Table of Contents

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-Q

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

For the quarterly period ended September 30, 2017

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

99 Hayden Ave, Suite 230
Lexington, Massachusetts 02421
(Address of principal executive offices and zip code)

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

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post 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. (Check one):

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer (Do not check if a smaller reporting company)	☐	Smaller reporting company	☒
Emerging growth company	☒		

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

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

As of November 13, 2017, the number of outstanding shares of the registrant's common stock was 8,717,541.

XENETIC BIOSCIENCES, INC.
FORM 10-Q
QUARTERLY PERIOD ENDED SEPTEMBER 30, 2017

PART I – FINANCIAL INFORMATION

ITEM 1 – FINANCIAL STATEMENTS

XENETIC BIOSCIENCES, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS

	September 30, 2017	December 31, 2016
	(Unaudited)	
ASSETS		
Current assets:		
Cash	$ 694,752	$ 4,048,131
Restricted cash	66,510	66,510
Accounts receivable	42,500	3,000,000
Prepaid expenses and other	1,245,252	1,224,009
Total current assets	2,049,014	8,338,650
Property and equipment, net	32,293	42,366
Goodwill	3,283,379	3,283,379
Indefinite-lived intangible assets	9,243,128	9,243,128
Other assets	31,831	66,342
Total assets	$ 14,639,645	$ 20,973,865
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,026,728	$ 1,006,903
Accrued expenses	1,113,446	838,888
Deferred revenue and other current liabilities	21,071	20,205
Total current liabilities	2,161,245	1,865,996
Deferred tax liability	2,918,518	2,918,518
Other liabilities	4,980	19,876
Total liabilities	5,084,743	4,804,390
Commitments and contingent liabilities (Note 10)		
Stockholders' equity:		
Preferred stock, 10,000,000 shares authorized		
Series B, $0.001 par value: 2,120,742 and 2,305,742 issued and outstanding as of September 30, 2017 and December 31, 2016, respectively	2,120	2,305
Series A, $0.001 par value: 970,000 shares issued and outstanding as of September 30, 2017 and December 31, 2016	970	970
Common stock, $0.001 par value; 45,454,546 shares authorized as of September 30, 2017 and December 31, 2016; 9,041,426 and 8,731,029 shares issued as of September 30, 2017 and December 31, 2016, respectively; 8,717,541 and 8,407,144 shares outstanding as of September 30, 2017 and December 31, 2016, respectively	9,040	8,730
Additional paid in capital	164,948,674	163,522,921
Accumulated deficit	(150,378,456)	(142,338,005)
Accumulated other comprehensive income	253,734	253,734
Treasury stock	(5,281,180)	(5,281,180)
Total stockholders' equity	9,554,902	16,169,475
Total liabilities and stockholders' equity	$ 14,639,645	$ 20,973,865

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

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

	THREE MONTHS ENDED SEPTEMBER 30		NINE MONTHS ENDED SEPTEMBER 30,	
	2017	**2016**	**2017**	**2016**
Revenue				
Collaboration services	$ 85,000	$ –	$ 85,000	$ –
Total revenues	85,000	–	85,000	–
Operating costs and expenses:				
Cost of research and development revenue	(97,028)	–	(156,119)	–
Research and development	(884,797)	(891,828)	(2,979,778)	(3,526,322)
In-process research and development expense	–	–	–	(39,500,000)
General and administrative	(1,343,671)	(1,359,801)	(4,948,675)	(4,339,844)
Loss from operations	(2,240,496)	(2,251,629)	(7,999,572)	(47,366,166)
Other non-operating income (expense):				
Change in fair value of derivative liability	–	241,298	–	2,146,587
Loss on issuance of hybrid debt instruments	–	(106,566)	–	(1,690,784)
Loss on conversion of debt	–	–	–	(6,187,337)
Other income (expense)	(14,979)	(13,440)	(49,611)	(26,991)
Interest income	–	4	10,201	31
Interest expense	(425)	(341,648)	(1,469)	(690,118)
Total other non-operating expense	(15,404)	(220,352)	(40,879)	(6,448,612)
Net loss	$ (2,255,900)	$ (2,471,981)	$ (8,040,451)	$ (53,814,778)
Basic and diluted loss per share	$ (0.26)	$ (0.28)	$ (0.93)	$ (7.54)
Weighted-average shares of common stock outstanding, basic and diluted	8,717,541	8,987,145	8,648,314	7,134,352

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

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

	NINE MONTHS ENDED SEPTEMBER 30,	
	2017	**2016**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (8,040,451)	$ (53,814,778)
Adjustments to reconcile net loss to net cash used in operating activities:		
In-process research and development expense	–	39,500,000
Depreciation	19,337	27,246
Amortization of hybrid debt instrument discount	–	519,099
Non-cash interest expense	–	168,751
Share-based payments	1,512,310	1,518,344
Warrant-based expense for services	(118,236)	1,116,852
Vendor share-based payments	97,781	–
Change in fair value of derivative liability	–	(2,146,587)
Loss on issuance of hybrid debt instruments	–	1,690,787
Hybrid debt instrument issuance costs	–	(12,093)
Loss on conversion of debt	–	6,187,337
Other non-cash transactions	–	40,611
Changes in operating assets and liabilities:		
Accounts receivable	2,957,500	–
Prepaid expenses and other assets	13,268	43,682
Accounts payable, accrued expenses and other liabilities	214,376	997,500
Net cash used in operating activities	(3,344,115)	(4,163,249)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(9,264)	(14,613)
Net cash used in investing activities	(9,264)	(14,613)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from issuance of debt	–	4,500,000
Payments on loan from related party	–	(242,471)
Net cash provided by financing activities	–	4,257,529
Net change in cash, excluding restricted cash	(3,353,379)	79,667
Cash at beginning of period	4,048,131	132,229
Cash at end of period	$ 694,752	$ 211,896
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid for interest	$ 1,551	$ –
SUPPLEMENTAL SCHEDULE OF NON-CASH INVESTING AND FINANCING ACTIVITIES:		
Convertible debt paid in common stock	$ –	$ 6,500,000
Interest paid in common stock	$ –	$ 227,829
Issuance of warrants in connection with debt	$ –	$ 2,107,835
Recording of derivative liability in connection with debt	$ –	$ 4,120,359
Common stock exchanged for Series A convertible preferred stock	$ –	$ 970
Issuance of common stock for goods and services	$ –	$ 993,667
Reclassification of common shares issuable to accounts payable	$ 65,977	$ –
Conversion of Series B preferred stock to common stock	$ 185	$ –
Issuance of common stock for promissory note converted in 2016	$ 125	$ –

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

1. The Company

Background

Xenetic Biosciences, Inc. ("Xenetic" or the "Company)" incorporated in the state of Nevada and based in Lexington, Massachusetts, is a biopharmaceutical company focused on the discovery, research and development of next-generation biologic drugs and novel orphan oncology therapeutics. Xenetic's proprietary drug development platforms include PolyXen™, which enables next-generation biologic drugs by improving their half-life and other pharmacological properties. The Company incorporates its patented and proprietary technologies into a number of drug candidates currently under development either in-house or with biotechnology and pharmaceutical collaborators in order to create what it believes will be next-generation biologic drugs and therapeutics. Xenetic's lead investigational product candidates include oncology therapeutic XBIO-101 (sodium cridanimod) for the treatment of progesterone resistant endometrial cancer ("EC").

Going Concern and Management's Plan

The Company incurred a net loss of approximately $8.0 million for the nine months ended September 30, 2017, and had an accumulated deficit of $150.4 million as of September 30, 2017. The Company's working capital was approximately ($0.1) million as of September 30, 2017, and $6.5 million as of December 31, 2016. The Company expects to continue incurring losses for the foreseeable future and will need to raise additional capital or pursue other strategic alternatives in the near term in order to continue pursuit of its business plan and continue as a going concern. On October 27, 2017, the Company entered into a sublicensing agreement that resulted in a one-time $7.5 million payment in November 2017 and is expected to result in future single digit royalty payments based on product sales. See Note 12, Subsequent Events, to these unaudited condensed consolidated financial statements for further details.

The Company believes that it has access to capital resources through possible public or private equity offerings, debt financings, corporate collaborations or other means; however, it has not secured any commitment for additional financing at this time. The terms, timing and extent of any future financing will depend upon several factors, including the achievement of progress in its clinical development programs, its ability to identify and enter into licensing or other strategic arrangements, and factors related to financial, economic and market conditions, many of which are beyond its control.

While these condensed consolidated financial statements have been prepared on a going concern basis, if the Company does not successfully raise additional working capital, there can be no assurance that the Company will be able to continue its operations, and these conditions raise substantial doubt about its ability to continue as a going concern. Under such circumstances, the Company would have to further reduce the planned scale of, or possibly suspend, some or all of its pre-clinical development initiatives and clinical trials. In addition, the Company would have to continue to reduce its general and administrative and other operating expenses and delay or cease the purchase of clinical research services if and until the Company is able to obtain additional financing. The accompanying condensed consolidated financial statements do not include any adjustments related to the recoverability or classification of asset carrying amounts or the amounts and classification of liabilities that may result should the Company be unable to continue as a going concern.

2. Summary of Significant Accounting Policies

Preparation of Interim Financial Statements

The accompanying condensed consolidated financial statements were prepared by the Company pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC") and, in the opinion of management, include all normal and recurring adjustments necessary to present fairly the results of the interim periods shown. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles have been condensed or omitted pursuant to such SEC rules and regulations. Management believes that the disclosures made are adequate to make the information presented not misleading. The results for the interim periods are not necessarily indicative of results for the full year. The condensed consolidated financial statements contained herein should be read in conjunction with the consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2016 filed with the SEC on March 31, 2017 and amended on May 1, 2017.

Reclassifications

Certain items previously reported in specific financial statement captions have been reclassified to conform to the current period presentation, including vendor share-based payments of $0.1 million in the statements of cash flows. Such reclassifications do not materially impact previously reported net losses, total assets, liabilities or stockholders' equity.

Principles of Consolidation

The financial statements of the Company include the accounts of Xenetic Biosciences (UK) Limited and its wholly owned subsidiaries: Lipoxen Technologies Limited, Xenetic Bioscience, Incorporated, and SymbioTec GmbH ("SymbioTec"). All material intercompany balances and transactions have been eliminated in consolidation.

Recently Adopted Accounting Standards

In March 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-09, *Compensation – Stock Compensation (Topic 718)* ("ASU 2016-09"). ASU 2016-09 simplifies several aspects of employee share-based payment accounting, including income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. ASU 2016-09 is effective for fiscal years beginning after December 15, 2016, including interim periods within that year. The Company adopted ASU 2016-09 effective January 1, 2017. The adoption of this standard did not have a material impact on the Company's financial statements or related disclosures as:

- There have been no stock option exercises as a US company and, therefore, there are no excess tax benefits related to windfalls. Moreover, the Company maintains a full valuation allowance and expects to do so for the foreseeable future.
- The Company has elected to account for forfeitures as they occur, which the Company adopted using a modified retrospective approach and there was no material cumulative effect adjustment to be recorded to opening retained earnings.
- The Company will classify cash paid to taxing authorities arising from the withholding of shares from employees in cash flows from financing activities.

Recent Accounting Standards

In January 2017, the FASB issued ASU 2017-04, *Intangible – Goodwill and Other (Topic 350),* that eliminates the requirement to calculate the implied fair value of goodwill to measure a goodwill impairment charge. Instead, the new guidance will require entities to record an impairment charge based on the excess of a reporting unit's carrying amount over its fair value. The guidance is effective for the company no later than 2020. The adoption of this guidance is not expected to have a material impact on the company's consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)* ("ASU 2014-09"), which supersedes existing revenue recognition guidance. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods and services. The standard defines a five-step process to achieve this principle and will require companies to use more judgment and make more estimates than under the current guidance. The Company expects that these judgments and estimates will include identifying performance obligations in the customer contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. ASU 2014-09 also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts. The new standard will be effective for the Company for annual and interim periods beginning after December 15, 2017. The Company continues to evaluate the impact that the adoption will have on its consolidated financial statements; however, the Company does not expect the adoption of this standard will have a material impact on the consolidated financial statements.

3. Significant Strategic Collaborations

The Company has entered into various research, development, license and supply agreements with the Company's controlling stockholder PJSC Pharmsynthez ("Pharmsynthez") and SynBio LLC ("SynBio"), which is a wholly owned subsidiary of Pharmsynthez, Serum Institute of India ("Serum Institute") and Shire plc ("Shire"). The Company and its collaborative partners continue to engage in research and development activities with no resultant commercial products through September 30, 2017. No amounts were recognized as revenue related to these agreements during the nine months ended September 30, 2017 or 2016.

4. Property and Equipment, net

Property and equipment, net consists of the following:

	September 30, 2017	December 31, 2016
Laboratory equipment	$ 264,583	$ 264,583
Office and computer equipment	46,634	37,370
Leasehold improvements	26,841	26,841
Furniture and fixtures	20,263	20,263
Property and equipment – at cost	358,321	349,057
Less accumulated depreciation	(326,028)	(306,691)
Property and equipment – net	$ 32,293	$ 42,366

Depreciation expense was approximately $5,000 and $9,000 for the three months ended September 30, 2017 and 2016, respectively, and approximately $19,000 and $27,000 for the nine months ended September 30, 2017 and 2016, respectively.

5. Hybrid Debt Instruments

During 2015 and 2016, the Company entered into several financing arrangements which included the issuance of convertible notes and warrants to purchase shares of common stock. On July 1, 2015, the Company entered into a Securities Purchase Agreement (the "SPA") with Pharmsynthez providing for the issuance of a minimum of a $3.0 million, 10% Senior Secured Collateralized Convertible Promissory Note (the "SPA Note"). The SPA also provided for the issuance of certain warrants up to the amount of the SPA Note to purchase shares of common stock at the lesser of $6.60 per share and 120% of the price per share in the Company's next capital raise of at least $7 million (the "Exercise Price").

On November 13, 2015, the Company entered into an Asset Purchase Agreement (the "APA") with Pharmsynthez and AS Kevelt ("Kevelt") providing for the issuance of a minimum of a $3.5 million, 10% Senior Secured Collateralized Convertible Promissory Note (the "Initial APA Note") and the transfer to the Company of certain intellectual property rights with respect to XBIO-101 in exchange for, among other things, 3,378,788 shares of the Company's common stock. The APA also provided for the issuance of certain warrants covering up to half the amount of the Initial APA Note to purchase shares of common stock at the Exercise Price. During the nine month period ended September 30, 2016, the Company issued $3.5 million of convertible debt, through a series of draws, as well as the associated warrants, both in connection with the Initial APA Note. The convertible debt and its embedded debt-like features were recorded within current liabilities as hybrid debt instruments. A $1.6 million loss was recorded upon the issuance of hybrid debt instruments. In addition, a $1.9 million gain was recorded during the nine months ended September 30, 2016, reflecting the change in fair value of hybrid debt instruments during the period.

On April 22, 2016, Pharmsynthez converted all of the convertible notes issued by the Company to Pharmsynthez in the principal amount of $6.5 million plus accrued interest of approximately $0.2 million, resulting in a $6.2 million loss. The conversion rate was $4.95 per share. As such, the Company issued to Pharmsynthez 1,373,036 shares of common stock in connection with conversion of the convertible notes. The related embedded derivatives, which had been bifurcated from the host debt and accounted for separately, were settled by action of the conversion.

On July 1, 2016, the Company issued a convertible promissory note (the "Note") in the amount of $500,000 to Pharmsynthez. In consideration for the Note, the Company issued Pharmsynthez warrants (the "Warrants") to purchase 50,505 shares of its common stock at the Exercise Price. The Note was convertible into shares of the Company's common stock at any time at a conversion price of $4.95 per share (subject to price protection and usual and customary adjustments). The Warrants could be exercised at any time through the five-year anniversary. The maturity date of the Note was one year from issuance and was convertible, in whole or in part, into shares of common stock at the option of the holder, at any time and from time to time in accordance with the terms contained therein. Upon a public offering, as such term was defined in the Note, the holder was required to convert the Note to shares of the Company's common stock in accordance with the conversion terms contained therein.

On July 1, 2016, the Company issued a convertible promissory note (the "CEO Note") in the amount of $369,958 and warrants to purchase 37,369 shares of common stock at the Exercise Price to Mr. Scott Maguire, the Company's former CEO, for his deferred salary. The maturity date of the CEO Note was September 30, 2016. Upon a public offering, as defined, and at the option of the holder, the CEO Note could be settled in cash or by means of conversion into shares of common stock in accordance with the conversion terms contained therein.

On August 26 and September 9, 2016, the Company issued convertible promissory notes (the "Further Notes") in the amount of $178,000 and $322,000, respectively, and warrants to purchase 50,505 shares of its common stock at the Exercise Price to Pharmsynthez. The notes were convertible into shares of common stock at any time at a conversion price of $4.00 per share (subject to price protection and usual and customary adjustments) or may be applied toward a public offering, at the option of Pharmsynthez. The maturity date of the Further Notes was one year from issuance and were convertible, in whole or in part, into shares of common stock at the option of the holder, at any time and from time to time in accordance with the terms contained therein. Upon execution of an underwriting agreement following declaration of effectiveness by the SEC of the registration statement filed in connection with the Company's public offering, the balance of the Further Notes automatically converted into units of the Company's public offering in accordance with the conversion terms contained therein.

The Note, CEO Note and Further Notes (together, the "Period Notes") shared the same principal terms and features. The Period Notes were convertible debt and included embedded debt-like features which were recorded on the face of the condensed consolidated balance sheet within current liabilities as an aggregate hybrid debt instrument.

The fair value of the compound derivatives bifurcated from the Period Notes were remeasured at each report date until they were settled, with changes in fair value recognized in the unaudited consolidated statement of operations as a gain or loss on derivative. Refer to Note 6 Fair Value Measurements for a table showing changes in the combined compound derivative during the nine months ended September 30, 2016.

The key assumptions used to calculate the estimated fair value of the compound derivative liability as of September 30, 2016, were as follows:

	September 30, 2016
Company stock price	$ 4.50
Expected volatility (%)	105%
Risk-free interest rate (%)	0.52%

A $0.1 million loss was recorded upon the issuance of the Period Notes. In addition, a $0.2 million gain was recorded during the three months ended September 30, 2016 reflecting the change in fair value of hybrid debt instruments during the period.

On November 7, 2016, the Company closed an approximate $10 million underwritten public offering. In connection with the offering and pursuant to the respective terms therein, the balances of the Period Notes were settled as follows:

- the Note converted to shares of common stock;
- the CEO Note was settled in cash; and
- the Further Notes converted into units.

See Notes 8 and 11 to the consolidated financial statements in the Company's Annual Report on Form 10-K for the year ended December 31, 2016. Following the November 2016 settlement of these instruments, no hybrid debt instruments were outstanding as of September 30, 2017 and December 31, 2016. Interest expense related to the SPA Note, the APA Note, and the Period Notes of approximately $341,000 and $690,000 was recognized in the unaudited condensed consolidated statement of operations for the three and nine months ended September 30, 2016, respectively.

6. Fair Value Measurements

ASC Topic 820, *Fair Value Measurement,* defines fair value as the price that would be received to sell an asset or be paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company applies the following fair value hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement. Level 1 inputs are quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date. Level 2 utilizes quoted market prices in markets that are not active, broker or dealer quotations, or alternative pricing sources with reasonable levels of price transparency. Level 3 inputs are unobservable inputs for the asset or liability in which there is little, if any, market activity for the asset or liability at the measurement date.

The Company's cash and restricted cash are measured at fair value and are classified as Level 1 in the fair value hierarchy. The carrying amount of certain of the Company's financial instruments approximate fair value due to their short maturities. The Company measures derivative liabilities at fair value on a recurring basis and are classified as Level 3 in the fair value hierarchy.

There were no financial instruments classified as Level 3 in the fair value hierarchy during the nine months ended September 30, 2017. For the nine months ended September 30, 2016, the following table provides a summary of the changes in fair value of the compound derivative measured at fair value on a recurring basis using significant unobservable inputs.

Balance as of January 1, 2016	$	3,544,222
Issuances of compound derivative instrument		4,120,359
Change in fair value of compound derivative instrument		(2,146,587)
Settlement of derivative instrument through conversion of debt host		(4,985,356)
Balance as of September 30, 2016	$	532,638

7. Stockholders' Equity

Common Stock

During the nine months ended September 30, 2017, 185,000 shares of Series B preferred stock were converted into 185,000 shares of common stock.

In connection with the Company's underwritten public offering in November 2016 and pursuant to the terms of the APA, the Note automatically converted into shares of common stock in March 2017. The associated 125,397 shares issued to Pharmsynthez represent both owed principal and accrued interest.

On April 29, 2016, the Company closed the APA with an effective date of April 27, 2016, acquiring in-process research and development ("IPR&D") related to certain intellectual property rights with respect to the immunomodulator product XBIO-101 held by Kevelt, which included the grant of the worldwide right to develop, market and license XBIO-101 for certain uses. In connection with the closing of the APA, the Company issued 3,378,788 shares of its common stock to Pharmsynthez. As there was no alternative use for the IPR&D, the Company recognized $39.5 million of expense based on the fair value of intellectual property received, which was determined to be more reliably measured than the related equity consideration.

On September 15, 2016, the Company issued 211,486 shares of common stock to Serum in exchange for $0.8 million of clinical PSA supply as well as settlement of prior purchases of PSA supply. Serum is a related party and the share transaction was approved by the Company's Board of Directors.

On September 23, 2016, SynBio exchanged 970,000 shares of common stock in the Company for an equal number of shares of Series A Preferred Stock.

Warrants

In connection with the Company's issuance of the Initial APA Note in March 2016, the Company issued a warrant to purchase 353,540 shares of common stock at the Exercise Price (the "Initial APA Warrant"). The Initial APA Warrant has a five-year term and is exercisable commencing March 31, 2016. The fair value of the Initial APA Warrant was calculated using the Black-Scholes option pricing model. The key valuation assumptions used consist of the Company's stock price, a risk-free rate of 1.42% and an expected volatility of 135%.

In connection with the Company's issuance of each of the Period Notes during the three months ended September 30, 2016, the Company issued warrants to purchase an aggregate of 138,379 shares of common stock at the Exercise Price and that are immediately exercisable. The Company has accounted for the warrants (the "Period Warrants") as issued contemporaneous with the issuance of the associated debt instrument. The Period Warrants have five-year terms. The fair values of the Period Warrants were calculated using the Black-Scholes option pricing model. The key valuation assumptions used consisted of the Company's stock price, risk free rates between 1.00% and 1.13% and expected volatilities of 110% and 120% and no expected dividends.

As of September 30, 2017 and December 31, 2016, there were outstanding warrants to purchase an aggregate of 3,522,225 shares of common stock at a weighted average exercise price of $4.30, which had been issued in connection with debt and equity financing arrangements.

8. Share-Based Compensation

Total share-based compensation related to stock options, common stock awards, and non-financing warrants was $0.3 million and $0.6 million during the three months ended September 30, 2017 and 2016, respectively, and $1.5 million and $2.6 million for the nine months ended September 30, 2017 and 2016, respectively.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Research and development expenses	$ 29,598	$ 113,976	$ 151,377	$ 1,348,216
Administrative expenses	272,393	502,957	1,340,478	1,286,980
	$ 301,991	$ 616,933	$ 1,491,855	$ 2,635,196

Employee Stock Options

During the nine months ended September 30, 2017, the Company granted 350,000 employee stock options. The key valuation assumptions used consisted of the Company's stock price, a risk-free rate of 0.19% and an expected volatility of approximately 110%. During the nine months ended September 30, 2016, the Company granted 12,122 employee stock options. The key valuation assumptions used consisted of the Company's stock price, a risk-free rate of 0.54% and an expected volatility of 123%. During the nine months ended September 30, 2017 and 2016, the Company extended the exercise expiration date of certain former employee stock option awards resulting in a change in incremental value of approximately $4,000 and $24,000, respectively, which was charged to administrative expense. In August 2016, the Company modified the exercise price and vesting of certain employee stock option awards resulting in a change in incremental value and catch up of share-based amortization of approximately $0.1 million which was charged to administrative and research and development expense. The Company recognized a total of $0.3 million and $0.5 million of compensation expense related to employee stock options during the three months ended September 30, 2017 and 2016, respectively, and $1.4 million and $1.3 million during the nine months ended September 30, 2017 and 2016, respectively.

Non-Employee Stock Options

No non-employee stock options were granted and no non-employee stock options were exercised during the nine months ended September 30, 2017 or 2016. In August 2016, the Company modified the exercise price and vesting of certain non-employee stock option awards resulting in a change in incremental value and catch up of share-based amortization of approximately $17,000 which was charged to administrative expense. The Company recognized approximately $8,000 and $80,000 of compensation expense related to non-employee stock options during the three and nine months ended September 30, 2017, respectively, and approximately $60,000 for both the three and nine months ended September 30, 2016, respectively.

Common Stock Awards

During the three months ended September 30, 2017 and 2016, the Company agreed to grant 14,091 and 8,146 common stock awards, respectively, and 26,801 and 20,309 common stock awards during the nine months ended September 30, 2017 and 2016, respectively, based on the value of the services provided and the average stock price during each respective quarter. As all services were rendered in each respective quarter, approximately $38,000 and $37,000 of compensation expense related to common stock awards was recognized during the three month periods ended September 30, 2017 and 2016, respectively, and approximately $0.1 million during both the nine months ended September 30, 2017 and 2016, respectively. The common stock awards were not issued as of September 30, 2017.

Warrants

In connection with certain of the Company's collaboration agreements and consulting arrangements, the Company has issued warrants to purchase shares of common stock as payment for services. As of September 30, 2017 and December 31, 2016, warrants to purchase 646,249 shares of common stock were outstanding. The fair value of these warrants was determined at each issuance date using the Black-Scholes option pricing model. The warrants are subject to re-measurement at each reporting period until the measurement date is reached. Expense is recognized on a straight-line basis over the expected service period or at the date of issuance, if there is not a service period. The Company recognized a gain of approximately $22,000 and $2,000 related to collaboration and consulting warrants during the three months ended September 30, 2017 and 2016, respectively. For the nine months ended September 30, 2017 and 2016, the Company recognized a gain of $0.1 million and expense of $1.1 million, respectively, related to collaboration and consulting warrants.

No warrants have been issued in the first nine months of 2017. During the first nine months of 2016, warrants to purchase 212,222 shares of common stock were issued.

9. Income Taxes

During the nine months ended September 30, 2017 and 2016, there was no provision for income taxes as the Company incurred losses during both periods. Deferred tax assets and liabilities reflect the net tax effect of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The Company records a valuation allowance against its deferred tax assets as the Company believes it is more likely than not the deferred tax assets will not be realized. The valuation allowance against deferred tax assets was approximately $24.0 million and $21.5 million as of September 30, 2017 and December 31, 2016, respectively.

As of September 30, 2017, and December 31, 2016, the net deferred tax liability of $2.9 million on the condensed consolidated balance sheets is related to book and tax basis differences for intangible assets with indefinite lives that were acquired in the Company's January 2012 acquisition of SymbioTec. In accordance with ASC 740-10-30-18, the deferred tax liability related to the intangible assets cannot be used to offset deferred tax assets when determining the amount of the valuation allowance for deferred tax assets which are not more-likely-than-not to be realized. This results in a net deferred tax liability, even though the Company has a full valuation allowance on its other net deferred tax assets. This net deferred tax liability will continue to be reflected on the balance sheet until the related intangible assets are no longer held by the Company.

As of September 30, 2017 and December 31, 2016, the Company did not record any unrecognized tax positions.

10. Commitments and Contingencies

Leases

In August 2013, the Company entered into an agreement to lease office and laboratory space in Lexington, Massachusetts under an operating lease with a commencement date of January 1, 2014 and a termination date of January 31, 2019. In connection with this lease, the Company is required to maintain a $66,000 letter of credit as a security deposit. In addition, the Company recorded approximately $40,000 as prepaid rent as of September 30, 2017, with approximately $10,000 recorded as a non-current asset. The Company also incurred a liability of approximately $90,000 with respect to the Company's contribution to the landlord's leasehold improvements, of which approximately $25,000 is outstanding as of September 30, 2017, with approximately $5,000 recorded as a non-current liability, respectively. This liability is repayable as additional rent expense over the term of the lease and bears interest at 6%. In addition, in January 2017, the Company leased office space in Miami, Florida requiring a total of approximately $1,000 in payments through the lease termination date in December 2017.

Litigation

On August 27, 2015, Eurogentec S.A. ("EGT"), a former supplier of the Company, brought an action against the Company in the Commercial Court of the Canton of Zurich Switzerland (the "Court") alleging nonpayment of invoices for services provided by EGT. The Company requested dismissal of the claim based on the argument that EGT knew, or should have known, that the services provided by EGT should not have been performed or had not been properly performed. On July 12, 2017, the Court rendered a decision in favor of EGT ordering the Company to pay approximately $0.7 million to EGT, representing all amounts that EGT alleged were owed by the Company, plus interest and court and legal fees.

The Company had previously recorded $0.6 million related to this contract when the relevant costs were incurred. As a result of this ruling, the Company has accrued an additional $0.1 million related to interest and fees associated with the ruling. The Company has appealed the decision.

11. Related Party Transactions

The Company has entered into various research, development, license and supply agreements with Pharmsynthez (including SynBio), and Serum Institute, each a related party whose relationship and ownership has not materially changed from that disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2016 filed with the SEC on March 31, 2017, as amended on May 1, 2017.

12. Subsequent Events

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

On October 27, 2017 the Company entered into a Right to Sublicense Agreement (the "Sublicense Agreement") with Baxalta Incorporated, Baxalta US Inc., and Baxalta GmbH (collectively, with their affiliates, "Baxalta"), wholly-owned subsidiaries of Shire. Pursuant to the Sublicense Agreement, the Company granted to Baxalta the right to grant a nonexclusive sublicense to certain patents related to the Company's PolyXen technology that were previously exclusively licensed to Baxalta pursuant to an agreement between the Company and Baxalta (the "Licensed Patents") in connection with products relating to the treatment of blood and bleeding disorders (the "Covered Products"). The term of the Sublicense Agreement continues on a country-to-country basis until the expiration of the last-to-expire Licensed Patents or upon certification from Baxalta that it is not receiving compensation for sales of Covered Products in a given country, whichever is later (the "Term").

Pursuant to the Sublicense Agreement, Baxalta agreed to pay the Company (i) a one-time payment of seven million five hundred thousand dollars ($7,500,000) and (ii) single digit royalty payments based upon net sales of the Covered Products throughout the Term. The $7.5 million one-time payment was received in November 2017.

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

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains both historical and "forward-looking statements," as that term is defined under the Private Securities Litigation Reform Act of 1995 ("PSLRA"), Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. The forward-looking statements in this Quarterly Report on Form 10-Q ("Quarterly Report") are not based on historical facts, but rather reflect the current expectations of our management concerning future results and events. These forward-looking statements include, but are not limited to, statements concerning our plans to continue the development of our proposed drug candidates; our expectations regarding the nature, timing and extent of clinical trials and proposed clinical trials; our expectations regarding the timing for proposed submissions of regulatory filings, including but not limited to any Investigational New Drug ("IND") filing or any new drug application ("NDA"); the nature, timing and extent of collaboration arrangements; the expected results pursuant to collaboration arrangements including the receipts of future payments that may arise pursuant to collaboration arrangements; the outcome of our plans to obtain regulatory approval of our drug candidates; the outcome of our plans for the commercialization of our drug candidates; our plans to address certain markets, engage third party manufacturers, and evaluate additional drug candidates for subsequent commercial development; and the likelihood and extent of competition to our drug candidates.

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

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

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

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

- our need to raise additional working capital for the purpose of further developing our various drug candidates and to continue as a going concern;
- our ability to finance our business;
- our ability to achieve milestone and other payments associated with our co-development collaborations and strategic arrangements;
- the impact of new technologies on our drug candidates and our competition;
- changes in laws or regulations of governmental agencies;
- interruptions or cancellation of existing contracts;
- impact of competitive products and pricing;
- product demand and market acceptance and risks;
- the presence of competitors with greater financial resources;
- product development and commercialization risks;
- continued availability of supplies or materials used in manufacturing at the current prices;
- the ability of management to execute plans and motivate personnel in the execution of those plans;
- adverse publicity related to our products or the Company itself;
- adverse claims relating to our intellectual property;
- the adoption of new, or changes in, accounting principles;
- the costs inherent with complying with statutes and regulations applicable to public reporting companies, such as the Sarbanes-Oxley Act of 2002; and
- other new lines of business that the Company may enter in the future.

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

BUSINESS OVERVIEW

We are a clinical-stage biopharmaceutical company focused on the discovery, research and development of next-generation biologic drugs and novel orphan oncology therapeutics. We have an extensive patent portfolio of over 200 issued patents and more than 60 pending patent applications in the United States and worldwide, which covers various aspects of our PolyXen™ platform technology and advanced polymer conjugate technologies, as well as our proprietary biologic drugs and novel oncology drug candidates. We believe our portfolio positions us well for strategic partnership and commercialization opportunities. Our objective is to maximize opportunities to out-license assets from our portfolio in order to generate working capital to both build long-term stockholder value and provide us with the funding necessary to clinically develop our orphan oncology drug candidate pipeline through market launch.

Our lead drug candidate, XBIO-101 (sodium cridanimod), is a small-molecule immunomodulator and interferon inducer, which, in preliminary studies, has been shown to increase progesterone receptor ("PrR") expression in endometrial tissue. We have exclusive rights to develop and commercialize XBIO-101 worldwide, except for specified countries in the Commonwealth of Independent States, including Russia. XBIO-101 has been granted orphan drug designation by the U.S. Food and Drug Administration ("FDA") for the potential treatment of progesterone receptor negative ("PrR-") endometrial cancer in conjunction with progesterone therapy. Patient enrollment for the Phase 2 trial for XBIO-101 commenced in June 2017.

- The primary objective of the open-label, multi-center, single-arm, two-period Phase 2 study is to assess the antitumor activity of XBIO-101 in conjunction with progestin therapy as measured by Overall Disease Control Rate in women with recurrent or persistent endometrial carcinoma not amenable to surgical treatment or radiotherapy who have either failed progestin monotherapy or who have been identified as PrR-. Secondary objectives include assessments of efficacy and safety/tolerability parameters.

- The study is expected to enroll a total of 72 women with recurrent or persistent endometrial cancer not amenable to surgical treatment or radiotherapy but suitable to be treated with progestins. All subjects determined to be PrR- at screening, as well as those subjects who experience disease progression after at least 4 weeks of progestin monotherapy, will receive XBIO-101 in combination with continued progestin treatment. Subjects will receive treatment until disease progression as defined according to RECIST 1.1 criteria.

Our lead proprietary technology is PolyXen™, an enabling platform technology designed for protein or peptide therapeutics. It uses the natural polymer polysialic acid ("PSA") to prolong a drug's circulating half-life and potentially improve other pharmacological properties. PolyXen™ has been demonstrated in human clinical trials to confer extended half-life to biotherapeutics such as recombinant human erythropoietin and recombinant Factor VIII ("rFVIII"). We believe this technology may be used in a variety of drug candidates to enhance the properties of the therapeutic, potentially providing advantages over competing products.

Recent Developments

In May 2017, we announced that our strategic collaborator, Shire plc ("Shire"), had terminated further development of SHP656, its polysialylated rFVIII drug candidate being developed using our proprietary PolyXen™ technology. While Shire's Phase 1/2 trial demonstrated SHP656's efficacy and pharmacokinetic data commensurate with the profile of an extended half-life rFVIII product, the pre-defined once-weekly dosing criterion set forth in the research, development, license and supply agreement was not met. To our knowledge, there were no drug-related adverse events, serious adverse events, or rFVIII inhibitors reported to date. Though the trial's pre-defined once-weekly dosing criterion was not met, we intend to explore the potential for future collaborations with Shire.

In October 2017, we entered into a Right to Sublicense Agreement (the "Sublicense Agreement") with Baxalta Incorporated, Baxalta US Inc., and Baxalta GmbH (collectively, with their affiliates, "Baxalta") wholly-owned subsidiaries of Shire. Pursuant to the Sublicense Agreement, we granted to Baxalta the right to grant a nonexclusive sublicense to certain patents related to our PolyXen™ technology that were previously exclusively licensed to Baxalta pursuant to an agreement between us and Baxalta (the "Licensed Patents") in connection with products relating to the treatment of blood and bleeding disorders (the "Covered Products"). The term of the Sublicense Agreement continues on a country-to-country basis until the expiration of the last-to-expire Licensed Patents or upon certification from Baxalta that it is not receiving compensation for sales of Covered Products in a given country, whichever is later (the "Term").

Pursuant to the Sublicense Agreement, Baxalta agreed to pay us (i) a one-time payment of seven million five hundred thousand dollars ($7,500,000) and (ii) single digit royalty payments based upon net sales of the Covered Products throughout the Term, each of which is conditioned upon the performance of the sublicense contemplated by the Sublicense Agreement. The $7.5 million one-time payment was received in November 2017.

We are also developing a broad pipeline of clinical candidates for next-generation biologics and novel oncology therapeutics in a number of orphan disease indications. Though we hold a broad patent portfolio, the current focus of our internal development efforts is currently limited to research and development of our lead product candidate XBIO-101 because of capital constraints.

Critical Accounting Estimates

The preparation of our financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amount of expenses during the reporting period. On an ongoing basis, we evaluate management's estimates that are based on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. The result of these evaluations forms the basis for making judgments about the carrying values of assets and liabilities and the reported amount of expenses that are not readily apparent from other sources. Because future events and their effects cannot be determined with certainty, actual results could differ from our assumptions and estimates, and such differences could be material.

There has been no material change to our critical accounting estimates since those critical accounting estimates described in our Annual Report on Form 10-K for the year ended December 31, 2016 filed with the SEC on March 31, 2017, as amended on May 1, 2017.

RESULTS OF OPERATIONS

Comparison of Quarter Ended September 30, 2017 and 2016

The comparison of our historical results of operations for the three months ended September 30, 2017 to the three months ended September 30, 2016 is as follows:

Description	Quarter Ended September 30, 2017	Quarter Ended September 30, 2016	Increase (Decrease)	Percentage Change
Revenue	$ 85,000	$ –	$ 85,000	100.0
Cost of research and development revenue	(97,028)	–	97,028	100.0
Research and development expenses	(884,797)	(891,828)	(7,031)	(0.8)
General and administrative expenses	(1,343,671)	(1,359,801)	(16,130)	(1.2)
Loss from operations	(2,240,496)	(2,251,629)	(11,133)	(0.5)
Other non-operating income (expense):				
Change in fair value of derivative liability	–	241,298	241,298	100.0
Loss on issuance of hybrid debt instruments	–	(106,566)	(106,566)	(100.0)
Other income (expense)	(14,979)	(13,440)	1,539	11.5
Interest income	–	4	4	(100.0)
Interest expense	(425)	(341,648)	(341,223)	(99.9)
Net loss	$ (2,255,900)	$ (2,471,981)	$ (216,081)	(8.7)

Revenue and Cost of Research and Development Revenue

Revenue and cost of research and development revenue represent collaboration services related to research and development programs conducted on behalf of third parties in 2017. There were no such third party programs in 2016.

Research and Development Expenses

Overall, corporate research and development ("R&D") expenses were substantially the same for the quarter ended September 30, 2017 compared to the same period in 2016. The table below sets forth the R&D costs incurred by us, by category of expense, for the three months ended September 30, 2017 and 2016:

	Three Months Ended,	
Category of Expense	September 30, 2017	September 30, 2016
Outside services and contract research organizations	$ 657,683	$ 596,399
Salaries and wages	128,553	115,283
Share-based compensation expense	29,598	113,976
Other	68,963	66,170
Total research and development expense	$ 884,797	$ 891,828

The decrease in R&D expenses was primarily due to decreases in clinical development costs associated with program initiatives in 2016 and in share-based compensation expense related to forfeited stock options and the change in value of warrants issued to Serum in 2016. Costs associated with outside services and contract research organizations were higher in 2017 compared to 2016 primarily due to the commencement of site initiation and patient recruitment in our XBIO-101 phase 2 clinical trial.

General and Administrative Expenses

General and administrative expenses decreased by approximately $16,000 or 1.2% for the three months ended September 30, 2017, to $1.3 million from $1.4 million in the comparable quarter in 2016. The most significant drivers of the decrease relate to a decrease in non-employee share-based compensation and a decrease in costs associated with our 2016 public offering. These decreases were substantially offset by increases in personnel costs including salary, benefits and travel as we hired our Chief Operating Officer in December 2016 and our Chief Financial Officer in April 2017, and our ongoing public company costs.

Hybrid Debt Instruments

During the three months ended September 30, 2016, we recorded a net charge of approximately $0.2 million associated with hybrid debt instruments including a $0.1 million loss on issuance of hybrid debt instruments and interest expense of $0.3 million associated with the instruments. These costs were offset by a $0.2 million gain from changes in derivative fair value during the quarter. All hybrid debt instruments were settled in November 2016 and none were issued or outstanding in 2017.

Other Income (Expense)

Other expense increased approximately $2,000, or 11.5% from approximately $13,000 for the three months ended September 30, 2016 to approximately $15,000 for the three months ended September 30, 2017. This increase is primarily related to changes in foreign currency exchange rates between the periods.

Interest Expense

Interest expense related to the notes associated with hybrid instruments of $0.3 million was recognized during the three months ended September 30, 2016. The notes were settled in November 2016 and, therefore, no such interest expense was recognized during the three months ended September 30, 2017.

Comparison of Nine Months Ended September 30, 2017 and 2016

The comparison of our historical results of operations for the nine months ended September 30, 2017 to the nine months ended September 30, 2016 is as follows:

Description	Nine Months Ended September 30, 2017	Nine Months Ended September 30, 2016	Increase (Decrease)	Percentage Change
Revenue	$ 85,000	$ –	$ 85,000	100.0
Cost of research and development revenue	(156,119)	–	156,119	100.0
Research and development expenses	(2,979,778)	(3,526,322)	(546,544)	(15.5)
IPR&D expense	–	(39,500,000)	(39,500,000)	(100.0)
General and administrative expenses	(4,948,675)	(4,339,844)	608,831	14.0
Loss from operations	(7,999,572)	(47,366,166)	(39,366,594)	(83.1)
Other non-operating income (expense):				
Change in fair value of derivative liability	–	2,146,587	2,146,587	100.0
Loss on issuance of hybrid debt instruments	–	(1,690,784)	(1,690,784)	(100.0)
Loss on conversion of debt	–	(6,187,337)	(6,187,337)	(100.0)
Other income (expense)	(49,611)	(26,991)	22,620	83.8
Interest income	10,201	31	(10,170)	(32,806.5)
Interest expense	(1,469)	(690,118)	(688,649)	(99.8)
Net loss	$ (8,040,451)	$ (53,814,778)	$ (45,774,327)	(85.1)

Revenue and Cost of Research and Development Revenue

Revenue and cost of research and development revenue represents collaboration services related to research and development programs conducted on behalf of third parties in 2017. There were no such third party programs in 2016.

Research and Development Expenses

Overall, corporate R&D expenses for the nine months ended September 30, 2017 decreased by $40.0 million primarily due to the decrease of in-process research and development ("IPR&D") expense of $39.5 million. During the nine months ended September 30, 2016, we expensed $39.5 million of IPR&D associated with the closing of our acquisition of XBIO-101 from Kevelt. There was no similar expense in 2017. Excluding the effects of the IPR&D expense, R&D expenses decreased $0.5 million, or 15.5% to $3.0 million from $3.5 million in the comparable period in 2016. The table below sets forth the R&D costs incurred by us by category of expense for the nine months ended September 30, 2017 and 2016:

	Nine Months Ended,	
Category of Expense	September 30, 2017	September 30, 2016
IPR&D expense	$ –	$ 39,500,000
Outside services and contract research organizations	2,139,004	1,826,600
Salaries and wages	448,828	364,075
Share-based compensation expense	151,377	1,156,331
Other	240,569	179,316
Total research and development expense	$ 2,979,778	$ 43,026,322

The decrease in R&D expenses exclusive of the IPR&D charge was primarily due to a decrease in share-based compensation expense related to warrants issued to Serum Institute in 2016. Ongoing R&D costs associated with the XBIO-101 program were substantially higher in 2017 compared to 2016 primarily due to the initiation of site initiation and patient recruitment associated with our phase 2 clinical trial. In addition, salaries and wages increased due to the hiring of our Chief Scientific Officer on January 1, 2017.

General and Administrative Expenses

General and administrative expenses increased by approximately $0.6 million or 14.0% for the nine months ended September 30, 2017 to $4.9 million from $4.3 million in the comparable period in 2016. The most significant drivers of the change were related to increases in personnel costs including salary, share-based compensation and travel as we hired our Chief Operating Officer in December 2016 and our Chief Financial Officer in April 2017. These increases were partially offset by a decrease in costs associated with our public offering in 2016.

Hybrid Debt Instruments

During the nine months ended September 30, 2016, we recorded a net gain of approximately $0.2 million associated with hybrid debt instruments representing a $1.7 million loss on issuance and $0.7 million of interest and amortization expenses associated with the instruments both offset a $2.1 million gain from changes in derivative fair value.

On April 22, 2016, Pharmsynthez converted all of the convertible notes of our Company in the principal amount of $6.5 million plus accrued interest of approximately $0.2 million, issued by us to Pharmsynthez resulting in a $6.2 million loss. The conversion rate was $4.95 per share. As such, we issued to Pharmsynthez 1,373,036 shares of common stock in connection with conversion of the convertible notes. The related embedded derivatives, which had been bifurcated from the host debt and accounted for separately, were settled by action of the conversion. All hybrid debt instruments were settled in November 2016 and none were issued or outstanding in 2017.

Other Income (Expense)

Other expense increased approximately $23,000, or 83.8% to approximately $50,000 for the nine months ended September 30, 2017. This increase is primarily related to changes in foreign currency exchange rates between the periods.

Interest Expense

Interest expense decreased by approximately $0.7 million, or 99.8%, to approximately $1,000 for the nine months ended September 30, 2017. The decrease is due to the settlement of all outstanding debt in connection with the proceeds from our underwritten public offering in November 2016.

Liquidity and Capital Resources

We incurred a net loss of approximately $8.0 million for the nine months ended September 30, 2017, and had an accumulated deficit of $150.4 million at September 30, 2017. Working capital was approximately ($0.1) million and $6.5 million at September 30, 2017 and December 31, 2016, respectively. During the nine months ended September 30, 2017, our working capital decreased by $6.6 million due primarily to outflows for general operating costs and costs related to our XBIO-101 phase 2 clinical trial. We expect to continue incurring losses for the foreseeable future and will need to raise additional capital or pursue other strategic alternatives in the near term in order to continue the pursuit of our business plan and continue as a going concern.

Our principal source of liquidity consists of cash. At September 30, 2017, we had approximately $0.7 million in cash and $2.1 million in accounts payable and accrued expenses. At December 31, 2016, we had approximately $4.0 million in cash and $1.8 million in accounts payable and accrued expenses.

We have historically relied upon sales of our equity securities to fund our operations. Since 2005, we have raised approximately $60.0 million in proceeds from offerings of our common and preferred stock, including net proceeds of approximately $9.0 million from our underwritten public offering in November 2016. We have also received approximately $13.0 million from revenue producing activities from 2005 through September 30, 2017, including a $3.0 million milestone payment from Shire recognized in the fourth quarter of 2016 and received in January 2017. More than 90% of the milestone revenue received to date has been from a single collaborator, Shire. We expect the majority of our funding through equity or equity-linked instruments, debt financings and/or licensing agreements to continue as a trend for the foreseeable future.

In October 2017, we entered into the Sublicense Agreement with Baxalta. Pursuant to the Sublicense Agreement, we granted to Baxalta the right to grant a nonexclusive sublicense to certain patents related to our PolyXen™ technology that were previously exclusively licensed to Baxalta pursuant to an agreement between us and Baxalta (the "Licensed Patents") in connection with products relating to the treatment of blood and bleeding disorders (the "Covered Products"). The term of the Sublicense Agreement continues on a country-to-country basis until the expiration of the last-to-expire Licensed Patents or upon certification from Baxalta that it is not receiving compensation for sales of Covered Products in a given country, whichever is later (the "Term"). Pursuant to the Sublicense Agreement, Baxalta agreed to pay us (i) a one-time payment of seven million five hundred thousand dollars ($7,500,000) and (ii) single digit royalty payments based upon net sales of the Covered Products throughout the Term. The $7.5 million one-time payment was received in November 2017.

We estimate that our existing resources will only be able to fund our planned operations, existing obligations and contractual commitments through the second quarter of 2018. This projection is based on our current expectations regarding projected staffing expenses, working capital requirements, capital expenditure plans and anticipated revenues. Given our current working capital constraints, we have attempted to minimize cash commitments and expenditures for external research and development and general and administrative services to the greatest extent practicable. We will need to raise additional working capital in the near term in order to fund our future operations.

We have no committed sources of additional capital. Our management believes that we have access to capital resources through possible public or private equity offerings, debt financings, corporate collaborations, related party funding or other means; however, we have not secured any commitment for additional financing at this time. The terms, timing and extent of any future financing will depend upon several factors including the achievement of progress in our clinical development programs, our ability to identify and enter into licensing or other strategic arrangements and factors related to financial, economic and market conditions, many of which are beyond our control.

Our management evaluates whether there are conditions or events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that the financial statements are issued. We have incurred substantial losses since our inception and we expect to continue to incur operating losses in the near-term. These factors raise substantial doubt about our ability to continue as a going concern. We will need to raise additional capital in order to sustain our operations. If we are unable to secure additional funds on a timely basis or on acceptable terms, we may be required to defer, reduce or eliminate significant planned expenditures, restructure, curtail or eliminate some or all of our development programs or other operations, reduce general and administrative expenses, and delay or cease the purchase of clinical research services, dispose of technology or assets, pursue an acquisition of our company by another party at a price that may result in a loss on investment for our stockholders, enter into arrangements that may require us to relinquish rights to certain of our drug candidates, technologies or potential markets, file for bankruptcy or cease operations altogether.

We continue to seek appropriate out-license arrangements for our ErepoXen™ technology but are currently unable to reliably predict whether or when we may enter into an agreement. Due to the uncertainties inherent in the clinical research process and unknown future market conditions, there can be no assurance our ErepoXen™ technology will lead to any future income.

Cash Flows from Operating Activities

Cash flows used in operating activities for the nine months ended September 30, 2017 totaled approximately $3.3 million, which was primarily due to our $8.0 million net loss for the period offset by non-cash charges of $1.5 million. This net use of cash was substantially offset by the receipt of the $3.0 million clinical milestone payment from Shire in January 2017.

Cash flows used in operating activities for the nine months ended September 30, 2016 totaled approximately $4.2 million, which includes a net loss of $53.8 million offset by $48.6 million in non-cash charges related to the XBIO-101 asset acquisition, which was immediately expensed ($39.5 million), as well as hybrid debt instruments, which included $6.4 million of issuance loss, interest, amortization, change in fair value, and loss on extinguishment upon conversion of the debt host. In addition, we recognized a net non-cash charge of approximately $2.6 million for share-based compensation and warrants.

Cash Flows from Investing Activities

For the nine months ended September 30, 2017 and 2016, there were no significant cash sources or uses from investing activities.

Cash Flow from Financing Activities

For the nine months ended September 30, 2017, there were no significant cash sources or uses from financing activities. During the nine months ended September 30, 2016, we received $4.5 million in proceeds from issuance of $4.5 million 10% convertible secured promissory notes in connection with the APA.

Contractual Obligations and Commitments

As of September 30, 2017, there were no material changes in our contractual obligations and commitments from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on March 31, 2017, as amended on May 1, 2017.

Off Balance Sheet Arrangements

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

Recent Accounting Standards

See Note 2 in our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on March 31, 2017, as amended on May 1, 2017 for a discussion of recent accounting pronouncements.

Critical Accounting Policies and Estimates

Our condensed consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States. The preparation of our condensed consolidated financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities, revenue, costs and expenses. We base our estimates and assumptions on historical experience and other factors that we believe to be reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. The results of these evaluations form the basis for making judgments about the carrying values of the assets and liabilities and the reported amount of expenses that are not readily apparent from other sources. Our actual results may differ from these estimates. There have been no material changes in our critical accounting policies from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2016 filed with the SEC on March 31, 2017, as amended on May 1, 2017.

ITEM 3 – QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are not required to provide the information required by this Item because we are a “smaller reporting company” as defined in Rule 12b-2 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”).

ITEM 4 – CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer (principal executive officer) and our Chief Financial Officer (principal financial officer), evaluated the effectiveness of our disclosure controls and procedures as defined in Rules 13a-15(e) or 15d-15(e) under the Exchange Act, as of the end of the period covered by this Quarterly Report on Form 10-Q.

Based on this evaluation, our management, including our Chief Executive Officer and our Chief Financial Officer, concluded that, as of the end of the period covered by this Quarterly Report on Form 10-Q, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the period covered by this Quarterly Report on Form 10-Q that would have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

ITEM 1 – LEGAL PROCEEDINGS

From time to time, we are subject to legal proceedings and claims arising from the conduct of our business operations, including litigation related to employment matters. See Note 10, Commitments and Contingencies to the unaudited condensed consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for a discussion of recent legal proceedings.

ITEM 1A – RISK FACTORS

Except for the risk factors set forth below, there have been no material changes to the risk factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2016 filed with the SEC on March 31, 2017, as amended on May 1, 2017.

Our independent registered public accounting firm and the Company have expressed substantial doubt about our ability to continue as a going concern.

Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern. As described in the notes to the condensed consolidated financial statements, we have incurred recurring losses and negative cash flows from operations since inception and have an accumulated deficit at September 30, 2017 of $150.4 million. These matters raise substantial doubt about our ability to continue as a going concern. Our condensed consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. If we cannot continue as a viable entity, our stockholders may lose some or all of their investment in us.

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

None.

ITEM 3 – DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4 – MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5 – OTHER INFORMATION

None.

ITEM 6 – EXHIBITS

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

EXHIBIT NUMBER	DESCRIPTION
3.1	Articles of Incorporation (incorporated by reference to Exhibit 3.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-178082) filed with the SEC on November 21, 2011).
3.2	Certificate of Amendment to Articles of Incorporation (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 333-178082) filed with the SEC on February 12, 2013).
3.3	Certificate of Amendment to Articles of Incorporation (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 333-178082) filed with the SEC on February 27, 2013).
3.4	Certificate of Amendment to Articles of Incorporation (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 333-178082) filed with the SEC on January 10, 2014).
3.5	Certificate of Change Pursuant to NRS 78.209 (incorporated by reference to Exhibit 3.2 to the Registrant' s Quarterly Report on Form 10-Q (File No. 333-178082) filed with the SEC on January 10, 2014).
3.6	Certificate of Amendment to Articles of Incorporation (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 333-178082) filed with the SEC on September 30, 2015.
3.7	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-37937) filed with the SEC on February 27, 2017).
3.8	Form of Amended and Restated Certificate of Designation of Preferences, Rights and Limitations of Series A Preferred Stock (incorporated by reference to Exhibit 3.8 of the Registrant's Registration Statement on Form S-1/A (File No. 333-211249) filed with the SEC on October 27, 2016).
3.9	Second Amended and Restated Certificate of Designation of Preferences, Rights and Limitations of Series B Preferred Stock (incorporated by reference to Exhibit 3.9 of the Registrant's Registration Statement on Form S-1/A (File No. 333-211249) filed with the SEC on October 31, 2016).
31.1*	Certification of Jeffrey F. Eisenberg, Principal Executive Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of James Parslow, Principal Financial Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certifications of Jeffrey F. Eisenberg, Principal Executive Officer, and James Parslow, Principal Financial Officer, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

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

SIGNATURES

Pursuant to the requirements of 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.

November 14, 2017

By: /S/ Jeffrey F. Eisenberg
Jeffrey F. Eisenberg
Chief Executive Officer
(Principal Executive Officer)

November 14, 2017

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

EXHIBIT 31.1

I, Jeffrey F. Eisenberg, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: November 14, 2017

By: /s/ Jeffrey F. Eisenberg
Jeffrey F. Eisenberg
Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

I, James Parslow, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: November 14, 2017

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

EXHIBIT 32.1

CERTIFICATION

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

The Company's Quarterly Report on Form 10-Q for the period ended September 30, 2017, to which this Certification is attached as Exhibit 32.1 (the "Periodic Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

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

Date: November 14, 2017

In Witness Whereof, the undersigned have set their hands hereto as of the 14th day of November, 2017.

/s/ Jeffrey F. Eisenberg
Jeffrey F. Eisenberg
Chief Executive Officer

/s/James Parslow
James Parslow
Chief Financial Officer

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