock options, see Note 10 to our audited financial statements included in Item 8 of the Original Filing.

(2) The table below shows the aggregate number of option awards outstanding for each of our non-employee directors as of December 31, 2024:

Name	Option Awards (#)
Dr. Grigory Borisenko	7,500
Firdaus Jal Dastoor	15,796
Dr. Dmitry Genkin	—
Dr. Roger Kornberg	15,626
Mr. Moshe Mizrahy	2,500
Dr. Alexey Vinogradov	15,000

(3) The Board determined that Dr. Genkin and Mr. Mizrahy are not independent directors, and as such, neither were eligible for compensation during fiscal year 2024.

See "[Certain Related Person Transactions](#)" in the Original Filing for compensation arrangements involving specific members of the Board.

PART IV

ITEM 15 – EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

- (a) The following financial statements, schedules and exhibits are filed as part of this report:

Consolidated Financial Statements: The consolidated financial statements and report of independent registered public accounting firm required by this item are included in Part II, Item 8 of the Original Filing;

Financial Statement Schedules: All schedules were omitted because they are not applicable or not required, or because the required information is shown in the consolidated financial statements or in the notes thereto.

- (b) **Exhibits:** The exhibits required to be filed by Item 15 are set forth in, and filed with or incorporated by reference in, the “Exhibit Index” of the Original Filing. The attached list of exhibits in the “[Exhibit Index](#)” sets forth the additional exhibits required to be filed with this Amendment and is incorporated herein by reference in response to this item.

EXHIBIT INDEX

Exhibit No.	Exhibit Index	Form	Filing Date	Exhibit Number	Filed Herewith
31.5	Certification of Principal Executive Officer, as required by Rule 13a-14(a) and Rule 15d-14(a)				X
31.6	Certification of Principal Financial Officer, as required by Rule 13a-14(a) and Rule 15d-14(a)				X
101.INS	Inline XBRL Instance Document				X
101.SCH	Inline XBRL Taxonomy Extension Schema Document				X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.				X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.				X
104	Cover Page Interactive Data File (embedded within the inline document and included in Exhibit 101)				X

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

Date: May 13, 2025

By:

/s/ JAMES PARSLow

James Parslow
Interim Chief Executive Officer

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO EXCHANGE ACT RULES 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, James Parslow, certify that:

1. I have reviewed this Amendment No. 2 to the annual report on Form 10-K of Xenetic Biosciences, Inc.; and
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.

Dated: May 13, 2025

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

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO EXCHANGE ACT RULES 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, James Parslow, certify that:

1. I have reviewed this Amendment No. 2 to the annual report on Form 10-K of Xenetic Biosciences, Inc.; and
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.

Dated: May 13, 2025

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