

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

Form 10-K/A
Amendment No. 1

(Mark One)
 ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.
For the fiscal year ended December 31, 2018
 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.)

40 Speen Street, Suite 102
Framingham, Massachusetts 01701
(Address of principal executive offices and zip code)
781-778-7720
(Registrant's telephone number, including area code)

Title of Each Class
Common Stock, \$0.001 par value per share

Name of Each Exchange
on Which Registered
The NASDAQ Stock Market LLC

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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K:

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. (Check one):

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input 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 is a shell company (as defined in Exchange Act Rule 12b-2):

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant as of June 29, 2018, the last business day of the registrant's most recently completed second fiscal quarter, based upon the closing price of the registrant's common stock on the NASDAQ Capital Market on that date of \$4.08, was approximately \$16,464,779. 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 26, 2019, the number of outstanding shares of the registrant's common stock was 10,443,889.

DOCUMENTS INCORPORATED BY REFERENCE
None.

EXPLANATORY NOTE

The Registrant is filing this Amendment No. 1 on Form 10-K/A (this “Amendment”) to amend its Annual Report on Form 10-K for the fiscal year ended December 31, 2018 originally filed with the Securities and Exchange Commission (“SEC”) on March 29, 2019 (the “Original Filing”) to include the information required by Items 10 through 14 of Part III of Form 10-K. This information was previously omitted from the Original Filing in reliance on General Instruction G(3) to Form 10-K, which permits the information in the above-referenced items to be incorporated in the Form 10-K by reference from our definitive proxy statement if such statement is filed no later than 120 days after our fiscal year-end. We are filing this Amendment to include Part III information in our Form 10-K because our definitive proxy statement will be filed later this year.

Part III of the Original Filing (Items 10 through 14) 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 31.3 and Exhibit 31.4, 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.

TABLE OF CONTENTS

PART III

Item 10	Directors, Executive Officers and Corporate Governance	4
Item 11	Executive Compensation	8
Item 12	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	12
Item 13	Certain Relationships and Related Transactions, and Director Independence	14
Item 14	Principal Accounting Fees and Services	17

PART IV

Item 15	Exhibits and Financial Statement Schedules	18
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PART III

ITEM 10 – DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Directors and Executive Officers

Set forth below is the name, age, position and brief biographies of each of our executive officers and directors as of April 26, 2019.

Name	Age	Position
Jeffrey Eisenberg	53	Chief Executive Officer and Director
Dr. Curtis Lockshin	58	Chief Scientific Officer
James Parslow	54	Chief Financial Officer and Corporate Secretary
Dr. James E. Callaway	62	Director (1), (2), (3)
Firdaus Jal Dastoor, FCS	66	Director (1), (2)
Dr. Dmitry Genkin	50	Director
Roman Knyazev	38	Director
Dr. Roger Kornberg	72	Director (3)
Adam Logal	41	Director (1), (2), (3)

- (1) Member of the Audit Committee
- (2) Member of the Compensation Committee
- (3) Member of the Nominating and Corporate Governance Committee

Jeffrey F. Eisenberg was appointed our Chief Executive Officer on October 26, 2017, after serving as Chief Operating Officer since December 2, 2016, and has served as a member of our Board of Directors (“Board”) since July 2016. Mr. Eisenberg previously worked at Noven Pharmaceuticals, Inc. (“Noven”), a subsidiary of Hisamitsu Pharmaceutical, Inc., where he held various positions of increasing responsibility, most recently serving from 2009-2016 as Noven’s president, chief executive officer and as a member of its board of directors. Mr. Eisenberg obtained his J.D. at Columbia University Law School and a B.S. in Economics from the Wharton School, University of Pennsylvania. We believe Mr. Eisenberg’s significant life science executive experience and leadership experience in the areas of R&D, operations, manufacturing/quality, business development, strategic partnering, product development, commercialization, and human resources provides him with the appropriate set of skills to serve as a member of our Board.

Dr. Curtis A. Lockshin initially joined us on a part-time basis in March 2014 as our Vice President of Research & Operations and was appointed our Chief Scientific Officer effective January 1, 2017. Dr. Lockshin has held several management positions at development and commercial stage biotechnology companies, with experience including discovery, preclinical and clinical development, as well as commercial manufacturing. Since May 2013, he has held the position of president and chief executive officer of Guardum Pharmaceuticals LLC (“Guardum”), a wholly owned subsidiary of PJSC Pharmsynthez, our controlling stockholder, a position which he continues to hold in addition to his position with us. Dr. Lockshin does not receive a salary for these services but did receive medical benefits and was covered under Guardum’s health plan through July 31, 2018. In addition, Dr. Lockshin has served as an officer or consultant of several biotechnology companies on a part-time basis, including as an officer of a series of related companies following multiple mergers beginning as chief executive officer and director of SciVac Therapeutics, Inc. and its subsidiary SciVac, Ltd., from September 2014 until July 2016. After SciVac Therapeutics, Inc.’s merger with VBI Vaccines, Inc. in July 2016, Dr. Lockshin served as chief technical officer of the merged company until December 2016. Dr. Lockshin is currently serving as a member of the board of directors of Phio Pharmaceuticals Corporation, a publicly traded clinical-stage RNAi company, a position he has held since April 2013. Dr. Lockshin has an S.B. in Life Sciences and a Ph.D. in Biological Chemistry from the Massachusetts Institute of Technology. Since April 2004, Dr. Lockshin has also served as a member of the board of directors of the Ruth K. Broad Biomedical Research Foundation, a Duke University Support Corporation that supports basic research related to Alzheimer’s disease and neurodegeneration via intramural, extramural and international grants.

James Parslow was appointed our Chief Financial Officer on April 3, 2017. Mr. Parslow most recently served as Chief Financial Officer, Treasurer and Secretary of World Energy Solutions, Inc., a publicly-traded business-to-business e-commerce company brokering energy and environmental commodities, from 2006 until its acquisition by EnerNOC, Inc. in 2015. Since 2015, he has served as an independent consultant providing interim chief financial officer services to multiple emerging technology companies. Mr. Parslow is a Certified Public Accountant with 30 years of experience serving private and public companies in the biotech, alternative energy, online auction, and high-tech manufacturing industries. He holds an A.B. in Economics and Accounting from the College of the Holy Cross and an M.B.A. with a concentration in Finance from Bentley University.

James E. Callaway was appointed to the Board on August 14, 2017. Dr. Callaway has over 30 years of experience in the execution of product development operations for biotherapeutics and currently serves as CEO of KalGene, a privately-held preclinical company focused on delivery of a proprietary development candidate to alter the course of Alzheimer's Disease. Dr. Callaway is a seasoned CEO within the venture-backed biotech community and over the course of his career he has built and operated several companies, transforming each from research companies to clinical stage operating entities. Since 2016, he has also served as a Corporate Strategy Consultant at Callaway Innovations. From 2012 until 2016, Dr. Callaway was President and Chief Executive Officer of ArmaGen, Inc. and from 2008 until 2012, served as President and CEO of CEBIX, Inc. Prior to these efforts, Dr. Callaway held multiple senior leadership positions at Elan Pharmaceuticals, including simultaneously acting as Head of Development and overseeing the complex partnership with Wyeth Pharmaceuticals in the Alzheimer's disease immunotherapy program. He has developed antibodies for a wide-range of therapeutic applications over the past two decades, including treatments of multiple sclerosis (Tysabri®: pharmaceutical development), Alzheimer's disease (bapineuzumab: Program Executive), and blood-brain barrier transport, and has worked with the United States Food and Drug Administration on multiple orphan drug development programs. We believe Dr. Callaway's significant life sciences executive, leadership and strategic experience in the area of biotherapeutics provides him with the appropriate set of skills to serve as a member of our Board.

Firdaus Jal Dastoor, FCS, was initially appointed as a member of our Board in January 2014 pursuant to terms of the agreement of our acquisition of Xenetic U.K. He has been employed by the Cyrus Poonawalla Group, a conglomerate in India with interests in horse racing and breeding, biotech, engineering and hotels, in business development strategies and operational roles since October 1981. Mr. Dastoor is currently a Group Director in charge of Finance and Corporate Affairs and Company Secretary of the Serum Institute of India Private Limited at the Cyrus Poonawalla Group, one of our significant stockholders. He is a Fellow Member of The Institute of Company Secretaries of India since 1990. Mr. Dastoor is on the board of several private companies operating in the fields of engineering products, life sciences and biotech, international trade, financial services and quality standards certifications. Mr. Dastoor received a B.A. in Commerce from the University of Poona. We believe Mr. Dastoor's knowledge of investments in the life sciences and biotechnology industries, and his finance and business development background provide him with the appropriate set of skills to serve as a member of our Board.

Dmitry Genkin was appointed to the Board on August 14, 2017. Dr. Genkin currently serves on the Company's Scientific Advisory Board and previously served on the Company's Board of Directors from 2004-2016. He has the Russian equivalent of an MD in Internal Therapy and studied drug delivery under Professor Gregory Gregoriadis at The School of Pharmacy, University of London in 1992, as well as the Department of Clinical Pharmacology at Karolinska Hospital, Stockholm from 1992 until 1993. Since 2005, Dr. Genkin has served as Executive Chairman of PJSC Pharmsynthez, a public company and Xenetic's majority stockholder. Prior to that time, Dr. Genkin headed a number of Russia's largest pharmaceutical companies including Pharmavit, which had 27% of the Russian pharmaceutical market. In 1998, he was awarded the silver medal by the Russian Natural Science Academy. We believe Dr. Genkin's significant life sciences, biotechnology and international background provide him with the appropriate set of skills to serve as a member of our Board.

Roman Knyazev has served as a member of our Board since April 2014. Mr. Knyazev has served in various positions at Rusnano Moscow since 2009, most recently as its Investment Director. He also serves on the boards of directors of Nanolek, PETAR, PJSC Pharmsynthez, and SynBio LLC. Mr. Knyazev is a Fellow of the Kauffman Fellows Program. We believe Mr. Knyazev's experience investing in clinical stage biotechnology companies provides him with the appropriate set of skills to serve as a member of our Board.

Dr. Roger Kornberg has served as a member of our Board since February 2016. Dr. Kornberg is a member of the U.S. National Academy of Sciences and the Winzer Professor of Medicine in the Department of Structural Biology at Stanford University. He earned his B.S. in chemistry from Harvard University in 1967 and his Ph.D. in chemical physics from Stanford in 1972. He became a postdoctoral fellow at the Laboratory of Molecular Biology in Cambridge, England and then an assistant professor of biological chemistry at Harvard Medical School in 1976, before moving to his present position as professor of structural biology at Stanford Medical School in 1978. In 2006, Dr. Kornberg was awarded the Nobel Prize in Chemistry in recognition for his studies of the molecular basis of Eukaryotic Transcription, the process by which DNA is copied to RNA. Dr. Kornberg is also the recipient of several awards, including the 2001 Welch Prize, the highest award granted in the field of chemistry in the United States, and the 2002 Leopold Mayer Prize, the highest award granted in the field of biomedical sciences from the French Academy of Sciences. We believe Dr. Kornberg's prior experience serving on the boards of directors of large organizations as well as his scientific background provides him with the appropriate set of skills to serve as a member of our Board.

Adam Logal was appointed to the Board in August 2017. Mr. Logal has over 16 years of experience in the biopharmaceuticals industry. Since April 2014, Mr. Logal has served as Senior Vice President, Chief Financial Officer, Chief Accounting Officer and Treasurer of OPKO Health, Inc. and from March 2007 until April 2014 served as OPKO's Vice President of Finance, Chief Accounting Officer and Treasurer. Mr. Logal served as a director of VBI Vaccines, Inc., a publicly-traded company, from May 2015 through October 2018 and served as its Audit Committee Chairman. Prior to joining OPKO, Mr. Logal served in various financial management roles at Nabi Biopharmaceuticals, a commercial stage biopharmaceutical company. Mr. Logal is a strategic finance executive with extensive experience in SEC compliance and reporting, domestic and international finance, strategic planning, cash flow management, budgeting, taxation, treasury and business development. We believe Mr. Logal's extensive financial experience with public companies in the life sciences industry provides him with appropriate set of skills to serve as a member of our Board.

There are no family relationships among any of our directors and executive officers and, to the best of our knowledge, none of our directors or executive officers has, during the past ten years, been involved in any legal proceedings which are required to be disclosed pursuant to the rules and regulations of the SEC.

Board Role in Risk Oversight

Our management is principally responsible for defining the various risks facing the Company, formulating risk management policies and procedures, and managing our risk exposures on a day-to-day basis. The Board's principal responsibility in this area is to ensure that sufficient resources, with appropriate technical and managerial skills, are provided throughout the Company to identify, assess and facilitate processes and practices to address material risk and to monitor our risk management processes by informing itself concerning our material risks and evaluating whether management has reasonable controls in place to address the material risks. The involvement of the Board in reviewing our business strategy is an integral aspect of the Board's assessment of management's tolerance for risk and its determination of what constitutes an appropriate level of risk for the Company.

Our Board of Directors

Currently, the Board consists of seven (7) members: Jeffrey F. Eisenberg, Dr. James E. Callaway, Firdaus Jal Dastoor, Dr. Dmitry Genkin, Roman Knyazev, Dr. Roger Kornberg, and Adam Logal. Prior to August 2017, we combined the positions of Chief Executive Officer and Board Chair. As of August 2017, we separated the roles of Chief Executive Officer and Board Chair in recognition of the differences between the two roles. The Board of Directors is currently chaired by independent director, Adam Logal, and our Chief Executive Officer, Jeffrey Eisenberg, is our only employee-director. The Chief Executive Officer is responsible for setting the strategic direction for the Company and the day to day leadership and performance of the Company, while the Board Chair is responsible for leading the Board in the execution of its fiduciary duties. The Board Chair presides over meetings of the full Board. While we recognize that different board leadership structures may be appropriate for companies in different situations, we believe our current leadership structure is the optimal structure for the Company at this time. Directors shall hold office for a one-year term or until their successors have been duly elected and qualified. Vacancies on the Board resulting from death, resignation, disqualification, removal, or other causes can be filled by the affirmative vote of a majority of the directors then in office. Any director so elected, shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been duly elected and qualified.

Committees of the Board

The Board has three standing committees: an Audit Committee, a Compensation Committee, and a Nominating and Corporate Governance Committee. The Board also has two special committees: an Expense Management and Financing Oversight Committee and a Strategic Alternatives Committee. The Expense Management and Financing Oversight Committee was formed in October 2017. The Strategic Alternatives Committee was formed in March 2018. The Company has adopted charters to govern the conduct, authority and responsibilities of each of the Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee.

Audit Committee

The Audit Committee of the Board of Directors was established by the Board in accordance with Section 3(a)(58)(A) of the Exchange Act, to oversee the Company's corporate accounting and financial reporting processes and audits of its financial statements. For this purpose, the Audit Committee performs several functions. The Audit Committee evaluates the performance of and assesses the qualifications of the independent auditors; determines and approves the engagement of the independent auditors; determines whether to retain or terminate the existing independent auditors or to appoint and engage new independent auditors; reviews and approves the retention of the independent auditors to perform any proposed permissible non-audit services; monitors the rotation of partners of the independent auditors on the Company's audit engagement team as required by law; reviews and approves or rejects transactions between the Company and any related persons; confers with management and the independent auditors regarding the effectiveness of internal control over financial reporting; establishes procedures, as required under applicable law, for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters and the confidential and anonymous submission by employees of concerns regarding questionable accounting or auditing matters; and meets to review the Company's annual audited financial statements and quarterly financial statements with management and the independent auditor, including a review of the Company's disclosures under the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of the Company's Annual Report to Stockholders on Form 10-K.

For the fiscal year 2018, the Audit Committee was composed of three directors: Mr. Dastoor, Dr. Callaway, and Mr. Logal (chair). The Audit Committee met five times during fiscal year 2018. The Board has adopted a written Audit Committee charter that is available to stockholders on the Company's website at <http://ir.xeneticbio.com/>.

The Board of Directors reviews the NASDAQ listing standards definition of independence for Audit Committee members on an annual basis and has determined that all current members of our Audit Committee are independent (as independence is currently defined in Rule 5605(c)(2)(A)(i) and (ii) of the NASDAQ listing standards).

The Board of Directors has also determined that Mr. Logal qualifies as an "audit committee financial expert," as defined in applicable SEC rules. The Board made a qualitative assessment of Mr. Logal's level of knowledge and experience based on a number of factors, including his formal education and experience as a chief financial officer.

Director Nominations

No material changes have been made to the procedures by which stockholders may recommend nominees to our Board.

Code of Business Conduct and Ethics

We have adopted the Xenetic Biosciences, Inc. Code of Business Conduct and Ethics that applies to all of our employees, officers and directors, including our principal executive officer, principal financial officer and principal accounting officer. The Code of Business Conduct and Ethics is available on our website, www.xeneticbio.com, under "Investors" at "Corporate Governance." If we make any substantive amendments to the Code of Business Conduct and Ethics or grant any waiver from a provision of the Code of Business Conduct and Ethics to any executive officer or director, we intend to promptly disclose the nature of the amendment or waiver on our website, to the extent required by the applicable rules and exchange requirements.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our directors and executive officers, and persons who own more than ten percent of a registered class of our equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of our ordinary shares and other equity securities. Such persons are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file.

To our knowledge, based solely on a review of the copies of such reports furnished to us and written representations that no other reports were required, during the fiscal year ended December 31, 2018, we believe that all Section 16(a) filing requirements applicable to our executive officers, directors and greater than 10% beneficial owners were complied with, except that one report, covering an aggregate of one transaction, was filed late by Dr. Dmitry Genkin.

ITEM 11 – EXECUTIVE COMPENSATION

Summary Compensation Table

The following table sets forth, for the years ended December 31, 2018 and 2017, the compensation information for Jeffrey Eisenberg, our Chief Executive Officer, Dr. Curtis Lockshin, our Chief Scientific Officer, and James Parslow, our Chief Financial Officer. We refer to Messrs. Eisenberg, Lockshin, and Parslow herein, collectively, as our “named executive officers.”

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$)	Option Awards ⁽¹⁾ (\$)	Non-Equity Incentive Plan Compensation (\$)	All Other Compensation (\$)	Total (\$)
Jeffrey F. Eisenberg, <i>Chief Executive Officer</i>	2018	\$ 300,000	\$ –	\$ –	\$ –	\$ –	\$ 18,333 ⁽²⁾	\$ 318,333
	2017	\$ 300,000 ⁽³⁾	\$ –	\$ 105,720	\$ 375,389	\$ –	\$ 34,381	\$ 815,490
James Parslow, <i>Chief Financial Officer</i>	2018	\$ 265,000	\$ –	\$ –	\$ –	\$ –	\$ 22,595 ⁽⁴⁾	\$ 287,595
	2017	\$ 198,750 ⁽⁵⁾	\$ –	\$ –	\$ 667,216	\$ –	\$ 24,830	\$ 890,796
Dr. Curtis Lockshin, <i>Chief Scientific Officer</i>	2018	\$ 250,000	\$ –	\$ –	\$ –	\$ –	\$ 9,584 ⁽⁶⁾	\$ 259,584
	2017	\$ 250,000 ⁽⁷⁾	\$ –	\$ –	\$ 625,316	\$ –	\$ 2,523	\$ 877,839

⁽¹⁾The amounts represent the aggregate grant date fair value of stock options granted in the applicable fiscal year, computed in accordance with FASB 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. Eisenberg, Mr. Parslow, and Dr. Lockshin were granted options to purchase 250,000 shares, 175,000 shares and 175,000 shares of common stock, respectively, during 2017. In addition, Mr. Eisenberg was granted 50,000 restricted stock units in 2017.

⁽²⁾ Includes \$18,333 for health and welfare plans.

⁽³⁾Mr. Eisenberg was appointed our Chief Operating Officer in December 2016 and Chief Executive Officer in October 2017. Mr. Eisenberg served as a director of the Company from July 2016 through November 2016. As an employee, Mr. Eisenberg no longer receives compensation for serving as a member of our Board.

⁽⁴⁾ Includes \$22,595 for health and welfare plans.

⁽⁵⁾ Mr. Parslow was appointed our Chief Financial Officer in April 2017.

⁽⁶⁾ Includes \$9,584 for health and welfare plans.

⁽⁷⁾ Dr. Lockshin was appointed our Chief Scientific Officer in January 2017.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth certain information with respect to outstanding equity awards held by our named executive officers at December 31, 2018.

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 (\$)
Jeffrey F. Eisenberg	154,900 ⁽¹⁾	75,100 ⁽¹⁾	3.40	12/2/2026	–	–
	41,667 ⁽²⁾	208,333 ⁽²⁾	2.11	10/26/2027	–	–
	–	–	–	–	33,333 ⁽³⁾	\$ 70,480
James Parslow	58,333 ⁽⁴⁾	116,667 ⁽⁴⁾	4.57	4/3/2027	–	–
Curtis Lockshin	14,546 ⁽⁵⁾	–	4.59	12/31/2024	–	–
	15,152 ⁽⁶⁾	–	4.59	9/6/2025	–	–
	58,333 ⁽⁷⁾	116,667 ⁽⁷⁾	4.30	1/1/2027	–	–

- (1) 4,700 shares vested 100% on the date of grant. Remainder vests one-third upon the first anniversary of the grant date, one-third of the remaining amount upon the second anniversary of the grant date and one-third of the remaining amount on the third anniversary of the grant date.
- (2) 125,000 of the options granted vest 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. 100,000 of the options granted vest upon the achievement of key clinical milestones for XBIO-101 and 25,000 of the options granted vest upon the achievement of key development milestones related to PSA.
- (3) References restricted stock units (“RSUs”) granted on October 26, 2017. Each RSU represents the right to receive one share of the Company’s common stock upon settlement, as defined. The RSUs vest 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.
- (4) Vests 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.
- (5) Vested one-third upon March 3, 2015, one-third upon March 15, 2016 and one-third upon March 15, 2017.
- (6) 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.
- (7) Vests 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.

Employment Agreements with our Named Executive Officers

Employment Agreement with Mr. Eisenberg

We entered into an employment agreement with Mr. Eisenberg effective as of December 1, 2016 for him to serve as Chief Operating Officer (the “Original Agreement”). The Original 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 Original Agreement at any time. Mr. Eisenberg’s annual salary under the Original Agreement was \$300,000, and was subject to annual review and upward adjustment only by the Compensation Committee of the Board. Mr. Eisenberg was also eligible to receive a bonus equal to 35% of his annual salary based on the attainment of certain individual and/or Company goals established by the Board or a committee thereto. 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.

Under the Original Agreement, if Mr. Eisenberg's employment was terminated by us without "Cause" (as defined in the Original Agreement) or if he resigned for "Good Reason" (as defined in the Original Agreement), he was entitled to receive (i) six months of his then current base salary, paid over time in accordance with our payroll practices then in effect if he had been employed by us for six months or less, (ii) 12 months of his then current base salary, paid over time in accordance with our payroll practices then in effect if he had been employed by us for more than six months, (iii) a pro-rated annual bonus and (iv) payment of premiums for continued health benefits under COBRA for up to six months.

On October 26, 2017, the Company amended and restated the Original Agreement in order to employ Mr. Eisenberg as the Chief Executive Officer of the Company, effective as of the same date (the "Amended Agreement"). The terms of the Amended Agreement were substantially similar to the terms of the Original Agreement, except that Mr. Eisenberg is now 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 is terminated by us without "Cause" (as defined in the Amended Agreement) or if he resigns for "Good Reason" (as defined in the Amended Agreement), he will 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.

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 will receive an initial annual base salary of \$265,000 and is eligible to earn an annual cash incentive bonus, which is initially 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), after six months of employment but before his first anniversary with the Company, he will be entitled to receive (i) six months 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 six months. 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), after his first anniversary with the Company, 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.

Employment Agreement with Dr. Lockshin

We entered into an employment agreement with Dr. Lockshin effective as of January 1, 2017 (the "Lockshin Employment Agreement"). The Lockshin Employment Agreement does not provide for a specified term of employment and Dr. Lockshin's employment will be on an at-will basis. Dr. Lockshin will receive an initial annual base salary of \$250,000 and is eligible to earn an annual performance-based cash incentive bonus, which is initially 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 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. Dr. Lockshin is also subject to certain customary confidentiality, non-solicitation and non-competition provisions.

If Dr. Lockshin's employment is terminated by the Company without "Cause" (as defined in the Lockshin Employment Agreement) or Dr. Lockshin terminates his employment for "Good Reason" (as defined in the Lockshin Employment Agreement) and Dr. Lockshin executes and does not revoke a general release of claims against the Company, then 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 twelve months.

Potential Payments Upon Termination or Change of Control

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

Director Compensation

Each of our non-employee, independent directors is currently entitled to receive an annual retainer of \$50,000, payable in equal quarterly installments, an option to acquire 25,000 shares of the Company's common stock upon initial appointment to the Board, and an additional option to acquire 25,000 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 our employee director during fiscal 2018, 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, 2018 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. James E. Callaway	\$ 50,000	–	\$ 65,642	–	\$ 115,642
Firdaus J. Dastoor	\$ 50,000	–	\$ 65,642	–	\$ 115,642
Dr. Dmitry Genkin	\$ –	–	\$ –	–	\$ –
Roman Knyazev	\$ –	–	\$ –	–	\$ –
Dr. Roger Kornberg	\$ 50,000	–	\$ 65,642	–	\$ 115,642
Mr. Adam Logal	\$ 50,000	–	\$ 65,642	–	\$ 115,642

(1)The amounts represent the aggregate grant date fair value of stock options granted during 2018. 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, 2018:

Name	Option Awards (#)
Dr. James Callaway	50,000
Firdaus J. Dastoor	95,455
Dr. Dmitry Genkin	37,879
Roman Knyazev	37,879
Dr. Roger Kornberg	75,000
Adam Logal	50,000

In addition to the option awards described above, Mr. Dastoor holds a warrant to purchase 48,485 shares of our common stock at \$7.92 per share. These warrants are fully vested and expire in December 2019. In addition, Dr. Genkin holds a warrant to purchase 30,304 shares of our common stock at \$13.86 per share. These warrants are fully vested and expire in April 2021.

See "Certain Relationships and Transactions" below for compensation arrangements involving specific members of the Board.

ITEM 12 – SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table and footnotes set forth certain information known to us regarding beneficial ownership of our capital stock as of March 31, 2019 for:

- each person known by us to be the beneficial owner of more than 5% of our capital stock;
- our named executive officers;
- each of our directors; and
- all executive officers and directors as a group.

The number of shares beneficially owned by each entity, person, director or executive officer is determined in accordance with the rules of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares over which the individual has sole or shared voting power or investment power as well as any shares that the individual has the right to acquire within 60 days through the exercise of any stock option, warrants or other rights. Except as otherwise indicated, and subject to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of common stock held by that person or entity.

The percentage of shares beneficially owned is computed on the basis of 10,443,889 shares of our common stock outstanding as of March 31, 2019, on an as-converted basis. Shares of our common stock that a person has the right to acquire within 60 days after March 31, 2019 are deemed outstanding for purposes of computing the percentage ownership of the person or entity holding such rights, but are not deemed outstanding for purposes of computing the percentage ownership of any other person, except with respect to the percentage ownership of all directors and executive officers as a group. Unless otherwise indicated below, the address for each beneficial owner listed is c/o Xenetic Biosciences, Inc., at 40 Speen Street, Suite 102, Framingham, Massachusetts 01701.

Name of Beneficial Owner	Number of Shares Beneficially Owned ⁽¹⁾	Percentage Beneficially Owned
Fiscal Year 2018 Named Executive Officers and Directors		
Jeffrey F. Eisenberg	213,233 ⁽²⁾	2.00%
James Parslow	116,666 ⁽³⁾	1.10%
Dr. Curtis Lockshin	146,365 ⁽⁴⁾	1.38%
Dr. James E. Callaway	37,500 ⁽⁵⁾	*
Firdaus J. Dastoor	131,440 ⁽⁶⁾	1.24%
Dr. Dmitry Genkin ⁽⁷⁾	70,732 ⁽⁸⁾	*
Roman Knyazev ⁽⁹⁾	37,879 ⁽¹⁰⁾	*
Dr. Roger Kornberg	62,500 ⁽¹¹⁾	*
Adam Logal	37,500 ⁽¹²⁾	*
All executive officers and directors as a group (9 persons)	853,815 ⁽¹³⁾	7.56%
5% Current Stockholders		
PJSC Pharmsynthez ^{(7) (9)}	9,335,159 ⁽¹⁴⁾	64.77%
Empery Asset Management	1,040,000 ⁽¹⁵⁾	9.96%
Serum Institute of India Private Limited	891,607 ⁽¹⁶⁾	8.33%

* Represents beneficial ownership of less than one percent (1%).

(1) Unless otherwise indicated below, this table is based upon corporate records, information supplied by officers, directors and, in the case of principal stockholders, information provided by our transfer agent.

(2) The total beneficial ownership consists of 196,566 shares issuable upon exercise of options that are exercisable within 60 days of March 31, 2019 and 16,667 of vested restricted stock units.

(3) The total beneficial ownership consists of 116,666 shares issuable upon exercise of options that are exercisable within 60 days of March 31, 2019.

- (4) The total beneficial ownership consists of 146,365 shares issuable upon exercise of options that are exercisable within 60 days of March 31, 2019.
- (5) The total beneficial ownership consists of 37,500 shares issuable upon exercise of options that are exercisable within 60 days of March 31, 2019.
- (6) The total beneficial ownership consists of 131,440 shares issuable upon exercise of warrants and options that are exercisable within 60 days of March 31, 2019.
- (7) Dr. Genkin is the Chairman of the Board of Directors of Pharmsynthez.
- (8) The total beneficial ownership consists of 2,549 shares of common stock owned directly and 68,183 shares issuable upon exercise of warrants and options that are exercisable within 60 days of March 31, 2019.
- (9) Mr. Knyazev is the Deputy Chairman of the Board of Directors of Pharmsynthez.
- (10) The total beneficial ownership consists of 37,879 shares issuable upon exercise of options that are exercisable within 60 days of March 31, 2019.
- (11) The total beneficial ownership consists of 62,500 shares issuable upon exercise of options that are exercisable within 60 days of March 31, 2019.
- (12) The total beneficial ownership consists of 37,500 shares issuable upon exercise of options that are exercisable within 60 days of March 31, 2019.
- (13) The total beneficial ownership consists of 2,549 shares of common stock owned directly, 834,599 shares issuable upon exercise of warrants and options that are exercisable within 60 days of March 31, 2019 and 16,667 shares of restricted stock units that are vested.
- (14) The total beneficial ownership consists of 5,365,455 shares of common stock owned directly or indirectly through SynBio, 2,909,090 shares issuable upon the conversion of Series B Preferred Stock and 1,060,614 shares issuable upon exercise of warrants that are exercisable within 60 days of March 31, 2019. SynBio is a wholly-owned subsidiary of Pharmsynthez. Pharmsynthez may be deemed to have shared voting and shared dispositive power with respect to all the shares owned by SynBio and therefore, Pharmsynthez may be deemed to be the beneficial owner of such shares. The address of PJSC Pharmsynthez is Office Center IT Park, 25 Liter ZH, Krasnogo Kursanta St., St. Petersburg, 197110, Russia.
- (15) The Company has reviewed the Schedule 13G jointly filed with the SEC on March 11, 2019 by Empery Tax Efficient II, LP (“ETE II Fund”), Empery Asset Management, LP (“Empery Asset”), Ryan M. Lane, and Martin D. Hoe (such joint filers, collectively, “Empery Asset Management”), reporting ownership of these shares as of March 5, 2019. According to the Schedule 13G, each of Empery Asset, Ryan M. Lane and Martin D. Hoe beneficially owned 1,040,000 shares of common stock with shared voting and shared dispositive power with respect to all such shares, which excludes, in each case, 509,000 shares of common stock issuable upon exercise of pre-funded warrants and 1,549,000 shares of common stock issuable upon exercise of warrants. Pursuant to the terms of the warrants, Empery Asset Management cannot exercise the warrants to the extent the reporting persons would beneficially own, after any such exercise, more than 4.99% of the outstanding shares of our common stock. Pursuant to the terms of the pre-funded warrants, Empery Asset Management cannot exercise the warrants to the extent the reporting persons would beneficially own, after any such exercise, more than 9.99% of the outstanding shares of our common stock. ETE II Fund beneficially owned 853,271 shares of common stock with shared voting and shared dispositive power with respect to all such shares, which excludes 417,611 shares of common stock issuable upon exercise of pre-funded warrants and 1,270,882 shares of common stock issuable upon exercise of warrants. ETE II Fund’s beneficial ownership is included within Empery Assets’ share ownership amounts reflected above. The address of Empery Asset Management is 1 Rockefeller Plaza, Suite 1205 New York, New York 10020.
- (16) The total beneficial ownership consists of 631,000 shares of common stock owned directly and indirectly by related affiliates of Serum Institute of India Private Limited and 260,607 shares issuable upon exercise of warrants that are exercisable within 60 days of March 31, 2019. The address of Serum Institute of India is S. No. 212/2, Off Soli Poonawalla Road, Hadapsar, Pune, 411028, Maharashtra, India.

Equity Compensation Plan Information

The following table sets forth information as of December 31, 2018 with respect to compensation plans under which equity securities are authorized for issuance:

Plan Category	Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans
Equity compensation plans approved by security holders	1,708,011 ⁽¹⁾	\$ 3.73	1,599,620
Equity compensation plans not approved by security holders	175,000 ⁽²⁾	4.57	—
Total	1,883,011	\$ 3.80	1,599,620

(1)Consists of 1,708,011 shares of our common stock to be issued upon the exercise of outstanding stock options and restricted stock units under the Xenetic Biosciences, Inc. Amended and Restated 2014 Equity Incentive Plan.

(2)Represents inducement award granted in 2017 that was not covered under the Xenetic Biosciences, Inc. Amended and Restated 2014 Equity Incentive Plan.

ITEM 13 – CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

During the fiscal year ended December 31, 2018 and the fiscal year ended December 31, 2017, there was not, nor is there any currently proposed transaction or series of similar transactions to which Xenetic was or is to be a party in which the amount involved exceeded or exceeds the lesser of \$120,000 or 1% of the average of our total assets at year end for the last two completed fiscal years and in which any executive officer, director or holder of more than 5% of any class of voting securities of Xenetic and members of that person’s immediate family had, has or will have a direct or indirect material interest, other than as set forth in “Executive Compensation” and “Director Compensation Table” above and disclosed below.

Policy Regarding Related Party Transactions

Our Board has adopted a written related party transaction policy to set forth the policies and procedures for the review and approval or ratification of related party transactions. Any transaction between the Company and its officers, directors, principal stockholders or affiliates is required to be on terms no less favorable to us than could be reasonably obtained in arms-length transactions with independent third-parties, and any such material related party transactions must also be reviewed and approved by a majority of the Board of Directors. All of the actions described in this section occurred prior to the adoption of this policy, except for the acquisition of the XCART Technology. On March 16, 2018, our Board formed the Strategic Alternatives Committee (the “SAC”) to evaluate an alternative transaction and other strategic alternatives for the Company should they arise. James Callaway, an independent outside director of the Company, was appointed Chair of the SAC. The SAC had primary oversight over the XCART Technology acquisition.

PJSC Pharmsynthez

PJSC Pharmsynthez (formerly, OJSC Pharmsynthez) (“Pharmsynthez”) is our largest and controlling stockholder with a share ownership of 43.5% of the total issued and outstanding common stock at March 31, 2019. In addition to its common stock ownership, Pharmsynthez holds outstanding warrants to purchase our common stock and approximately 1.5 million shares of our issued and outstanding Series B Preferred Stock at March 31, 2019. Pharmsynthez was a related party of SynBio, which is related party of ours, and acquired 100% of SynBio in February 2017. The combined ownership of Pharmsynthez and SynBio was 51.4% at March 31, 2019. In addition, one of our directors, Dr. Dmitry Genkin, is the Executive Chairman of the board of directors of Pharmsynthez, a second director of ours, Mr. Roman Knyazev, is also a director of Pharmsynthez and one of our executive officers, Dr. Curtis Lockshin, is an officer of a wholly-owned subsidiary of Pharmsynthez. In November 2009, the Company entered into a collaborative research and development license agreement with Pharmsynthez (the “Pharmsynthez Arrangement”) pursuant to which the Company granted an exclusive license to Pharmsynthez to develop, commercialize and market six drug candidates based on the Company’s PolyXen and ImuXen technology in certain territories. In exchange, Pharmsynthez granted an exclusive license to the Company to use any preclinical and clinical data developed by Pharmsynthez, within the scope of the Pharmsynthez Arrangement, and to engage in further research, development and commercialization of drug candidates outside of certain territories at the Company’s own expense.

SynBio LLC

SynBio is one of our largest stockholders and owns approximately 7.9% of our total issued and outstanding common stock as of March 31, 2019 and all of our outstanding Series A Preferred Stock. In 2017, SynBio became a wholly-owned subsidiary of Pharmsynthez.

In August 2011, SynBio and the Company entered into a stock subscription and collaborative development of pharmaceutical products agreement (the “Co-Development Agreement”). The Company granted an exclusive license to SynBio to develop pharmaceutical products using certain molecule(s) based on SynBio’s technology and the Company’s proprietary technology (PolyXen, OncoHist and ImuXen) that prolongs the active life and/or improves the pharmacokinetics of certain therapeutic proteins and peptides (as well as conventional drugs). In return, SynBio granted an exclusive license to the Company to use the pre-clinical and clinical data generated by SynBio in certain agreed products and engage in the development of commercial candidates.

SynBio and the Company are each responsible for funding their own research activities. There are no milestone or other research-related payments due under the agreement other than fees for the supply of each company’s respective research supplies based on their technology, which, when provided, are due to mutual convenience and not representative of an ongoing or recurring obligation to supply research supplies. Serum Institute of India Limited (“Serum Institute”) has agreed to directly provide the research supplies to SynBio, where the Company is not liable for any failure to supply the research supplies as a result of any act or fault of Serum Institute. Upon successful commercialization of any resultant products, the Company is entitled to receive royalties on sales in certain territories and pay royalties to SynBio for sales outside those certain territories.

Through December 31, 2018, the Company and SynBio continued to engage in research and development activities with no resultant commercial products. The Company did not recognize revenue in connection with the Co-Development Agreement during the years ended December 31, 2018 and 2017.

Serum Institute

Serum Institute owns approximately 6.0% of our total issued and outstanding common stock at March 31, 2019. In addition to its common stock ownership, Serum Institute holds outstanding warrants to purchase our common stock. One of our directors, Firdaus Jal Dastoor, is currently a Group Director in charge of Finance and Corporate Affairs and Company Secretary of Serum Institute. In August 2011, we entered into a collaborative research and development agreement with Serum Institute providing Serum Institute an exclusive license to use our PolyXen technology to research and develop one potential commercial product, Polysialylated Erythropoietin (“PSA-EPO”). Serum Institute is responsible for conducting all preclinical and clinical trials required to achieve regulatory approvals within the certain predetermined territories at Serum Institute’s own expense. Royalty payments are payable by Serum Institute to us for net sales to certain customers in the Serum Institute sales territory. Royalty payments are payable by us to Serum Institute for net sales received by us over the term of the license. There are no milestone or other research-related payments due under the collaborative arrangement.

Through December 31, 2018, we continued to engage in research and development activities with no resultant commercial products. No royalty revenue or expense was recognized by us related to the Serum Institute arrangement during the years ended December 31, 2018 and 2017.

Director Fees and Consulting Services Agreement with Dr. Dmitry Genkin

Dr. Genkin provided research and consulting services to the Company, for which he was paid approximately \$50,000 during the year ended December 31, 2017. The agreement was terminated on July 31, 2017 prior to Mr. Genkin being reappointed to the Board in August 2017.

XCART Technology

On March 1, 2019, we entered into an agreement to acquire the XCART platform technology (the “Transaction”) a proximity-based screening platform capable of identifying CAR constructs that can target patient-specific tumor neoantigens, with a demonstrated proof of mechanism in B-cell Non-Hodgkin lymphomas. The XCART technology, developed by The Scripps Research Institute (the “Institute”) in collaboration with the Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry (“IBCH”), is believed to have the potential to significantly enhance the safety and efficacy of cell therapy for B-cell lymphomas by generating patient- and tumor-specific CAR T cells.

In connection with the Transaction, on March 1, 2019, we entered into a Share Purchase Agreement with Hesperix SA (“Hesperix”) pursuant to which the Company will purchase all of the issued and outstanding shares of capital stock of Hesperix, as well as additional transaction documents. Dr. Dmitry Genkin, one of our directors, is a director and significant shareholder of Hesperix. In addition, in connection with the Transaction, the Company has agreed to repay a \$150,000 loan that Dr. Genkin entered into with Hesperix.

In addition, and in connection with the Transaction, Hesperix entered into an assignment agreement (the “Hesperix Assignment Agreement”) with the IBCH, Pharmsynthez, and certain other parties thereto (collectively, the “Assignors”), pursuant to which, the Assignors have agreed, among other things, to sell, assign, transfer, and convey unto Hesperix all of their individual right, title, and interest throughout the world in and to patents related to “Articles And Methods Directed To Personalized Therapy Of Cancer,” and the related know-how. Hesperix has agreed to pay each of IBCH and Pharmsynthez a royalty rate in the low single digit range based on the net sales of products in each country in which, in absence of the Hesperix Assignment Agreement, the manufacture, use, offer for sale, sale, or importation of such product would infringe a valid claim of a patent. Dr. Dmitry Genkin, one of our directors, is the Executive Chairman of the board of directors of Pharmsynthez. A second director of ours, Mr. Roman Knyazev, is also a director of Pharmsynthez and one of our executive officers, Dr. Curtis Lockshin is an officer of a wholly-owned subsidiary of Pharmsynthez.

Concurrent with the Share Purchase Agreement, we also entered into an assignment agreement with OPKO Pharmaceuticals, LLC (“OPKO”) (the “OPKO Assignment Agreement”) pursuant to which the Company will acquire and accept all of OPKO’s right, title and interest in an Intellectual Property License Agreement entered into between the Institute and OPKO related to the XCART technology. Mr. Adam Logal, one of our directors, is Senior Vice President, Chief Financial Officer, Chief Accounting Officer and Treasurer of OPKO Health, Inc., the parent company of OPKO.

In total, we will issue 7.5 million shares of our common stock in the Transaction, including 4.875 million shares to be issued to the shareholders of Hesperix and 2.625 million shares of common stock to be issued in connection with the OPKO Assignment Agreement. The closing of the Transaction is subject to customary closing conditions as well as conditions regarding (i) the Company having adequate financing to fund its future working capital obligations following the closing and (ii) the Company obtaining necessary and appropriate stockholder approvals, evidencing among other matters, approval of the Share Purchase Agreement and the transactions contemplated thereunder, including the issuance of the Transaction Shares. Subject to the satisfaction of the closing conditions, the Transaction is expected to close in the first half of 2019.

Empery Asset Management

Empery Tax Efficient II, LP (“ETE II Fund”), Empery Asset Management, LP (“Empery Asset”), Ryan M. Lane, and Martin D. Hoe (collectively, “Empery Asset Management”) own approximately 9.96% of our total issued and outstanding common stock at March 31, 2019. On March 5, 2019 Empery Asset Management purchased 1,040,000 shares of our common stock, as well as prefunded warrants to purchase 509,000 shares of our common stock resulting in net proceeds to the Company of \$2.7 million. In addition to its common stock and prefunded warrant ownership, Empery Asset Management holds outstanding warrants to purchase our common stock.

Director Independence

Under the NASDAQ Stock Market (“NASDAQ”) listing standards, a majority of the members of a listed company’s board of directors must qualify as “independent,” as affirmatively determined by the Board of Directors. The Board consults with advisors to ensure that the Board’s determinations are consistent with relevant securities and other laws and regulations regarding the definition of “independent,” including those set forth in pertinent listing standards of NASDAQ, as in effect from time to time.

Consistent with these considerations, after review of all relevant identified transactions or relationships between each director, or any of his or her family members, and the Company, its senior management and its independent auditors, the Board has affirmatively determined that the following directors were independent directors within the meaning of the applicable NASDAQ listing standards for the period during which they served as a member of the Board during fiscal year 2018: Dr. Callaway, Mr. Dastoor, Dr. Kornberg and Mr. Logal.

During fiscal year 2018, all members of our Audit Committee, Nominating and Corporate Governance Committee, and Compensation Committee were independent (as independence is currently defined in Rule 5605 of the NASDAQ listing standards).

ITEM 14 – PRINCIPAL ACCOUNTING FEES AND SERVICES

The following table represents aggregate fees billed to the Company for the fiscal years ended December 31, 2018 and December 31, 2017, by Marcum LLP, the Company’s principal accountant.

	2018	2017
Audit Fees	\$ 162,374	\$ 167,824
Audit-Related Fees	9,766	8,005
Tax Fees	–	–
All Other Fees	–	–
	<u>\$ 172,140</u>	<u>\$ 175,829</u>

Audit Fees

Audit fees include the total fees incurred in connection with the audit of our annual consolidated financial statements for each of the years ended December 31, 2018 and 2017.

Audit-Related Fees

Audit related fees during the year ended December 31, 2018 include fees incurred in connection with our S-3 registration statement filed in September 2018. Audit-related fees during the year ended December 31, 2017 include fees incurred in connection with SEC filings related to our Amended and Restated Equity Incentive Plan.

Audit and Non-Audit Services Pre-Approval Policy

The Audit Committee pre-approves all audit and non-audit accounting services provided by our independent, registered accounting firm. All audit and non-audit fee services described above were pre-approved by the Audit Committee.

Pursuant to the Board of Directors' policy, to help ensure the independence of our independent registered public accounting firm, all auditing services and permitted non-audit services (including the terms thereof) to be performed for us by our independent registered public accounting firm must be pre-approved by the Audit Committee, subject to the de-minimis exceptions for non-audit services described in Section 10A(i)(1)(B) of the Securities Exchange Act of 1934, which are approved by the Audit Committee prior to the commencement of services.

Our Audit Committee approved and retained Marcum LLP to audit our consolidated financial statements for 2018. Our Audit Committee reviewed all services provided by Marcum LLP in 2018 and concluded that the services provided were compatible with maintaining its independence.

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
31.3	Certification of Principal Executive Officer, as required by Rule 13a-14(a) or Rule 15d-14(a)				X
31.4	Certification of Principal Financial Officer, as required by Rule 13a-14(a) or Rule 15d-14(a)				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: April 30, 2019

By:

/s/ JEFFREY F. EISENBERG

Jeffrey F. Eisenberg
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, Jeffrey F. Eisenberg, certify that:

1. I have reviewed this Amendment No. 1 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: April 30, 2019

By: /s/ Jeffrey F. Eisenberg
Jeffrey F. Eisenberg
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. 1 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: April 30, 2019

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