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

FORM 10-Q

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

FOR THE QUARTERLY PERIOD ENDED March 31, 2016

or

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

FOR THE TRANSITION PERIOD FROM _____ TO _____.

Commission file number 033-80623

OncoGenex Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**95-4343413**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification Number)**

19820 North Creek Parkway, Bothell, Washington 98011
(Address of Principal Executive Offices)

(425) 686-1500
(Registrant's telephone number, including area code)

Indicate by check 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 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, or a smaller reporting company. See the definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class	**Outstanding at May 12, 2016**
Common Stock, $0.001 par value	29,914,226

OncoGenex Pharmaceuticals, Inc.

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PART I. FINANCIAL INFORMATION

Item 1. Consolidated Financial Statements

OncoGenex Pharmaceuticals, Inc.

Consolidated Balance Sheets

(In thousands, except per share and share amounts)

	March 31, 2016 (Unaudited)	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents *[note 4]*	$ 18,913	$ 34,310
Short-term investments *[note 4]*	27,201	20,876
Interest receivable	53	111
Prepaid expenses	1,585	1,987
Other current assets	233	14
Total current assets	**47,985**	**57,298**
Restricted cash *[note 4 and note 7]*	272	272
Property and equipment, net	546	602
Other assets	38	37
Total assets	**$ 48,841**	**$ 58,209**
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 592	$ 1,343
Accrued liabilities other	909	641
Accrued clinical liabilities	8,450	9,966
Accrued compensation	744	1,267
Current portion of long-term obligations *[note 7]*	51	52
Lease termination liability *[note 7]*	1,250	1,250
Deferred collaboration revenue *[note 3]*	2,099	5,040
Warrant liability *[note 4 and note 5]*	438	1,105
Total current liabilities	**14,533**	**20,664**
Long-term obligations, less current portion *[note 7]*	92	105
Total liabilities	**14,625**	**20,769**
Commitments and contingencies *[note 7]*		
Stockholders' equity:		
Common stock, $0.001 par value, 75,000,000 shares authorized, 29,948,219 and 29,846,991 issued at March 31, 2016 and December 31, 2015, respectively, and 29,914,226 and 29,812,998 outstanding at March 31, 2016 and December 31, 2015, respectively	30	29
Additional paid-in capital	212,058	211,590
Accumulated deficit	(180,518)	(176,811)
Accumulated other comprehensive income	2,646	2,632
Total stockholders' equity	**34,216**	**37,440**
Total liabilities and stockholders' equity	**$ 48,841**	**$ 58,209**

See accompanying notes.

OncoGenex Pharmaceuticals, Inc.

Consolidated Statements of Loss and Comprehensive Loss

(Unaudited)

(In thousands, except per share and share amounts)

	Three Months Ended March 31,	
	2016	**2015**
COLLABORATION REVENUE ***(note 3)***	$ 2,940	$ 1,374
EXPENSES		
Research and development	4,642	3,673
General and administrative	2,299	2,698
Restructuring costs *[note 7]*	431	—
Total operating expenses	7,372	6,371
OTHER INCOME (EXPENSE)		
Interest income	48	54
Other	10	(39)
Gain on warrants	667	465
Total other income	725	480
Net loss	$ (3,707)	$ (4,517)
OTHER COMPREHENSIVE INCOME		
Net unrealized gain on securities	14	13
Total other comprehensive income	14	13
Comprehensive loss	$ (3,693)	$ (4,504)
Basic and diluted net loss per common share	$ (0.12)	$ (0.20)
Shares used in computation of basic and diluted net loss per common share	29,827,824	22,656,022

See accompanying notes

OncoGenex Pharmaceuticals, Inc.

Consolidated Statements of Cash Flows

(Unaudited)

(In thousands)

	Three Months Ended March 31,	
	2016	**2015**
Operating Activities:		
Net loss	$ (3,707)	$ (4,517)
Adjustments to reconcile net loss to net cash used in operating activities:		
Gain on warrants *[note 4 and note 5 [f]]*	(667)	(465)
Depreciation	56	46
Stock-based compensation *[note 5 [c] and note 5 [d]]*	468	516
Changes in operating assets and liabilities:		
Interest receivable	58	42
Amounts receivable	(219)	4,117
Prepaid expenses and other assets	401	(842)
Accounts payable	(751)	916
Accrued liabilities other	268	(1,849)
Accrued clinical liabilities	(1,516)	(3,797)
Accrued compensation	(523)	(602)
Restricted cash	—	61
Excess lease liability	—	(194)
Lease obligation	(14)	124
Deferred collaboration revenue *[Note 3]*	(2,941)	—
Net cash (used in) operating activities	(9,087)	(6,444)
Financing Activities:		
Taxes paid related to net share settlement of equity awards	—	(52)
Net cash (used in) provided by financing activities	—	(52)
Investing Activities:		
Purchase of investments	(24,169)	1,071
Proceeds from maturities of investments	17,859	3,011
Purchase of property and equipment	—	(205)
Net cash (used in) provided by investing activities	(6,310)	3,877
Effect of exchange rate changes on cash	—	—
Net increase in cash and cash equivalents	(15,397)	(2,619)
Cash and cash equivalents at beginning of period	34,310	27,897
Cash and cash equivalents at end of period	$ 18,913	$ 25,278

See accompanying notes.

1. NATURE OF BUSINESS AND BASIS OF PRESENTATION

OncoGenex Pharmaceuticals, Inc. (referred to as "OncoGenex," "we," "us," or "our") is a biopharmaceutical company committed to the development and commercialization of new therapies that address treatment resistance in cancer patients. We were incorporated in the state of Delaware, are headquartered in Bothell, Washington and have a subsidiary in Vancouver, British Columbia.

The unaudited consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States for interim financial information and with the instructions to Form 10-Q. Accordingly, they do not include all of the information and footnotes required to be presented for complete financial statements. The accompanying unaudited consolidated financial statements reflect all adjustments (consisting only of normal recurring items) which are, in the opinion of management, necessary for a fair presentation of the results for the interim periods presented. The accompanying consolidated Balance Sheet at December 31, 2015 has been derived from the audited consolidated financial statements included in our Annual Report on Form 10-K for the year then ended. The unaudited consolidated financial statements and related disclosures have been prepared with the assumption that users of the interim financial information have read or have access to the audited consolidated financial statements for the preceding fiscal year. Accordingly, these financial statements should be read in conjunction with the audited consolidated financial statements and the related notes thereto included in the Annual Report on Form 10-K for the year ended December 31, 2015 and filed with the United States Securities and Exchange Commission, or the SEC, on March 9, 2016.

The consolidated financial statements include the accounts of OncoGenex and our wholly owned subsidiary, OncoGenex Technologies Inc., or OncoGenex Technologies. All intercompany balances and transactions have been eliminated. Certain comparative figures have been reclassified to conform with the financial presentation adopted for the current year.

2. ACCOUNTING POLICIES

Pending Adoption of Recent Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board, or FASB, issued ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting.* ASU 2016-09 simplifies several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. Some of the areas of simplification apply only to nonpublic entities. For public business entities, the amendments in ASU 2016-09 are effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. For all other entities, the amendments are effective for annual periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018. Early adoption is permitted for any entity in any interim or annual period for which financial statements haven't been issued or made available for issuance. If an entity early adopts the amendments in an interim period, any adjustments must be reflected as of the beginning of the fiscal year that includes that interim period. An entity that elects early adoption must adopt all of the amendments in the same period. We are currently evaluating the impact of adoption on its financial position and results from operations.

In February 2016, the FASB issued its new leases standard, ASU No. 2016-02, Leases (Topic 842) (ASU 2016-02). ASU 2016-02 is aimed at putting most leases on lessees' balance sheets, but it would also change aspects of lessor accounting. ASU 2016-02 is effective for public business entities for annual periods beginning after December 15, 2018 and interim periods within that year. This standard is expected to have a significant impact on our current accounting for our lease arrangements, particularly our current operating lease arrangements, as well as, disclosures. We are currently evaluating the impact of adoption on its financial position and results from operations.

In November 2015, the FASB issued ASU No. 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes. The standard requires that deferred tax liabilities and assets be classified as noncurrent in a classified statement of financial position. Entities are currently required to separate deferred income tax liabilities and assets into current and noncurrent amounts in a classified statement of financial position. The amendments, which require non-current presentation only (by jurisdiction), are effective for financial statements issued for annual periods beginning after December 15, 2016 with earlier application permitted as of the beginning of an interim or annual reporting period. The guidance is to be applied either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. We are currently in the process of evaluating the impact of adoption of ASU No. 2015-17 on our consolidated financial statements and related disclosures

In August 2014, the Financial Accounting Standards Board, or FASB issued Accounting Standards Updated, or ASU No. 2014-15, Presentation of Financial Statements-Going Concern (Subtopic 2015-40) (ASU 2014-15). ASU 2014-15 provides guidance to U.S.

GAAP about management's responsibility to evaluate whether there is a substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. This new rule requires management to assess an entity's ability to continue as a going concern by incorporating and expanding upon certain principles currently in the U.S. auditing standards. Specifically, ASU 2014-15 (1) defines the term substantial doubt, (2) requires an evaluation of every reporting period including interim periods, (3) provides principles for considering the mitigating effect of management's plans, (5) requires an express statement and other disclosures when substantial doubt is not alleviated, and (6) requires an assessment for a period of one year after the date that the financial statements are issued (or available to be issued). This guidance is effective for annual periods ending after December 15, 2016. We are currently in the process of evaluating the impact of adoption of ASU No. 2014. Depending on our capital resources and forecasted expenses at the time of adoption, the impact of ASU No. 2014-15 could have an impact on our consolidated financial statements and related disclosures.

In May 2014, the FASB, issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606): Revenue from Contracts with Customers, which guidance in this update will supersede the revenue recognition requirements in Topic 605, Revenue Recognition, and most industry-specific guidance when it becomes effective. ASU No. 2014-09 affects any entity that enters into contracts with customers to transfer goods or services or enters into contracts for the transfer of nonfinancial assets unless those contracts are within the scope of other standards. The core principal of ASU No. 2014-09 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 or services. In doing so, companies will need to use more judgment and make more estimates than under current guidance. These may include identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. ASU No. 2014-09 is effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period, which will be our fiscal year 2018 (or December 31, 2018), and entities can transition to the standard either retrospectively or as a cumulative-effect adjustment as of the date of adoption. Early adoption is permitted. We are currently in the process of evaluating the impact of adoption of ASU No. 2014-09 on our consolidated financial statements and related disclosures.

Recently Adopted Accounting Policies

In February 2015, the FASB issued ASU 2015-02,*Consolidation (Topic 810) — Amendments to the Consolidation Analysis.* ASU 2015-02 eliminates the deferral of FAS 167 and makes changes to both the variable interest model and the voting model. For public business entities, the guidance is effective for annual and interim periods beginning after 15 December 2015. For nonpublic business entities, it is effective for annual periods beginning after December 15, 2016 and interim periods beginning after December 15, 2017. Early adoption is permitted for annual and interim periods. The adoption of this standard did not have a significant impact on our financial position or results of operations.

In January 2015, the FASB issued ASU 2015-01,*Income Statement—Extraordinary and Unusual Items (Subtopic 225-20): Simplifying Income Statement Presentation by Eliminating the Concept of Extraordinary Items.* ASU 2015-01 eliminates the concept of reporting extraordinary items, but retains current presentation and disclosure requirements for an event or transaction that is of an unusual nature or of a type that indicates infrequency of occurrence. Transactions that meet both criteria would now also follow such presentation and disclosure requirements. For all entities, the guidance is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2015. Early adoption is permitted; however, adoption must occur at the beginning of an annual period and can be applied prospectively or retrospectively. The adoption of this standard did not have a significant impact on our financial position or results of operations.

3. COLLABORATION AGREEMENT

In December 2009, we, through our wholly-owned subsidiary, OncoGenex Technologies, entered into a collaboration agreement, or Collaboration Agreement, with Teva Pharmaceutical Industries Ltd., or Teva, for the development and global commercialization of custirsen (and related compounds), a pharmaceutical compound designed to inhibit the production of clusterin, a protein we believe is associated with cancer treatment resistance, or the Licensed Product. In December 2014, we and Teva agreed to terminate the Collaboration Agreement upon entry into a termination agreement. In April 2015, OncoGenex Technologies and Teva entered into an agreement, or the Termination Agreement, pursuant to which the Collaboration Agreement was terminated and we regained rights to custirsen.

Pursuant to the Termination Agreement, Teva paid to us, as advanced reimbursement for certain continuing research and development activities related to custirsen, an amount equal to $27.0 million less approximately $3.8 million, which reduction represented a hold-back amount of $3.0 million and $0.8 million for certain third-party expenses incurred by Teva between January 1, 2015 and April 24, 2015, or Closing Date. Teva was permitted to deduct from the $3.0 million hold-back certain costs incurred after January 1, 2015 that arose after the Closing Date. Teva will be responsible for expenses related to custirsen incurred pursuant to the Collaboration Agreement through December 31, 2014. We will be responsible for certain custirsen-related expenses from and after January 1, 2015. Pursuant to the Termination Agreement, one half of the then remaining hold-back amount will be paid to us six months after the

Closing Date, one half of the then remaining hold-back amount will be paid to us nine months after the Closing Date and the entire then remaining hold-back amount will be paid to us 12 months after the Closing Date. As of March 31, 2016, the entire amount of the holdback had been almost fully deducted by Teva for certain custirsen-related costs incurred after the Closing Date. We received a nominal amount from the remaining hold-back in October 2015, representing one half of the then remaining amount six months from the Closing Date. We expect to receive only nominal amounts from the remaining hold-back.

In accordance with the Termination Agreement, Teva transferred certain third-party agreements for the ENSPIRIT study and custirsen development activities to us on the Closing Date. If any additional historical third-party agreements are discovered after the Closing Date and are used to conduct the ENSPIRIT study, then Teva will use commercially reasonable effort to assign such agreements to us and will be responsible for any costs invoiced under such agreements in excess of an aggregate of $0.1 million. We will be responsible for the initial $0.1 million of costs under such agreements.

All licenses granted by us to Teva under the Collaboration Agreement were terminated as of the Closing Date. In addition, Teva assigned to us certain patent applications related to custirsen and abandoned certain other patent applications as requested by us. Furthermore, Teva granted to us and our affiliates an exclusive license (except as to Teva and its affiliates) to any know-how created under and during the term of the Collaboration Agreement to develop, manufacture and commercialize custirsen and certain other antisense inhibitors of clusterin, as set forth in more detail in the Termination Agreement. Teva additionally granted to us and our affiliates a non-exclusive license to any intellectual property owned by or licensed to Teva and its affiliates, whether as of the Closing Date or thereafter, to develop, manufacture and commercialize custirsen, subject to certain limitations. Teva also agreed not to challenge the patentability, validity or enforceability of certain of our patents, and agreed not to file any patent applications covering custirsen or any antisense inhibitor of clusterin for 18 months after the Closing Date. We are responsible for any such expenses incurred from and after January 1, 2015. We do not owe Teva any development milestone payments or royalty payments on sales of custirsen, if any.

As part of the termination, Teva assigned to us the investigational new drug application for custirsen and submitted amendments, on a country-by-country basis, transferring sponsorship of the ENSPIRIT study to us. In July 2015, we became the sole trial sponsor for the ENSPIRIT study in all countries.

We and Teva released each other from all claims related to the Collaboration Agreement. In addition, we agreed to indemnify Teva and its affiliates against any third-party claims attributable to the development and commercialization of custirsen prior to the execution of the Collaboration Agreement and after the Closing Date, and any third-party claims attributable to the conduct of the AFFINITY study. Teva agreed to indemnify us and our affiliates against any third-party claims attributable to the development of custirsen during the period between the execution of the Collaboration Agreement and the Closing Date, but excluding the AFFINITY study. The parties' indemnity obligations cover, among other things, third-party claims brought by current or former patients in the relevant studies and patient product liability claims.

Revenue for the three months ended March 31, 2016 was $2.9 million, which consists of recognition of deferred collaboration revenue representing our efforts in the development of custirsen. As of March 31, 2016, a remaining balance of $2.1 million of the advanced reimbursement payment was recorded in deferred collaboration revenue. The advanced reimbursement payment made by Teva, as part of the Termination Agreement, was deferred and will be recognized as collaboration revenue on a dollar for dollar basis as costs are incurred as part of the continuing research and development activities related to custirsen.

Ionis and UBC License Agreements

Pursuant to the terms of the agreements with Ionis and UBC, we anticipate we will pay royalties to third-parties of 4.0% to 8.0% of net sales, unless our royalties are adjusted for competition from generic compounds, in which case royalties to third parties will also be subject to adjustment on a country-by-country basis. Certain third-party royalties are tiered based on the royalty rate received by us. Minimum royalty rates payable by us assume certain third-party royalties are not paid at the time that the Licensed Product is marketed due to the expiration of patents held by such third parties. Maximum royalty rates assume all third-party royalty rates currently in effect continue in effect at the time the Licensed Product is marketed. We did not make any royalty payments to Ionis in the three months ended March 31, 2016. In addition, pursuant to the terms of the agreement with Ionis, we are required to pay to Ionis up to 20% of all non-royalty revenue (defined to mean revenue not based on net sales of products) we receive from third parties. Pursuant to the terms of agreement with UBC, we are required to pay low single digit royalties on milestones and the revenue from sales of custirsen. We did not make any royalty or milestone payments to UBC under the terms of the agreement in the three months ended March 31, 2016.

In May and November 2015, we received communications from Ionis requesting payment of 30% of the $23.2 million paid by Teva under the Termination Agreement, as well as 30% of any amounts paid by Teva upon release of the $3.0 million holdback amount. In January 2016, Ionis filed a lawsuit and claims that OncoGenex Technologies is in breach of the license agreement for failing to pay Ionis a share of the advance reimbursement payment from Teva and other non-monetary consideration received from Teva in connection with the termination of the Collaboration Agreement. Ionis seeks damages in the amount of at least $10 million and a declaratory judgment that, based on OncoGenex Technologies' alleged breach, Ionis has the right to terminate the license agreement. We do not believe that

any payments are due to Ionis. Under the Ionis license agreement, no payment is due to Ionis on any consideration that we receive for the reimbursement for research and development activities. The amounts paid or payable by Teva under the Termination Agreement constitute an advanced reimbursement for certain continuing research and development activities related to custirsen and certain other antisense inhibitors of clusterin, and therefore, no payments are owed to Ionis. We intend to vigorously defend the lawsuit and, based on our preliminary review, we believe we have valid defenses.

Amendment to Ionis and UBC License Agreements

To facilitate the execution and performance of our prior Collaboration Agreement with Teva, we and Ionis agreed to amend the Ionis License Agreement and we and UBC agreed to amend the UBC License Agreement, in each case, effective December 19 and December 20, 2009, respectively.

The amendment to the Ionis License Agreement provides, among other things, that if we are the subject of a change of control with a third party, where the surviving company immediately following such change of control has the right to develop and sell the product, then (i) a milestone payment of $20.0 million will be due and payable to Ionis 21 days following the first commercial sale of the product in the United States; and (ii) unless such surviving entity had previously sublicensed the product and a royalty rate payable to Ionis by us has been established, the applicable royalty rate payable to Ionis will thereafter be the maximum amount payable under the Ionis License Agreement. Any non-royalty milestone amounts previously paid will be credited toward the $20.0 million milestone if not already paid. As a result of the $10.0 million milestone payment payable to Ionis in relation to the Collaboration Agreement entered into with Teva in 2009, the remaining amount owing in the event of change of control discussed above is a maximum of $10.0 million.

4. FAIR VALUE MEASUREMENTS

Assets and liabilities recorded at fair value in the balance sheets are categorized based upon the level of judgment associated with the inputs used to measure their fair value. For certain of our financial instruments including amounts receivable and accounts payable the carrying values approximate fair value due to their short-term nature.

ASC 820 “Fair Value Measurements and Disclosures,” specifies a hierarchy of valuation techniques based on whether the inputs to those valuation techniques are observable or unobservable. In accordance with ASC 820, these inputs are summarized in the three broad levels listed below:

- Level 1 – Quoted prices in active markets for identical securities.
- Level 2 – Other significant inputs that are observable through corroboration with market data (including quoted prices in active markets for similar securities).
- Level 3 – Significant unobservable inputs that reflect management’s best estimate of what market participants would use in pricing the asset or liability.

As quoted prices in active markets are not readily available for certain financial instruments, we obtain estimates for the fair value of financial instruments through third-party pricing service providers.

In determining the appropriate levels, we performed a detailed analysis of the assets and liabilities that are subject to ASC 820.

We invest our excess cash in accordance with investment guidelines that limit the credit exposure to any one financial institution other than securities issued by the U.S. Government. These securities are not collateralized and mature within one year.

A description of the valuation techniques applied to our financial instruments measured at fair value on a recurring basis follows.

Financial Instruments

Cash

Significant amounts of cash are held on deposit with large well-established U.S. and Canadian financial institutions.

U.S. Government and Agency Securities

U.S. Government Securities U.S. government securities are valued using quoted market prices. Valuation adjustments are not applied. Accordingly, U.S. government securities are categorized in Level 1 of the fair value hierarchy.

U.S. Agency Securities U.S. agency securities are comprised of two main categories consisting of callable and non-callable agency issued debt securities. Non-callable agency issued debt securities are generally valued using quoted market prices. Callable agency issued debt securities are valued by benchmarking model-derived prices to quoted market prices and trade data for identical or comparable securities. Actively traded non-callable agency issued debt securities are categorized in Level 1 of the fair value hierarchy. Callable agency issued debt securities are categorized in Level 2 of the fair value hierarchy.

Corporate and Other Debt

Corporate Bonds and Commercial Paper The fair value of corporate bonds and commercial paper is estimated using recently executed transactions, market price quotations (where observable), bond spreads or credit default swap spreads adjusted for any basis difference between cash and derivative instruments. The spread data used are for the same maturity as the bond. If the spread data does not reference the issuer, then data that reference a comparable issuer are used. When observable price quotations are not available, fair value is determined based on cash flow models with yield curves, bond or single name credit default swap spreads and recovery rates based on collateral values as significant inputs. Corporate bonds and commercial paper are generally categorized in Level 2 of the fair value hierarchy; in instances where prices, spreads or any of the other aforementioned key inputs are unobservable, they are categorized in Level 3 of the hierarchy.

Warrants

As of March 31, 2016, we recorded a $0.4 million warrant liability. We reassess the fair value of the common stock warrants classified as liabilities at each reporting date utilizing a Black-Scholes pricing model. Inputs used in the pricing model include estimates of stock price volatility, expected warrant life and risk-free interest rate. The computation of expected volatility was based on the historical volatility of shares of our common stock for a period that coincides with the expected life of the warrants that are classified as liabilities. Warrants that are classified as liabilities are categorized in Level 3 of the fair value hierarchy. A small change in the estimates used may have a relatively large change in the estimated valuation. Warrants that are classified as equity are not considered liabilities and therefor are not reassessed for their fair values at each reporting date.

The following table presents information about our assets and liabilities that are measured at fair value on a recurring basis, and indicates the fair value hierarchy of the valuation techniques we utilized to determine such fair value (in thousands):

March 31, 2016	Level 1	Level 2	Level 3	Total
Assets				
Cash	$ 4,350	$ —	$ —	$ 4,350
Money market securities	14,563	—	—	14,563
Restricted cash (Note 7)	272	—	—	272
Corporate bonds and commercial paper	—	27,201	—	27,201
Total assets	**$ 19,185**	**$ 27,201**	**$ —**	**$ 46,386**
Liabilities				
Warrants	$ —	$ —	$ 438	$ 438

The following table presents the changes in fair value of our total Level 3 financial liabilities for the three months ended March 31, 2016. During the three months ended March 31, 2016, we did not issue any common stock warrants that were classified as liabilities (in thousands):

	Liability at December 31, 2015	Issuance of Warrants	Unrealized Gain on warrants	Liability at March 31, 2016
Warrant liability	$ 1,105	$ —	$ (667)	$ 438

Cash, cash equivalents and marketable securities consist of the following (in thousands):

March 31, 2016	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Cash	$ 4,350	$ —	$ —	$ 4,350
Money market securities	14,563	—	—	14,563
Total cash and cash equivalents	$ 18,913	$ —	$ —	$ 18,913
Money market securities (restricted cash)	272	—	—	272
Total restricted cash	$ 272	$ —	$ —	$ 272
Corporate bonds and commercial paper	27,197	6	(2)	27,201
Total short-term investments	$ 27,197	$ 6	$ (2)	$ 27,201

Our gross realized gains and losses on sales of available-for-sale securities were not material for the three months ended March 31, 2016 and 2015.

All securities included in cash and cash equivalents had maturities of 90 days or less at the time of purchase. All securities included in short-term investments have maturities of within one year of the balance sheet date. The cost of securities sold is based on the specific identification method.

We only invest in A (or equivalent) rated securities. We do not believe that there are any other than temporary impairments related to our investment in marketable securities at March 31, 2016, given the quality of the investment portfolio and subsequent proceeds collected on sale of securities that reached maturity.

5. COMMON STOCK

[a] Authorized

75,000,000 authorized common shares, par value of $0.001, and 5,000,000 preferred shares, par value of $0.001.

[b] Issued and outstanding shares

Equity Award Issuances and Settlements

During the three months ended March 31, 2016, we issued no shares of common stock to satisfy stock option exercises and 101,228 shares of common stock to satisfy restricted stock unit settlements, compared with the issuance of no shares of common stock and 82,410 shares of common stock to satisfy stock option exercises and restricted stock unit settlements, respectively, during the three months ended March 31, 2015.

[c] Stock options

2010 Performance Incentive Plan

As of March 31, 2016, we had reserved, pursuant to various plans, 3,797,923 common shares for issuance upon exercise of stock options and settlement of restricted stock units by employees, directors, officers and consultants of ours, of which 2,960,766 were reserved for options currently outstanding, 501,090 were reserved for restricted stock units currently outstanding and 336,067 were available for future equity grants.

Stock Option Summary

We grant stock options that vest over time in accordance with terms as determined by our Board of Directors, or the Board, which terms are typically four years for employee and consultant grants and one to three years for Board option grants. We also grant stock option awards that vest in conjunction with certain performance conditions to executive officers, employees and consultants. At each reporting date, we are required to evaluate whether achievement of the performance conditions is probable. Compensation expense is recorded over the appropriate service period based upon our assessment of accomplishing each performance condition. The expiry date for each option is set by the Board, which is typically seven to ten years. The exercise price of the options is determined by the Board, but will be at least equal to the fair value of the share at the grant date.

Stock option transactions and the number of stock options outstanding are summarized below:

	Number of Optioned Common Shares	Weighted Average Exercise Price
Balance, December 31, 2015	**1,479,221**	**$ 8.78**
Granted	1,513,750	0.85
Forfeited	(32,205)	4.11
Balance, March 31, 2016	**2,960,766**	**$ 4.78**

The fair value of each stock award for employees and directors is estimated on the grant date and for consultants at each reporting period, using the Black-Scholes option-pricing model based on the weighted-average assumptions noted in the following table:

	Three Months Ended March 31,	
	2016	2015
Risk-free interest rates	1.52%	—
Expected dividend yield	0%	—
Expected life	5.3 years	—
Expected volatility	71.80%	—

The expected life was calculated based on the simplified method as permitted by the SEC's Staff Accounting Bulletin 110,*Share-Based Payment*. We consider the use of the simplified method appropriate because we believe our historical stock option exercise activity may not be indicative of future stock option exercise activity based upon the AFFINITY clinical data results we expect to receive in the third quarter of 2016, the structural changes to our business that may result and the potential impact of that data on our business operations and future stock option exercise activity. The expected volatility of options granted was calculated based on the historical volatility of the shares of our common stock. The risk-free interest rate is based on a U.S. Treasury instrument whose term is consistent with the expected life of the stock options. In addition to the assumptions above, as required under ASC 718, management made an estimate of expected forfeitures and is recognizing compensation costs only for those equity awards expected to vest. Forfeiture rates are estimated using historical actual forfeiture rates. These rates are adjusted on a quarterly basis and any change in compensation expense is recognized in the period of the change. We have never paid or declared cash dividends on our common stock and do not expect to pay cash dividends in the foreseeable future.

The results for the periods set forth below included share-based compensation expense for stock options and restricted stock units in the following expense categories of the consolidated statements of loss (in thousands):

	Three Months Ended March 31,	
	2016	2015
Research and development	$ 222	$ 252
General and administrative	$ 246	264
Total stock-based compensation	$ 468	$ 516

As of March 31, 2016 and December 31, 2015, the total unrecognized compensation expense related to stock options granted was $2.2 million and $1.8 million respectively, which is expected to be recognized as expense over a period of approximately 1.8 years from March 31, 2016.

For the three months ended March 31, 2016, a total of 7.2 million shares, consisting of 3.7 million warrants, 3.0 million options and 0.5 million restricted stock units, have not been included in the loss per share computation, as their effect on diluted per share amounts would have been anti-dilutive. For the same periods in 2015, a total of 6.9 million shares underlying options, restricted stock units and warrants have not been included in the loss per share computation.

[d] Restricted Stock Unit Awards

We grant restricted stock unit awards that generally vest and are expensed over a four year period. We also grant restricted stock unit awards that vest in conjunction with certain performance conditions to certain executive officers, key employees and consultants. At each reporting date, we are required to evaluate whether achievement of the performance conditions is probable. Compensation expense is recorded over the appropriate service period based upon our assessment of accomplishing each performance condition. For the three months ended March 31, 2016, $0.2 million of compensation expense was recognized related to these awards, compared to $0.2 million for the three months ended March 31, 2015.

The following table summarizes our restricted stock unit award activity during thethree months ended March 31, 2016:

	Number of Shares	Weighted Average Grant Date Fair Value
Balance, December 31, 2015	**640,759**	**$ 4.92**
Settled	(101,228)	7.28
Forfeited or expired	(38,441)	4.23
Balance, March 31, 2016	**501,090**	**$ 4.50**

As of March 31, 2016, we had approximately $3.7 million in total unrecognized compensation expense related to our restricted stock unit awards that is to be recognized over a weighted-average period of approximately 2.0 years.

[e] Non-employee options and restricted stock units

We recognize non-employee stock-based compensation expense over the period of expected service by the non-employee. As the service is performed, we are required to update our valuation assumptions, re-measure unvested options and restricted stock units and record the stock-based compensation using the valuation as of the vesting date. This differs from the accounting for employee awards where the fair value is determined at the grant date and is not subsequently adjusted. This re-measurement may result in higher or lower stock-based compensation expense in the Consolidated Statements of Loss and Comprehensive Loss. As such, changes in the market price of our stock could materially change the value of an option or restricted stock unit and the resulting stock-based compensation expense.

[f] Common Stock Warrants

The following is a summary of outstanding warrants to purchase common stock at March 31, 2016:

	Total Outstanding and Exercisable	Exercise price per Share	Expiration Date
(1) Series A Warrants issued in July 2014 financing	2,779,933	4.00	July 2019
(2) Series B Warrants issued in July 2014 financing	670,269	4.00	July 2019
(3) Series A-1 Warrants issued in April 2015 financing	239,234	2.40	October 2020

No warrants were exercised during the three months ended March 31, 2016 or 2015. The Series A-1 Warrants issued in the April 2015 financing are classified as equity. The Series A and Series B warrants issued in the July 2014 financing are classified as liabilities. The estimated fair value of warrants issued and classified as liabilities is reassessed at each reporting date using the Black-Scholes option pricing model.

	As of March 31,	
Series A and Series B Warrant Valuation Assumptions	**2016**	**2015**
Risk-free interest rates	0.91 %	1.19 %
Expected dividend yield	0 %	0 %
Expected life	3.25 years	4.25 years
Expected volatility	84.07 %	63.35 %

6. RELATED PARTY TRANSACTION

In January 2016, Scott Cormack, our Chief Executive Officer, married Michelle Griffin, a consultant to us. For the three months ended March 31, 2016, we paid Ms. Griffin approximately $0.2 million, for consulting services pursuant to a consulting agreement entered into in 2013 and amended thereafter. We also granted Ms. Griffin options to purchase 135,000 shares of common stock in 2016. In addition, pursuant to the consulting agreement with Ms. Griffin, as at March 31, 2016, we had an accrued termination liability of approximately $0.4 million.

7. COMMITMENTS AND CONTINGENCIES

Teva Pharmaceutical Industries Ltd.

In December 2009, we, through our wholly-owned subsidiary, OncoGenex Technologies, entered into a Collaboration Agreement with Teva for the development and global commercialization of custirsen (and related compounds). In December 2014, we and Teva agreed to terminate the Collaboration Agreement upon entry into a Termination Agreement. In April 2015, OncoGenex Technologies and Teva entered into the Termination Agreement, pursuant to which the Collaboration Agreement was terminated and we regained rights to custirsen. Pursuant to the Termination Agreement, Teva paid to us, as advanced reimbursement for certain continuing research and development activities related to custirsen, an amount equal to $27.0 million less approximately $3.8 million, which reduction represented a hold-back amount of $3.0 million and $0.8 million for certain third-party custirsen-related development expenses incurred by Teva between January 1, 2015 and the Closing Date. Pursuant to the Termination Agreement, one half of the then remaining hold-back amount will be paid to us six months after the Closing Date, one half of the then remaining hold-back amount will be paid to us nine months after the Closing Date and the entire then remaining hold-back amount will be paid to us 12 months after the Closing Date. As of March 31, 2016, the entire amount of the holdback had been almost fully deducted by Teva for certain custirsen-related costs incurred after the Closing Date. We received a nominal amount from the remaining hold-back in October 2015, representing one half of the then remaining amount six months from the Closing Date. We expect to receive only nominal amounts from the remaining hold-back.

All licenses granted by us to Teva under the Collaboration Agreement were terminated as of the Closing Date.

In accordance with the Termination Agreement, Teva transferred certain third-party agreements for the ENSPIRIT study and custirsen development activities to us on the Closing Date. If any additional historical third-party agreements are discovered after the Closing Date and are used to conduct the ENSPIRIT study, then Teva will use commercially reasonable effort to assign such agreements to us and will be responsible for any costs invoiced under such agreements in excess of an aggregate of $0.1 million. We will be responsible for the initial $0.1 million of costs under such agreements.

Prior to the termination of the Collaboration Agreement, Teva made upfront payments in the aggregate amount of $50.0 million. Teva also acquired $10.0 million of our common stock at a premium under a separate Stock Purchase Agreement. We were required to contribute $30.0 million in direct and indirect costs towards the clinical development plan. We fulfilled our obligation to contribute $30.0 million towards the development of custirsen. Teva was required to and did fund all additional expenses under the clinical development plan through December 31, 2014, after which date we took over responsibility for future costs following termination of our Collaboration Agreement. We do not owe, to Teva, any development milestone payments or royalty payments on sales of custirsen, if any.

Ionis Pharmaceuticals Inc. and University of British Columbia

We are obligated to pay milestone payments of up to CAD $1.6 million and $7.75 million pursuant to license agreements with UBC and Ionis, respectively, upon the achievement of specified product development milestones related to apatorsen and OGX-225 and low to mid-single digit royalties on future product sales.

In addition, we are required to pay to Ionis up to 20% of all non-royalty revenue (defined to mean revenue not based on net sales of products) we receive from third partiesIn May and November 2015, we received communications from Ionis requesting payment of 30% of the $23.2 million paid by Teva under the Termination Agreement, as well as 30% of any amounts paid by Teva upon release of the $3.0 million holdback amount. On January 5, 2016, Ionis filed a lawsuit and claims that OncoGenex Technologies is in breach of the license agreement for failing to pay Ionis a share of the advance reimbursement payment from Teva and other non-monetary consideration received from Teva in connection with the termination of the Collaboration Agreement. Ionis seeks damages in the amount of at least $10 million and a declaratory judgment that, based on OncoGenex Technologies' alleged breach, Ionis has the right to terminate the license agreement. We do not believe that any payments are due to Ionis. Under the Ionis license agreement, no payment is due to Ionis on any consideration that we receive for the reimbursement for research and development activities. The amounts paid or payable by Teva under the Termination Agreement constitute an advanced reimbursement for certain continuing research and development activities related to custirsen and certain other antisense inhibitors of clusterin, and therefore, no payments are owed to Ionis. We intend to vigorously defend the lawsuit and, based on our preliminary review, we believe we have valid defenses.

Unless otherwise terminated, the Ionis agreements for custirsen and apatorsen will continue for each product until the later of 10 years after the date of the first commercial product sale, or the expiration of the last to expire of any patents required to be licensed in order to use or sell the product, unless OncoGenex Technologies abandons either custirsen or apatorsen and Ionis does not elect to unilaterally continue development. The Ionis agreement for OGX-225 will continue into perpetuity unless OncoGenex Technologies abandons the product and Ionis does not elect to unilaterally continue development.

To facilitate the execution and performance of our prior Collaboration Agreement with Teva, we amended the license agreement with Ionis and UBC, as it pertains to custirsen, in December 2009.

The amendment to the license agreement with Ionis provides, among other things, that if we are subject to change of control with a third party, where the surviving company immediately following such change of control has the right to develop and sell the product, then (i) a milestone payment of $20.0 million will be due and payable to Ionis 21 days following the first commercial sale of the product in the United States; and (ii) unless such surviving entity had previously sublicensed the product and a royalty rate payable to Ionis by us has been established, the applicable royalty rate payable to Ionis will thereafter be the maximum amount payable under the license agreement. Any non-royalty milestone amounts previously paid will be credited toward the $20.0 million milestone if not already paid. As a result of the $10.0 million milestone payment payable to Ionis in relation to the Collaboration Agreement, the remaining amount owing in the event of change of control discussed above is a maximum of $10.0 million.

Lease Arrangements

We have an operating lease agreement for office space being used in Vancouver, Canada, which expires in September 2016. As of March 31, 2016, the remaining future minimum lease payments under the Vancouver lease are $43,000.

In February 2015, we entered into an office lease with Grosvenor International (Atlantic Freeholds) Limited, or Landlord, pursuant to which we leased approximately 11,526 square feet located at 19820 North Creek Parkway, Bothell, Washington, 98011, commencing on February 15, 2015. The initial term of this lease will expire on April 30, 2018, with an option to extend the term for one approximately three-year period. Our monthly base rent for the premises started at approximately $18,000 commencing on May 1, 2015 and will increase on an annual basis up to approximately $20,000. The Landlord has agreed to provide us with a construction allowance of approximately $0.1 million. We will be responsible for 17% of taxes levied upon the building during each calendar year of the term. We delivered to the Landlord a letter of credit in the amount of $0.2 million, in accordance with the terms if the lease, which the Landlord may draw upon for base rent or other damages in the event of our default under this lease. In August 2015 we exercised our expansion option for an additional 2,245 square feet of office space, which commenced on August 1, 2015.

The remaining future minimum annual lease payments under the Bothell lease are as follows (in thousands):

2016		203
2017		281
2018		95
Total	**$**	**579**

Consolidated rent and operating expense relating to both the Vancouver, Canada and Bothell, Washington offices for the three months ended March 31, 2016 and 2015 was $0.1 million and $0.5 million, respectively.

In February 2015, we entered into a Lease Termination Agreement with BMR pursuant to which we and BMR agreed to terminate our lease, dated November 21, 2006, as amended, for the premises located at 1522 217th Place S.E. in Bothell, Washington, or Terminated Lease, effective March 1, 2015. Under the Lease Termination Agreement, we paid BMR a $2.0 million termination fee. We may also pay BMR an additional termination fee of $1.3 million if we (i) meet the primary endpoint for our phase 3 clinical trial for the treatment of second line metastatic CRPC with custirsen and if we (ii) close a transaction or transactions pursuant to which we receive funding in an aggregate amount of at least $20.0 million. BMR drew approximately $0.1 million on our letter of credit with respect to its payment of deferred state sales tax and terminated the remaining balance of $0.2 million. BMR returned to us the security deposit under the Terminated Lease, less amounts deducted in accordance with the terms of the Terminated Lease, of $0.5 million.

With respect to the contingent payment of $1.3 million, we have assessed that the likelihood of meeting both contingent events is more likely than not. As a result, we have recognized the $1.3 million in lease termination liability on our balance sheet as at March 31, 2016.

Guarantees and Indemnifications

We indemnify our officers, directors and certain consultants for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at our request in such capacity. The term of the indemnification period is equal to the officer's or director's lifetime.

The maximum amount of potential future indemnification is unlimited; however, we have obtained director and officer insurance that limits our exposure and may enable us to recover a portion of any future amounts paid. We believe that the fair value of these indemnification obligations is minimal. Accordingly, we have not recognized any liabilities relating to these obligations as of March 31, 2016.

We have agreements with certain organizations with which we do business that contain indemnification provisions pursuant to which we typically agree to indemnify the party against certain types of third-party claims. We accrue for known indemnification issues when a loss is probable and can be reasonably estimated. There were no accruals for or expenses related to indemnification issues for any period presented.

Restructure

In February 2016, we committed to a plan to reduce operating expenses, which included a workforce reduction of 11 employees, representing approximately 27% of our employees prior to the reduction. We incurred approximately $0.4 million in expenses as a result of the workforce reduction, substantially all of which were severance costs.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

INFORMATION REGARDING FORWARD LOOKING STATEMENTS

This document contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements involve a number of risks and uncertainties. We caution readers that any forward-looking statement is not a guarantee of future performance and that actual results could differ materially from those contained in the forward-looking statement. These statements are based on current expectations of future events. Such statements include, but are not limited to, statements about future financial and operating results, plans, objectives, expectations and intentions, costs and expenses, interest rates, outcome of contingencies, financial condition, results of operations, liquidity, business strategies, cost savings, objectives of management and other statements that are not historical facts. You can find many of these statements by looking for words like "believes," "expects," "anticipates," "estimates," "may," "should," "will," "could," "plan," "intend" or similar expressions in this document or in documents incorporated by reference into this document. We intend that such forward-looking statements be subject to the safe harbors created thereby. Examples of these forward-looking statements include, but are not limited to:

- progress and preliminary and future results of clinical trials conducted by us or our collaborators;
- anticipated regulatory filings and requirements and future clinical trials conducted by us or our collaborators;
- timing and amount of future contractual payments, product revenue and operating expenses;
- market acceptance of our products and the estimated potential size of these markets; and
- our anticipated future capital requirements and the terms of any capital financing agreements.

These forward-looking statements are based on the current beliefs and expectations of our management and are subject to significant risks and uncertainties. If underlying assumptions prove inaccurate or unknown risks or uncertainties materialize, actual results may differ materially from current expectations and projections. Factors that might cause such a difference include those discussed in Item 1A "Risk Factors," as well as those discussed elsewhere in the Quarterly Report on Form 10-Q. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this document or, in the case of documents referred to or incorporated by reference, the date of those documents.

All subsequent written or oral forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. We do not undertake any obligation to release publicly any revisions to these forward-looking statements to reflect events or circumstances after the date of this document or to reflect the occurrence of unanticipated events, except as may be required under applicable U.S. securities law. If we do update one or more forward-looking statements, no inference should be drawn that we will make additional updates with respect to those or other forward-looking statements.

Overview

We are an emerging leader in next generation cancer therapeutics. Our mission is to accelerate transformative therapies to improve the lives of people living with cancer and other serious diseases. We have developed a pipeline of late-stage product candidates that are designed to block the production of specific proteins that promote treatment resistance in cancer. We believe our therapies have the potential to redefine treatment outcomes in a variety of cancers. We have three product candidates in our pipeline: custirsen, apatorsen and OGX-225, each of which has a distinct mechanism of action and represents a unique opportunity for cancer drug development. Of the product candidates in our pipeline, custirsen and apatorsen are clinical-stage assets being evaluated in two phase 3 studies and four phase 2 studies, respectively.

Our product candidates -- custirsen, apatorsen and OGX-225 -- focus on mechanisms of treatment resistance in cancer patients and are designed to block the production of specific proteins that we believe promote treatment resistance and survival of tumor cells and are over-produced in response to a variety of cancer treatments. Our aim in targeting these particular proteins is to disable the tumor cell's adaptive defenses, thereby rendering the tumor cells more susceptible to attack with a variety of cancer therapies. We believe this approach will increase survival time and improve the quality of life for cancer patients.

We are focused on executing clinical development plans in order to reach several near-term milestones for both the custirsen and apatorsen programs and believe that our cash, cash equivalents, and short-term investments will be sufficient to fund our currently planned operations into the third quarter of 2017.

Product Candidate Custirsen

Three phase 3 custirsen clinical trials have been initiated:

- The SYNERGY Trial: The completed phase 3 clinical trial evaluated a survival benefit for custirsen in combination with first-line docetaxel treatment in patients with metastatic castrate resistant prostate cancer, or metastatic CRPC. Results of the SYNERGY trial were presented at the European Society for Medical Oncology, or ESMO, 2014 Congress in September 2014. Final survival results indicated that the addition of custirsen to standard first-line docetaxel/prednisone therapy did not meet the primary endpoint of a statistically significant improvement in overall survival, or OS, in men with metastatic CRPC, compared to docetaxel/prednisone alone (median survival 23.4 months vs. 22.2 months, respectively; hazard ratio 0.93 and one-sided p value 0.207). The adverse events observed were similar to custirsen's known adverse event profile. Subsequent exploratory analyses showed improved overall survival for those men who received custirsen and who were at increased risk for poor outcomes. Those preliminary results showed a 27% lower rate of death for patients who were at increased risk for poor outcomes and received custirsen. Based on these findings, we have amended the AFFINITY trial as outlined below.

- The AFFINITY Trial: The phase 3 clinical trial to evaluate a survival benefit for custirsen in combination with cabazitaxel treatment as second-line chemotherapy in patients with metastatic CRPC. AFFINITY was initiated in August 2012 and completed enrollment of approximately 630 patients in September 2014. In January 2015, an interim futility analysis was completed and per recommendation of an Independent Data Monitoring Committee, or IDMC, the trial continued as planned.

  Based on the exploratory findings from the SYNERGY trial, we sought advice from regulatory authorities to amend the AFFINITY trial to include these learnings and to adjust the statistical analysis plan accordingly. Both the FDA and European Medicines Agency, or EMA, were supportive of the proposed amendment to the AFFINITY protocol and statistical analysis plan. The following protocol amendment was submitted in all participating countries where the trial is being conducted:

  - The inclusion of a co-primary survival objective for evaluating survival benefit in a subpopulation of men who were at increased risk for poor outcomes as well as for all men enrolled into the study, known as the intent-to-treat, or ITT, population.
  - A revised statistical analysis plan including the hypothesized hazard ratio, or HR, for the subpopulation who are at an increased risk for poor outcomes specified to be 0.69 with the critical HR $\leq$ 0.778. The hypothesized HR for the ITT population, remains unchanged as 0.75 with the critical HR $\leq$ 0.820.
  - The revised statistical analysis plan included an interim analysis for the ITT population at the same time as the final analysis for the subpopulation. This interim analysis had both futility and early efficacy criteria defined for the ITT population.

  The co-primary survival analysis for the poor prognostic subpopulation and the interim analysis for the ITT population in the AFFINITY trial were completed in December 2015. The co-primary survival results for the subpopulation of men who had multiple poor prognostic risk factors revealed that the combination of custirsen and cabazitaxel did not meet the rigorous criteria required to demonstrate an improvement in overall survival (hypothesized hazard ratio < 0.69, one-sided p value < 0.015). Based on the interim analysis for the ITT population, the IDMC recommended that the trial continue as planned. Both the IDMC and we remain blinded to all analyses and final results are expected in the third quarter of 2016, depending on timing of the event-driven final ITT analysis.

- The ENSPIRIT Trial: The phase 3 clinical trial to evaluate a survival benefit for custirsen in combination with docetaxel treatment as second-line chemotherapy in patients with non-small cell lung cancer, or NSCLC. This trial was initiated in September 2012.

  The first interim futility analysis was completed in August 2014. A protocol amendment was submitted and approved by all regulatory agencies in participating countries, to amend the statistical design and analysis plan of the ENSPIRIT trial including the following:

  - A revised statistical analysis plan including the hypothesized HR, to be 0.75 with the critical HR of $\leq$ 0.84, reducing the required sample size from 1,100 to 700 patients. This change maintained 90% power while assessing for a more clinically relevant survival benefit when adding custirsen to second-line docetaxel.
  - A revision to the final interim futility analysis with more rigorous criteria in order to continue the trial due to lack of futility. This was successfully completed in July 2015, and the trial continued as planned.
  - The inclusion of an additional objective to analyze survival outcome based on NSCLC histology as part of the other non-primary analyses.

We believe these amendments, specifically the revised statistical thresholds, are more appropriately aligned to the interests of both treating clinicians and their patients. Based on current ENSPIRIT enrollment projections and the changes outlined in the protocol amendment, we believe final survival results could be available in the first half of 2017, depending on completion of enrollment and timing of the event-driven final analysis.

Custirsen has received Fast Track designation from the U.S. Food and Drug Administration, or FDA, for second-line treatment of metastatic CRPC when combined with cabazitaxel and prednisone and for the second-line treatment of advanced NSCLC when combined with docetaxel in patients with disease progression following treatment with a first-line, platinum-based chemotherapy doublet regimen.

Product Candidate Apatorsen

Apatorsen is our product candidate that is designed to inhibit production of Hsp27, a cell-survival protein expressed in many types of cancers including bladder, prostate, breast, pancreatic and non-small cell lung cancer. Hsp27 expression is stress-induced, including by many anti-cancer therapies. Overexpression of Hsp27 is thought to be an important factor leading to the development of treatment resistance and is associated with metastasis and negative clinical outcomes in patients with various tumor types.

A number of preclinical studies have shown that reducing Hsp27 production induces tumor cell death in prostate, non-small cell lung, bladder and pancreatic cancer cells. The studies also suggest that reducing Hsp27 production sensitizes prostate tumor cells to hormone ablation therapy. These preclinical studies have also shown that inhibiting the production of Hsp27 in human prostate, bladder, lung, breast, ovarian and pancreatic tumor cells sensitizes the cells to chemotherapy.

Hsp27 has been reported by others to function as an immunomodulatory protein by a number of mechanisms that include altering important membrane expressed proteins on monocytes and immature dendritic cells; this alteration results in tumor-associated immune cells that are not functional in identifying and killing cancer cells. The induction of anti-inflammatory cytokines by Hsp27 may also play a role in down-regulating lymphocyte activation leading to additional unresponsive immune cells.

In 2013, we initiated the ORCA (Ongoing Studies Evaluating Treatment Resistance in CAncer) program which encompasses clinical studies designed to evaluate whether inhibition of Hsp27 can lead to improved prognosis and treatment outcomes for cancer patients. Our goal is to advance cancer treatment by conducting clinical trials for apatorsen across multiple cancer indications including bladder, lung, pancreatic and prostate cancers. We are conducting parallel clinical trials to evaluate apatorsen in several cancer indications and treatment combinations to accelerate the development of apatorsen. As part of this strategy, we are supporting specific investigator-sponsored trials to allow assessment of a broader range of clinical indications for future OncoGenex-sponsored trials and possible market approval. The ORCA trials, with exception of the Pacific™ trial, are designed to provide information that will be useful for designing future phase 3 trials and may be used as supportive studies for registration, if applicable. Due to small sample sizes, data from these trials are not likely to result in statistically significant differences in either progression free survival, or PFS, or overall survival, or OS.

Six phase 2 apatorsen clinical trials have been initiated or completed under the ORCA program.

Completed Trials

- The Borealis-1™ Trial: Our completed company-sponsored Borealis-1™ phase 2 trial was a three-arm, randomized, placebo-controlled trial evaluating 600mg or 1000mg apatorsen in combination with a first-line standard of care chemotherapy regimen (gemcitabine and cisplatin) in the metastatic setting. Overall, trial results indicated that the addition of 600mg apatorsen to standard of care chemotherapy showed a 14% reduction in risk of death (OS HR = 0.86) and a 17% reduction in progressive disease and death (PFS HR = 0.83) when compared to chemotherapy alone. Less benefit was observed in the 1000mg apatorsen arm due to increased adverse events leading to a higher rate of discontinuation of both apatorsen and chemotherapy.Results from an exploratory analysis showed that metastatic bladder cancer patients with poor prognostic features (lower performance status, liver involvement, low hemoglobin and high alkaline phosphatase) achieved a 28% reduction in risk of death from the addition of 600mg apatorsen to first-line chemotherapy (OS HR = 0.72) compared to chemotherapy alone. Overall, higher baseline serum Hsp27 levels predicted worse survival outcome and patients characterized as poor prognosis had significantly higher baseline sHsp27 levels than patients characterized as good prognosis. These results were presented in an oral session on June 1, 2015 at the American

Society of Clinical Oncology, or ASCO, and additional analyses were presented on September 28, 2015 at the European Cancer Congress, or ECC.

- The Rainier™ Trial: Our completed investigator-sponsored Rainier™ phase 2 trial was a randomized, placebo-controlled trial evaluating apatorsen in combination with ABRAXANE® (paclitaxel protein-bound particles for injectable suspension) (albumin-bound) and gemcitabine compared to ABRAXANE and gemcitabine alone in patients with untreated metastatic pancreatic cancer. The addition of apatorsen to ABRAXANE and gemcitabine did not demonstrate an overall survival benefit in the study when compared to ABRAXANE and gemcitabine alone (OS HR = 1.253; PFS HR = 1.038). A potential benefit was observed in a subgroup of patients (14%) with high baseline serum Hsp27 status when treated with apatorsen (OS HR = 0.568; PFS HR = 0.402). Overall, higher baseline Hsp27 status correlated with worse survival outcome. The study was sponsored and conducted by Sarah Cannon Research Institute, or SCRI, and further results were presented at the Gastrointestinal, or GI, Cancers Symposium meeting in January 2016. The study investigators concluded that these promising results in pancreatic cancer patients with high Hsp27 status warrant further study of apatorsen in this population.

Ongoing Trials

- The Borealis-2™ Trial: The investigator-sponsored, randomized phase 2 trial evaluating apatorsen in combination with docetaxel treatment compared to docetaxel treatment alone in patients with advanced or metastatic bladder cancer who have disease progression following first-line platinum-based chemotherapy. Patients may also continue weekly apatorsen infusions as maintenance treatment until disease progression or unacceptable toxicity if they complete a minimum of two cycles of docetaxel, or are discontinued from docetaxel due to docetaxel toxicity. This trial was initiated in April 2013 and patient enrollment was completed in September 2015. A futility analysis was completed in December 2015 and the trial is continuing as planned. The trial randomized approximately 200 patients and results are expected in the second half of 2016. The study is being sponsored and conducted by the Hoosier Cancer Research Network.
- The Spruce™ Trial: The investigator-sponsored, randomized, placebo-controlled phase 2 trial evaluating apatorsen plus carboplatin and pemetrexed therapy compared to carboplatin and pemetrexed therapy in patients with previously untreated advanced non-squamous NSCLC. Patients continued pemetrexed with weekly apatorsen or placebo infusions as maintenance treatment until disease progression if they completed a minimum of 3 cycles of chemotherapy treatment. The aim of the trial is to determine if adding apatorsen to carboplatin and pemetrexed therapy can extend PFS outcome. Additional analyses are expected to include tumor response rates, overall survival, safety, tolerability and the effect of therapy on Hsp27 levels. Patients who are at increased risk for poor outcomes will also be prospectively evaluated. This trial was initiated in August 2013 and patient enrollment was completed in February 2015. The trial randomized approximately 155 patients. In January 2016, the primary endpoint data for PFS was reported to have not reached the statistical significance required to demonstrate a benefit. A potential PFS benefit was observed in patients with high baseline serum Hsp27 status when treated with apatorsen. The study is ongoing and overall survival results are expected in the second half of 2016. PFS results will be presented at t ASCO 2016. The study is being sponsored and conducted by Sarah Cannon Research Institute.
- The Spruce-2™ Trial (formerly referred to as the Cedar Trial): The investigator-sponsored, randomized phase 2 trial evaluating apatorsen plus gemcitabine and carboplatin therapy or gemcitabine and carboplatin therapy alone in patients with previously untreated advanced squamous NSCLC. Patients also continue weekly apatorsen infusions as maintenance treatment after chemotherapy until disease progression. The aim of the trial is to determine if adding apatorsen to gemcitabine and carboplatin therapy can extend PFS outcome. Additional analyses will include tumor response rates, overall survival, safety, and health-related quality of life. Additional analyses are expected to determine the effect of therapy on Hsp27 levels, explore potential biomarkers that may help predict response to treatment and survival outcomes in patients who were at increased risk for poor outcomes. The trial was initiated in July 2014 and is enrolling patients. Following review of our randomized phase 2 apatorsen clinical trials, an amendment was submitted that reduces the apatorsen dose from 600mg to 400mg to allow comparison of safety and efficacy between the two apatorsen doses. The trial is expected to randomize approximately 140 patients. The trial is being conducted and funded primarily by the UK National Cancer Research Network and the UK Experimental Cancer Medicine Network.
- The Pacific™ Trial: The investigator-sponsored, randomized phase 2 trial evaluating apatorsen in men with CRPC who are experiencing a rising PSA while receiving Zytiga® (abiraterone acetate). The aim of the trial is to determine if adding apatorsen to Zytiga treatment can reverse or delay treatment resistance by evaluating the PFS rate at a milestone Day 60 assessment. Other secondary endpoints such as PSA and objective responses, time to disease progression, CTCs and Hsp27 levels are expected to be evaluated. The trial completed enrollment of 72 patients in March 2016. The study is being sponsored and conducted by the Hoosier Cancer Research Network.

In addition to the Borealis-1 and Borealis-2 clinical trials in metastatic bladder cancer in the ORCA program, we are evaluating apatorsen for a potential pivotal study in the treatment of non-muscle invasive bladder cancer, or NMIBC. We have completed a pre-

IND meeting with FDA in preparation for a separate IND application to evaluate apatorsen for intravesical administration in combination with Bacillus Calmette-Guerin, or BCG, treatment in patients with NMIBC. FDA had no objection to the study population or classification of subpopulations in a preliminary study design and deemed the proposed definitions of primary and secondary endpoints acceptable.

Product Candidate OGX-225

OGX-225 is our product candidate designed to inhibit the production of Insulin Growth Factor Binding Proteins -2 and -5 (IGFBP-2, IGFBP-5), two proteins that when overexpressed affect the growth of cancer cells. Increased IGFBP-2 and IGFBP-5 production are observed in many human cancers, including prostate, breast, colorectal, non-small cell lung, glioblastoma, acute myeloid leukemia, acute lymphoblastic leukemia, neuroblastoma, and melanoma. The increased production of these proteins is linked to faster rates of cancer progression, treatment resistance, and shorter survival duration in humans.

Preclinical studies with human prostate and breast cancer cells have shown that reducing IGFBP-2 and IGFBP-5 production with OGX-225 sensitized these tumor types to hormone ablation therapy or chemotherapy and induced tumor cell death. We have completed IND enabling toxicology studies for OGX-225.

Collaboration Revenue

Revenue recognized to date was attributable to the upfront payment we received in the fourth quarter of 2009 pursuant to a Collaboration Agreement with Teva, as well as cash reimbursements from Teva for certain costs incurred by us under the clinical development plan. Our policy is to account for these reimbursements as collaboration revenue.

In April 2015, we and Teva entered into an agreement to terminate the Collaboration Agreement, or the Termination Agreement. Pursuant to the Termination Agreement, Teva paid to us, as advanced reimbursement for certain continuing research and development activities related to custirsen and certain other antisense inhibitors of clusterin, an amount equal to $27.0 million less approximately $3.8 million, which reduction represents a hold-back amount of $3.0 million and $0.8 million for certain third-party expenses incurred by Teva between January 1, 2015 and April 24, 2015, or Closing Date. Teva was permitted to deduct from the $3.0 million hold-back certain costs incurred after January 1, 2015 that arose after the Closing Date. Pursuant to the Termination Agreement, one half of the then remaining hold-back amount is to be paid to us six months after the Closing Date, one half of the then remaining hold-back amount is to be paid to us nine months after the Closing Date and the entire then remaining hold-back amount will be paid to us 12 months after the Closing Date. As of March 31, 2016, the entire amount of the hold-back had been almost fully deducted by Teva for certain custirsen-related costs incurred after the Closing Date. We received a nominal amount of the remaining hold-back in October 2015, representing one half of the then remaining amount six months after the Closing Date. We expect to receive only nominal amounts from the remaining hold-back. Teva is responsible for expenses related to custirsen incurred pursuant to the Collaboration Agreement through December 31, 2014. We will be responsible for certain custirsen-related expenses from and after January 1, 2015.

As a result of the termination of the Collaboration Agreement with Teva, we do not expect to earn any additional collaboration revenue beyond the amounts provided as advanced reimbursement for custirsen -related development expenses as set forth in the Termination Agreement. The advanced reimbursement payment made by Teva, as part of the Termination Agreement, was deferred and is being recognized as collaboration revenue on a dollar for dollar basis as costs are incurred as part the of continuing research and development activities related to custirsen and certain other antisense inhibitors of clusterin. Of the advance reimbursement received, we have incurred approximately $21.1 million for certain custirsen-related development costs since January 1, 2015 and recognized these amounts as collaboration revenue.

Research and Development Expenses

Research and development, or R&D, expenses consist primarily of costs for clinical trials, contract manufacturing, personnel costs, milestone payments to third parties, facilities, regulatory activities, preclinical studies and allocations of other R&D-related costs. External expenses for clinical trials include fees paid to clinical research organizations, clinical trial site costs and patient treatment costs.

Currently, we manage our clinical trials through contract research organizations and independent medical investigators at their sites and at hospitals and expect this practice to continue. Through our clinical development programs, we are developing each of our product candidates in parallel for multiple disease indications. Due to the number of ongoing projects and our ability to utilize resources across several projects, we do not record or maintain information regarding the indirect operating costs incurred for our research and development programs on a program-specific basis. In addition, we believe that allocating costs on the basis of time incurred by our employees does not accurately reflect the actual costs of a project.

Several of our clinical trials have been supported by grant funding that was received directly by the hospitals and/or clinical investigators conducting the clinical trials as investigator-sponsored trials, thereby allowing us to complete these clinical trials at a lower cost to us.

Under the prior Collaboration Agreement with Teva, we were required to spend $30.0 million in direct and indirect development costs for the benefit of the custirsen development plan, such contribution to be funded by the upfront payment provided by Teva as an advanced reimbursement for our development expenses. In December 2012, we had spent the required $30.0 million in development costs related to custirsen. In accordance with the Termination Agreement, Teva was required to and did fund all additional expenses under the clinical development plan through December 31, 2014, after which date we took over responsibility for future custirsen-related costs following termination of our Collaboration Agreement. We do not owe Teva any development milestone payments or royalty payments on sales of custirsen, if any.

Final analyses of clinical trials involving our product candidates are dependent on and driven by timing of disease progression and/or survival events occurring and as a result we cannot estimate completion dates for development activities or when we might receive material net cash inflows from our R&D projects, if ever.

Our projects or intended R&D activities may be subject to change from time to time as we evaluate our R&D priorities and available resources.

General and Administrative Expenses

General and administrative, or G&A, expenses consist primarily of salaries and related costs for our personnel in executive, finance and accounting, corporate communications, human resources and other administrative functions, as well as consulting costs, including market research, business consulting and intellectual property. Other costs include professional fees for legal and auditing services, insurance and facility costs.

Warrant liability

The following is a summary of outstanding warrants to purchase common stock that are classified as liabilities at March 31, 2016:

	Total Outstanding and Exercisable	Exercise price per Share	Expiration Date
(1) Series A Warrants issued in July 2014 financing	2,779,933	4.00	July 2019
(2) Series B Warrants issued in July 2014 financing	670,269	4.00	July 2019

No warrants were exercised during the three months ended March 31, 2016 or 2015.

We reassess the fair value of the common stock warrants classified as liabilities at each reporting date utilizing a Black-Scholes pricing model. Inputs used in the pricing model include estimates of stock price volatility, expected warrant life and risk-free interest rate. The computation of expected volatility was based on the historical volatility of shares of our common stock for a period that coincides with the expected life of the warrants.

Results of Operations

For the three months ended March 31, 2016 and 2015

Collaboration Revenue

Revenue for the three months ended March 31, 2016 and 2015 were $2.9 million and $1.4 million, respectively. The advanced reimbursement payment made by Teva, as part of the Termination Agreement, was deferred and is being recognized as collaboration revenue on a dollar for dollar basis as costs are incurred as part of the continuing research and development activities related to custirsen. The increase in 2016 as compared to 2015 was due to higher collaboration revenue recognized on the deferred revenue as a result of higher ENSPIRIT costs. This was partially offset by a decrease in collaboration revenue recognized for the AFFINITY trial as a result of a decrease in associated clinical activities.

Research and Development Expenses

Our research and development expenses for our clinical development programs for the three months ended March 31, 2016 and 2015 are as follows (in thousands):

	Three months ended March 31,	
	2016	2015
Clinical development programs:		
Custirsen	$ 2,282	$ 1,192
Apatorsen	$ 408	$ 528
Other research and development	$ 1,952	$ 1,953
Total research and development expenses	**$ 4,642**	**$ 3,673**

Research and development expenses for the three months ended March 31, 2016 and 2015 were $4.6 million and $3.7 million, respectively. The increase in 2016 as compared to 2015 was due primarily to higher ENSPIRIT trial costs. This was partially offset by lower clinical trial costs for the AFFINITY trial and our investigator sponsored trials evaluating apatorsen as a result of a decrease in associated clinical activities.

General and Administrative Expenses

G&A expenses for the three months ended March 31, 2016 and 2015 were $2.3 million and $2.7 million, respectively. The decrease in 2016 as compared to 2015 was due primarily to lower administrative and professional expenses. This was partially offset by higher consulting fees.

Gain on Warrants

We recorded a gain of $0.7 million and $0.5 million on the revaluation of our outstanding liability-classified warrants for the three months ended March 31, 2016 and 2015, respectively. We revalue warrants that are classified as liabilities at each balance sheet date to fair value.

Liquidity and Capital Resources

We have incurred an accumulated deficit of $180.5 million through March 31, 2016, and we expect to incur substantial additional losses in the future as we continue or expand our R&D activities and other operations, as more fully described below. We have not generated any revenue from product sales to date, and we may not generate product sales revenue in the near future, if ever.

Our operations to date have been primarily funded through the sale of our equity securities and payments received from Teva. As of March 31, 2016, our cash, cash equivalents, and short-term investments decreased to $46.1 million from $55.2 million as of December 31, 2015.

In April 2015, we and Teva terminated our Collaboration Agreement. Pursuant to the Termination Agreement, Teva paid to us, as advanced reimbursement for certain continuing research and development activities related to custirsen, an amount equal to $27.0 million less approximately $3.8 million, which reduction represented a hold-back amount of $3.0 million and $0.8 million for certain third-party expenses incurred by Teva between January 1, 2015 and the Closing Date. Teva was permitted to deduct from the $3.0 million hold-back certain custirsen-related costs incurred after January 1, 2015 that arose after the Closing Date. Pursuant to the Termination Agreement, one half of the then remaining hold-back amount is to be paid to us six months after the Closing Date, one half of the then remaining hold-backamount is to be paid to us nine months after the Closing Date and the entire then remaining hold-back amount will be paid to us 12 months after the Closing Date. As of March 31, 2016, the entire amount of the holdback had been almost fully deducted by Teva for certain custirsen-related costs incurred after the Closing Date. We received a nominal amount from the remaining hold-back in October 2015, representing one half of the then remaining amount six months from the Closing Date. We expect to receive only nominal amounts from the remaining hold-back.

Pursuant to the Termination Agreement, Teva remains responsible for expenses related to custirsen incurred pursuant to the Collaboration Agreement through December 31, 2014. We will be responsible for all custirsen-related expenses incurred from and after January 1, 2015. We do not owe Teva any development milestone payments or royalty payments on sales of custirsen, if any. As a result of the termination of the Collaboration Agreement, other than the advanced reimbursement for certain continuing research and development activities related to custirsen already received by us, and any amounts paid to us from the hold-back by Teva, if any, we will not receive any future cash reimbursements from Teva for certain costs incurred by us in connection with the clinical

development of custirsen. Of the advance reimbursement received, we have incurred approximately $21.1 million for certain custirsen-related development costs between January 1, 2015 and March 31, 2016.

In April 2015, we and Lincoln Park Capital Fund, LLC, or LPC, entered into a Purchase Agreement, pursuant to which we had the right to sell to LPC up to $18.0 million in shares of our common stock, par value $0.001 per share, subject to certain limitations and conditions set forth in the Purchase Agreement. LPC initially purchased 956,938 Series A-1 Units at a purchase price of $2.09 per unit, for aggregate gross proceeds of $2.0 million. Each Series A-1 Unit consisted of (i) one share of common stock and (ii) one warrant to purchase one-quarter of a share of common stock at an exercise price of $2.40 per share. After the initial purchase, we had the right, from time to time, in our sole discretion and subject to certain conditions, to direct LPC to purchase additional shares of common stock having an aggregate value of $16.0 million. We directed LPC to purchase such additional shares as often as every business day over the 24-month term of the Purchase Agreement in increments of up to 125,000 shares of common stock, with such number of shares increasing as the closing sale price of our common stock increased. The purchase price of shares of common stock pursuant to the Purchase Agreement was based on prevailing market prices of common stock at the time of sale without any fixed discount, and we controlled the timing and amount of common stock sold to LPC. In addition, we had the right to direct LPC to purchase additional amounts as accelerated purchases if on the date of a regular purchase the closing sale price of the common stock is not below $1.50 per share. As consideration for entering into the Purchase Agreement, we issued to LPC 126,582 shares of common stock; no cash proceeds were received from the issuance of these shares.

From April 30, 2015 through August 13, 2015, we offered and sold 6,814,980 shares of our common stock pursuant to our Purchase Agreement with LPC. These sales resulted in gross proceeds to us of approximately $18.0 million and offering expenses of $0.4 million. As of August 13, 2015, no further amounts remained available for sale under this offering program.

In February 2016, we committed to a plan to reduce operating expenses, which included a workforce reduction of 11 employees, representing approximately 27% of our employees prior to the reduction. We incurred approximately $0.4 million in expenses as a result of the workforce reduction, substantially all of which were severance costs. We expect cost savings associated with the reduction of employees and consultants, together with the elimination of certain planned expenditures not required for the completion of ongoing trials, will extend our cash runway into the third quarter of 2017. Our currently planned operations are set forth below under the heading Operating Capital and Capital Expenditure Requirements.

Cash Flows

Cash Used by Operations

For the three months ended March 31, 2016, net cash used in operating activities increased to $9.1 million from $6.4 million for the three months ended March 31, 2015. The increase in cash used in operations in 2016 as compared to 2015 was primarily attributable to the final Teva cash reimbursement, for costs incurred as part of the custiresen development program in the fourth quarter of 2014, which was received in the first quarter of 2015.

Cash Used by Financing Activities

For the three months ended March 31, 2016, net cash used in financing activities was zero compared to net cash used of $0.1 million for the three months ended March 31, 2015. There were no financing activities in the three months ended March 31, 2016. Net cash used by financing activities in the three months ended March 31, 2015 was the result of taxes paid upon the net settlement of equity awards.

Cash Used by Investing Activities

For the three months ended March 31, 2016, net cash used in investing activities was $6.3 million compared to $3.9 million provided by investing activities for the three months ended March 31, 2015. Net cash used in investing activities for the three months ended March 31, 2016 and net cash provided by investing activities for the three months ended March 31, 2015 was due to transactions involving marketable securities in the normal course of business.

Operating Capital and Capital Expenditure Requirements

Based on our current expectations, we believe that our cash, cash equivalents, and short-term investments will be sufficient to fund our currently planned operations into the third quarter of 2017. Depending on timing of enrollment or event-driven final analyses, the expected key milestones and activities are as follows:

- Custirsen
  - Announcing AFFINITY trial results, the phase 3 trial evaluating a survival benefit for custirsen in combination with cabazitaxel as second-line chemotherapy in approximately 630 patients with castrate-resistant prostate cancer. The final analysis for the intent-to-treat population is expected in the third quarter of 2016.
  - Announcing ENSPIRIT trial results, the phase 3 trial evaluating a survival benefit for custirsen in combination with docetaxel as second-line chemotherapy in approximately 700 patients with non-small cell lung cancer. The final survival analysis is expected in the first half of 2017.
- Apatorsen
  - Announcing Borealis-2 trial results, an investigator-sponsored, randomized phase 2 trial evaluating apatorsen in combination with docetaxel treatment compared to docetaxel treatment alone in patients with advanced or metastatic bladder cancer. Final results are expected in the second half of 2016.
  - Announcing Spruce trial results for the overall survival endpoint, the investigator-sponsored, randomized, placebo-controlled phase 2 trial evaluating apatorsen treatment with carboplatin and pemetrexed chemotherapy in patients with previously untreated advanced non-squamous NSCLC. Results are expected in the second half of 2016.
  - Completing a submission-ready investigational new drug application regarding apatorsen via intravesical administration in combination with Bacillus Calmette-Guerin (BCG) treatment in patients with non-muscle invasive bladder cancer.

Results from the custirsen and apatorsen trials may be released at a date that is beyond the period for which we currently project we have available cash resources. We have based this estimate on assumptions that may prove to be wrong, or we could utilize our available capital resources sooner than we currently expect. We would require additional funding to support our operations if we were to continue the AFFINITY or ENSPIRIT trials beyond their anticipated data result dates, spend capital on activities related to product launch, acquire or invest in other assets, conduct development activities with respect to our other product candidates beyond those development activities described above, including activities with respect to OGX-225 or unsuccessfully defend pending litigation, or if the clinical trials cost more than we anticipate or custirsen is successful in a phase 3 trial with no partnership. If we need to extend our cash availability or to conduct any such currently unplanned development activities, we would seek such necessary funding through the licensing or sale of certain of our product candidates, by executing a partnership or collaboration agreement, or through private or public offerings of our equity or debt. However, we can provide no assurance that such funding would be available to us on favorable terms, or at all.

Our future capital requirements will depend on many factors, including:

- timing, costs and results of clinical development, preclinical development and regulatory approvals;
- our ability to obtain additional funding through a partnership or collaboration agreement with a third party or licenses of certain of our product candidates, or through private or public offerings of our equity or debt, or through sale of certain of our royalty rights;
- our ongoing level of focus and efforts to develop and commercialize custirsen and apatorsen;
- success of custirsen and apatorsen;
- costs to defend, and results of, pending litigation; and
- costs related to obtaining, defending and enforcing patents.

Off-Balance Sheet Arrangements

We did not have any off-balance sheet financing arrangements at March 31, 2016.

Commitments and Contingencies

We previously disclosed certain contractual obligations and contingencies and commitments relevant to us within the financial statements and Management Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form

10-K for the year ended December 31, 2015, as filed with the SEC on March 9, 2016. There have been no material changes to our "Contractual Obligations" table in Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our 2015 Form 10-K. For more information regarding our current contingencies and commitments, see note 7 to the financial statements included above.

Material Changes in Financial Condition

(in thousands)	March 31, 2016	December 31, 2015
Total Assets	$ 48,841	$ 58,209
Total Liabilities	14,625	20,769
Total Equity	34,216	37,440

The decrease in assets at March 31, 2016 compared to December 31, 2015 was primarily due to a decrease in cash and cash equivalents as these assets have been used to fund operations. The decrease in liabilities at March 31, 2016 compared to December 31, 2015 were due to a decrease in deferred revenue as these amounts were recognized into collaboration revenue on a dollar for dollar basis as costs were incurred as part of the continuing research and development activities related to custirsen and lower clinical trial accruals associated with patient enrollment and treatment in the AFFINITY trial and our investigator sponsored trials evaluating apatorsen.

Critical Accounting Policies and Estimates

The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect reported amounts and related disclosures. We have discussed those estimates that we believe are critical and require the use of complex judgment in their application in our Annual Report on Form 10-K for the year ended December 31, 2015, filed with the SEC on March 9, 2016. Since December 31, 2015, there have been no material changes to our critical accounting policies or the methodologies or assumptions we apply under them.

New Accounting Standards

See Note 2, "Accounting Policies," of the consolidated financial statements for information related to the adoption of new accounting standards in 2016, none of which had a material impact on our financial statements, and the future adoption of recently issued accounting standards, which we do not expect to have a material impact on our financial statements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk

Interest rate risk is the risk that the fair values and future cash flows of financial instruments will fluctuate because of the changes in market interest rates. We invest our cash in a variety of financial instruments, primarily in short-term bank deposits, money market funds, and domestic and foreign commercial paper and government securities. These investments are denominated in U.S. dollars, and we monitor our exposure to interest rate changes. We have very limited interest rate risk due to having only a few assets or liabilities subject to fluctuations in interest rates. Our investment portfolio includes only marketable securities with active secondary or resale markets to help ensure portfolio liquidity. Due to the nature of our highly liquid marketable securities, a change in interest rates would not materially change the fair market value. We have estimated the effect on our portfolio of a hypothetical increase in interest rates by 1% to be a reduction of approximately $0.4 million in the fair value of our investments as of March 31, 2016.

Foreign Currency Exchange Risk

We are exposed to risks associated with foreign currency transactions on certain contracts and payroll expenses related to our Canadian subsidiary, OncoGenex Technologies, denominated in Canadian dollars, and we have not hedged these amounts. As our unhedged foreign currency transactions fluctuate, our earnings might be negatively affected. Accordingly, changes in the value of the U.S. dollar relative to the Canadian dollar might have an adverse effect on our reported results of operations and financial condition, and fluctuations in exchange rates might harm our reported results and accounts from period to period. We have estimated the effect on our reported results of operations of a hypothetical increase of 10% in the exchange rate of the Canadian dollar against the U.S. dollar to be approximately $0.1 million for the three months ended March 31, 2016.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that material information required to be disclosed in our periodic reports filed or submitted under the Securities Exchange Act of 1934, as amended, or the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Our disclosure controls and procedures are also designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act are accumulated and communicated to our management, including our principal executive officer and principal financial officer as appropriate, to allow timely decisions regarding required disclosure.

During the quarter ended March 31, 2016, we carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act. Based upon that evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective, as of the end of the period covered by this report.

Changes in Internal Control Over Financial Reporting

We have not made any changes to our internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended March 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls

Our management does not expect that our disclosure controls and procedures or our internal controls will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within our company have been detected.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings.

On January 5, 2016, Ionis Pharmaceuticals, Inc. (formerly known as Isis Pharmaceuticals, Inc.) filed a lawsuit against our subsidiary OncoGenex Technologies, Inc. in the United States District Court for the Southern District of California. Ionis claims that OncoGenex Technologies is in breach of an Amended and Restated License Agreement between Ionis and OncoGenex Technologies dated July 2, 2008, as amended, or License Agreement. Under the License Agreement, Ionis is entitled to a share of certain forms of non-royalty revenue received by OncoGenex Technologies, but is not entitled to a share of revenue received by OncoGenex Technologies for the reimbursement of research and development activities. In April 2015, we terminated a collaboration agreement with Teva Pharmaceuticals Industries Ltd. In connection with that termination, Teva paid us $23.2 million as an advance reimbursement for certain continuing research and development activities related to custirsen and certain other antisense inhibitors of clusterin. In the lawsuit, Ionis claims that OncoGenex Technologies is in breach of the License Agreement for failing to pay Ionis a share of the advance reimbursement payment from Teva and other non-monetary consideration received from Teva. Ionis seeks damages in the amount of at least $10 million and a declaratory judgment that, based on OncoGenex Technologies' alleged breach, Ionis has the right to terminate the License Agreement. On March 4, 2016, OncoGenex Technologies filed a motion to dismiss the lawsuit in the United States District Court for the Southern District of California.

We intend to vigorously defend this matter and, based on our preliminary review, we believe we have valid defenses. However, litigation is inherently uncertain, and any judgment or injunctive relief entered against us or any adverse settlement could materially and adversely impact our business, financial condition, operating results and prospects. Because we are in the early stages of this matter, we are unable to estimate a reasonably possible range of loss, if any, that may result from this matter. In addition, litigation can involve significant management time and attention, and the cost of litigation can be expensive, regardless of outcome.

Item 1A. Risk Factors

Risks Related to Our Business

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information contained in this Quarterly Report on Form 10-Q and in the other periodic and current reports and other documents we file with the Securities and Exchange Commission, before deciding to invest in our common stock. If any of the following risks materialize, our business, financial condition, results of operation and future prospects will likely be materially and adversely affected. In that event, the market price of our common stock could decline and you could lose all or part of your investment.

Risks Related to Our Business

We have incurred losses since inception and anticipate that we will continue to incur losses for the foreseeable future. We have never had any products available for commercial sale and we may never achieve or sustain profitability.

We are a clinical-stage biopharmaceutical company, are not profitable, have incurred losses in each year since our inception and do not expect to become profitable in the foreseeable future. We have never had any products available for commercial sale, and we have not generated any revenue from product sales nor do we anticipate that we will generate revenue from product sales in the near future. Our revenue to date has been collaboration revenue under the Collaboration Agreement with Teva, which was terminated in April 2015. As a result of the termination of the Collaboration Agreement, Teva will no longer be responsible for custirsen-related expenses, and we will not receive additional revenue from Teva other than the advanced reimbursement payment for custirsen-related expenses we received in connection with the termination of the Collaboration Agreement. We have not yet submitted any products for approval by regulatory authorities, and we continue to incur research and development and general and administrative expenses related to our operations. We expect to continue to incur losses for the foreseeable future, and we expect these losses to increase as we continue our research activities and conduct development of, and seek regulatory approvals for, our product candidates, and prepare for and begin to commercialize any approved products. If our product candidates fail in clinical trials or do not gain regulatory approval, or if our product candidates do not achieve market acceptance, we may never become profitable. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods.

Clinical trials may not demonstrate a clinical benefit of our product candidates.

Positive results from preclinical studies and clinical trials, including any exploratory results from the custirsen or apatorsen clinical trials conducted to date should not be relied on as evidence that on-going, amended, or later-stage or large-scale clinical trials will succeed. We will be required to demonstrate with substantial evidence through well-controlled clinical trials that our product candidates are safe and effective for use in a diverse population before we can seek regulatory approvals for their commercial sale. Success in early clinical trials does not mean that future clinical trials will be successful because product candidates in later-stage clinical trials may fail to demonstrate sufficient safety and efficacy to the satisfaction of regulatory agencies, despite having progressed through initial clinical trials. Further, preliminary results from our clinical trials may not be confirmed in final data, or may change materially.

Even after the completion of our planned Phase 3 clinical trials, regulatory agencies may disagree with our clinical trial design and our interpretation of data, and may require us to conduct additional clinical trials to demonstrate the efficacy of our product candidates.

We have amended some of our ongoing clinical trials to incorporate preliminary observations from our other completed clinical trials. These observations may not be applicable to other stages of disease, or in combination with other therapies or indications. In planning or completing amendments to our trials, the statistical requirements to demonstrate success have been increased. This is due to including fewer patients for the primary evaluation and/or due to allowing for the chance of success to be determined in either of two primary evaluations, rather than only having one primary evaluation specified. Accordingly, if the observations from other completed trials are applied as amendments to our ongoing trials but prove not to be applicable to our ongoing trials, the results might indicate that our original trial design would have been successful if the changes had not been made to the original statistical requirements. We may choose to make additional amendments to ongoing studies for any reason including to analyze final top line data earlier than planned. Any future amendments may compromise the integrity of the clinical trial results and may not be acceptable to regulators.

We are highly dependent on the success of our lead product candidates, custirsen and apatorsen, and we cannot give any assurance that they, or any of our other product candidates, will receive regulatory approval or will be successfully commercialized.

In order to market custirsen, we must, among other things, complete ongoing clinical trials, including phase 3 or registration clinical trials, to demonstrate safety and efficacy. In April 2014, we announced that top-line survival results from our phase 3 SYNERGY trial

indicated that the addition of custirsen to standard first-line docetaxel/prednisone therapy did not meet the primary endpoint of a statistically significant improvement in overall survival in men with metastatic CRPC, compared to docetaxel/prednisone alone. Our protocol amendments, including but not limited to revisions to statistical analysis plans, may be approved by regulatory authorities on a country-by-country basis slower than we anticipate, or not at all. We may decide not to continue to advance the development and commercialization of custirsen, which would harm or prevent the commercialization of this product candidate. The failure to further develop and eventually commercialize custirsen could have a material adverse effect on our business and financial condition. The failure of custirsen to be shown safe or effective in one or more indications could negatively impact the development of custirsen in other indications and could result in the suspension or termination of our custirsen development plans.

Completing additional clinical trials will be required for apatorsen to establish the safety and efficacy of this product candidate. In September 2015, we announced that the addition of apatorsen to ABRAXANE and gemcitabine did not demonstrate a survival benefit compared to ABRAXANE and gemcitabine alone. Additionally, in January 2016, we announced that data from the phase 2 Spruce trial evaluating the combination of apatorsen with carboplatin and pemetrexed in patients with untreated metastatic NSCLC did not reach the statistical significance required to demonstrate a PFS benefit. We are conducting parallel clinical trials to evaluate apatorsen in several cancer indications and treatment combinations. The failure of apatorsen to be shown safe or effective in one or more indications could negatively impact the development of apatorsen in other indications and could result in the suspension or termination of our apatorsen development plans.

OGX-225 has not been tested in humans. Our preclinical testing of this product candidate may not be favorable and we may not be able to clinically evaluate OGX-225.

Our clinical development programs for our product candidates may not receive regulatory approval either if such product candidates fail to demonstrate that they are safe and effective in clinical trials and consequently fail to obtain necessary approvals from the regulatory agencies, or if we have inadequate financial or other resources to advance these product candidates through the clinical trial process. If competitive products developed by third parties show significant benefit in the cancer indications in which we are developing our product candidates, any planned supportive or primary registration trials may be delayed, altered or not initiated and custirsen, apatorsen and our other product candidates may never receive regulatory approval. Any failure to obtain regulatory approval of custirsen, apatorsen or our other product candidates could have a material and adverse effect on our business.

We rely on third parties to manufacture and supply our product candidates and other agents used in our clinical trials and potential future commercial use. A decrease in the availability or quality of any of these products or agents could increase clinical trial costs, delay or halt clinical development or regulatory approval of our product candidates or commercialization of our future product candidates, resulting in additional losses and depriving us of potential product revenue.

We do not own or operate manufacturing facilities, and we depend on third-party contract manufacturers for production of all of our product candidates and rely on other companies and their manufacturers for other agents used in all of our clinical trials. We lack the resources and the capability to manufacture any of our product candidates ourselves. To date, our product candidates have been manufactured in limited quantities for preclinical studies and clinical trials. All active pharmaceutical ingredients, or API, and drug product for custirsen and apatorsen have been manufactured for us by third parties pursuant to a purchase order or short-term contract that has been fulfilled.

Prior to the termination of our collaboration agreement with Teva, Teva manufactured custirsen drug product and, pursuant to the Termination Agreement, it has discontinued such activities. In addition to the selection of a new drug product supplier, we will require technology and methods transfer, validation processes and stability data in order to manufacture drug product. These activities, results and associated regulatory requirements may delay our ability to submit our application for market approval, if applicable. We cannot provide assurance that we will find a new manufacturer of drug product whose terms or timing would be acceptable to us and we may not have sufficient resources to commence certain activities as soon as required. As a result, we could experience a significant delay in custirsen's development and potential future commercialization.

If, in the future, one of our product candidates is approved for commercial sale, we, or a pharmaceutical partner that has licensed such product candidate, may need to manufacture that product candidate in commercial quantities. We cannot provide assurance that the third-party manufacturers with which we have contracted in the past will have sufficient capacity to satisfy our future manufacturing needs, that we will be able to negotiate additional purchases of API or drug product from these or alternative manufacturers on terms favorable to us, if at all, or that a pharmaceutical partner that has licensed such product candidate will have sufficient capacity or expertise to satisfy future needs.

Third-party manufacturers may fail to perform under their contractual obligations, or may fail to deliver the required commercial quantities of bulk API or finished drug product on a timely basis and at commercially reasonable prices. We have experienced manufacturing quality issues resulting in an unusable lot of product candidate in the past. Any performance failure on the part of our contract manufacturers could delay clinical development or regulatory approval of our product candidates or commercialization of our

future product candidates, depriving us of potential product revenue and resulting in additional losses. If we are required to identify and qualify an alternate manufacturer, we may be forced to delay or suspend our clinical trials, regulatory submissions, required approvals or commercialization of our product candidates, which may cause us to incur higher costs and could prevent us from commercializing our product candidates successfully. If we are unable to find one or more replacement manufacturers capable of production at a reasonably favorable cost, in adequate volumes, of adequate quality and on a timely basis, we would likely be unable to meet demand for our product candidates and our clinical trials could be delayed or we could lose potential revenue. Our ability to replace an existing API manufacturer may be difficult because the number of potential manufacturers is limited to approximately five manufacturers, and regulatory agencies must inspect any replacement manufacturer and review information related to product produced at the manufacturer before they can begin manufacturing our product candidates. It may be difficult or impossible for us to identify and engage a replacement manufacturer on acceptable terms in a timely manner, if at all. We expect to continue to depend on third-party contract manufacturers for the foreseeable future.

Our product candidates require precise, high-quality manufacturing. Any of our contract manufacturers will be subject to ongoing periodic unannounced inspection by regulatory agencies to ensure strict compliance with current Good Manufacturing Practices, or cGMP, and other applicable government regulations and corresponding standards. If our contract manufacturers fail to achieve and maintain high manufacturing standards in compliance with cGMP regulations, we may experience manufacturing errors resulting in patient injury or death, product recalls or withdrawals, delays or interruptions of production or failures in product testing or delivery, delay or prevention of filing or approval of marketing applications for our product candidates, cost overruns or other problems that could seriously affect our business.

Significant manufacturing scale-up may require additional validation studies, which the regulatory agencies must review and approve. Additionally, any third-party manufacturers we retain to manufacture our product candidates on a commercial scale must pass regulatory agencies' pre-approval inspection for conformance to cGMP regulations before we can obtain approval of our product candidates. If we are unable to successfully increase the manufacturing capacity for a product candidate in conformance with cGMP regulations, the regulatory approval or commercial launch of any related products may be delayed or there may be a shortage in supply.

We also rely on third-parties for the provision of other agents used in our clinical trials, and in some circumstances these agents are provided to us at no cost. We have no assurance that these third-parties will continue to provide their products to us at no cost.

The termination of our Collaboration Agreement with Teva has resulted in us being required to take over responsibility for conducting the ongoing custirsen trials, and further development and commercialization of custirsen will require significant resources from us or another collaborator.

In April 2015, we and Teva entered into a Termination Agreement, pursuant to which we terminated our Collaboration Agreement and Teva transitioned the responsibilities associated with conducting the ongoing custirsen clinical trials to us. Under the terms of the Termination Agreement, we received approximately $23.2 million as advanced reimbursement for custirsen-related development activities and regained all rights to custirsen and responsibility for all custirsen-related expenses as of January 1, 2015, including those related to the ENSPIRIT trial, as well as manufacturing and regulatory activities for the custirsen programs, which were previously managed and funded by Teva. Of the advance reimbursement received, we have incurred approximately $21.1 million for certain custirsen-related development costs between January 1, 2015 and March 31, 2016.

Additionally, further development of custirsen will require significant resources from us or another collaborator. We will not receive any future cash reimbursements from Teva for costs incurred by us in connection with the clinical development of custirsen, and we are required to fund all future development and commercialization ourselves if we are unable to find another collaborator. We expect that the $23.2 million payment from Teva as advanced reimbursement for custirsen-related development activities, along with our existing capital resources, will allow for the completion and final results from the AFFINITY and ENSPIRIT trials, but we will need to acquire additional capital or enter into a new partnership or collaboration agreement to fund additional development or commercialization. There are no assurances that we will have access to additional capital or find a new collaborator, or that the terms and timing of any such arrangements would be acceptable to us. As a result, we could experience a significant delay in the custirsen development process. If we determine to discontinue the development of custirsen, or any ongoing clinical trials, we would not receive any future return on our investment from that product candidate, or a specific indication.

Because we depend on financing from third parties for our operations, our business may fail if such financing becomes unavailable or is not available on commercially reasonable terms.

To date, we have financed our operations primarily through the sale of our equity securities and from payments we received pursuant to the Collaboration Agreement with Teva. In April 2015, our Collaboration Agreement with Teva was terminated, and we will not receive any future payments from Teva. We believe that our existing capital resources and interest on such resources will be sufficient to meet our current operating requirements into the third quarter of 2017. However, if patients live longer as a result of new or

investigational therapies, the trials proceed slower or take longer than expected to complete, or are initiated later than expected, we change our development plans, acquire rights to new product candidates, cannot find third-party collaborators for our other product candidates, do not successfully defend pending litigation or engage in commercialization and product launch activities, we will need additional capital sooner than we expect. Our future capital requirements will depend on many factors, including, without limitation:

- the scope and results of our clinical trials and preclinical studies;
- whether we experience delays in our clinical and preclinical development programs, or experience slower-than-anticipated product development or rate of events;
- whether we are able to enter into additional third-party collaborative partnerships to develop and/or commercialize any of our other product candidates on terms that are acceptable to us;
- our ability to forecast the cost of our ongoing development activities, including the ENSPIRIT trial;
- the timing and requirements of, and the costs involved in, making protocol amendments to any of our ongoing studies prior to their completion and conducting studies required to obtain regulatory approvals for our product candidates from regulatory agencies;
- the availability of third parties to perform the key development tasks for our product candidates, including conducting preclinical studies and clinical trials and manufacturing our product candidates to be tested in those studies and trials and the associated costs of those services;
- the costs involved in preparing, filing, prosecuting, maintaining, defending the validity of and enforcing patent claims and other costs related to patent rights and other intellectual property rights, including litigation costs and the results of such litigation;
- whether we modify our development program, including terminating and starting new trials;
- whether opportunities to acquire additional product candidates arise and the costs of acquiring and developing those product candidates;
- whether we engage in commercialization and product launch activities; and
- the costs to defend, and the results of, pending litigation.

If we are unable to raise funds on acceptable terms when it becomes necessary to do so, we may not be able to continue developing our product candidates, acquire or develop additional product candidates or respond to competitive pressures or unanticipated requirements. For these reasons, any inability to raise additional funds when we require it could have a material adverse effect on our business.

We may fail to achieve the expected financial and operating benefits of our plan to reduce operating expenses and the plan may harm our business and financial results.

In February 2016, we announced a plan to reduce operating expenses, which included a workforce reduction of 11 employees, representing approximately 27% of our employees prior to the reduction. We face significant risks associated with this plan that may impair our ability to achieve anticipated savings and operational efficiencies or that may otherwise harm our business. These risks include loss of workforce capabilities, decreases in employee focus and morale, attrition of necessary or key employees, higher than anticipated separation expenses, litigation and the failure to meet financial and operational targets. In addition, the calculation of the anticipated cost savings and other benefits resulting from our plan to reduce operating expenses are subject to many estimates and assumptions. These estimates and assumptions are subject to significant business, economic, competitive and other uncertainties and contingencies, many of which are beyond our control. If these estimates and assumptions are incorrect or if we experience delays or unforeseen events, our business and financial results could be adversely affected.

We rely, in part, on third parties to conduct clinical trials for our product candidates and plan to rely on third parties to conduct future clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may be unable to obtain regulatory approval for or commercialize our current and future product candidates.

To implement our product development strategies, we rely on third parties, such as collaborators, contract research organizations, medical institutions, clinical investigators and contract laboratories, to conduct clinical trials of our product candidates. Although we rely on third parties to conduct our clinical trials, we are responsible for ensuring that each of our clinical trials is conducted in accordance with our development plan and protocol. Moreover, regulatory agencies require us to comply with regulations and standards, commonly referred to as Good Clinical Practices, or GCPs, for conducting, monitoring, recording and reporting the results of clinical trials to ensure that the data and results are scientifically credible and accurate and that the clinical trial subjects are

adequately informed of the potential risks of participating in clinical trials. Our reliance on third parties does not relieve us ofthese responsibilities and requirements. If the third parties conducting our clinical trials do not perform their contractual duties or obligations, do not meet expected deadlines or need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to GCPs or for any other reason, we may need to enter into new arrangements with alternative third parties and our clinical trials may be extended, delayed or terminated. In addition, a failure by such third parties to perform their obligations in compliance with GCPs may cause our clinical trials to fail to meet regulatory requirements, which may require us to repeat our clinical trials.

Our clinical trials may be suspended or terminated at any time, including by regulatory agencies, a Data Safety Monitoring Board overseeing the clinical trial at issue, by a clinical trial site or investigator, or by us. Any failure or significant delay in completing clinical trials for our product candidates could materially harm our financial results and the commercial prospects for our product candidates.

We do not know whether any of our currently planned or on-going clinical trials for custirsen or apatorsen will proceed or be completed on schedule, if at all, or, with respect to our other product candidates, whether we will be able to initiate any future preclinical studies or clinical trials, as applicable, beyond those currently planned. The completion of our clinical trials currently in progress could also be substantially delayed or prevented by several factors, including:

- delay or failure to obtain required future additional funding, when needed, through private or public offerings of our equity securities, debt financings, or the execution of a licensing, partnership or collaboration agreement with a third party for any of our product candidates;
- lack of efficacy evidenced during clinical trials;
- inadequate evidence of clinical benefit or futility;
- slower than expected rates of patient recruitment, enrollment and final analysis;
- failure of patients to complete the clinical trial;
- unforeseen safety issues;
- termination of our clinical trials by us, by one or more clinical trial sites, investigators, data safety monitoring boards, or regulatory agencies;
- inability or unwillingness of patients or medical investigators to follow clinical trial protocols;
- inability to monitor patients adequately during or after treatment;
- introduction of competitive products that may impede our ability to retain patients in clinical trials;
- delay or failure to obtain sufficient manufacturing supply of custirsen or apatorsen; and
- delay in submission or acceptance of protocol amendments.

The completion or commencement of future preclinical studies or clinical trials could be substantially delayed or prevented by several factors, including:

- delay or failure to obtain required future additional funding, when needed, through private or public offerings of our equity securities, debt financings, or the execution of a licensing, partnership or collaboration agreement with a third party for any of our product candidates;
- insufficient remaining patent term to justify continued development and commercialization;
- delay or failure to obtain sufficient manufacturing supply of custirsen, apatorsen or other products necessary to conduct our clinical trials;
- limited number of, and competition for, suitable patients with the particular types of cancer required for enrollment in our clinical trials;
- limited number of, and competition for, suitable sites to conduct clinical trials;
- introduction of new product candidates to the market in therapeutic areas similar to those that we are developing for our product candidates;
- concurrent evaluation of new investigational product candidates in therapeutic areas similar to those that we are developing for our product candidates;

- delay or failure to obtain regulatory agencies' approval or agreement to commence a clinical trial, including our phase 3 or registration clinical trials or amendment of those trials;
- delay or failure to obtain sufficient supplies, including comparator drug, for our clinical trials; delay or failure to reach agreement on acceptable clinical trial agreement terms or clinical trial protocols with prospective sites or investigators;
- delay or failure to obtain the approval of the Institutional Review Board to conduct a clinical trial at a prospective site; and
- our decision to alter the development strategy for one or more clinical or preclinical products.

We may seek to partner with third-party collaborators with respect to the development and commercialization of our product candidates, and we cannot control whether we will be able to do so on favorable terms, if at all.

Our business strategy relies in part on potentially partnering successful product candidates with larger companies to complement our internal development and commercialization efforts. We will be competing with many other companies as we seek partners for our product candidates and may not be able to compete successfully against those companies. If we are not able to enter into collaboration arrangements for our product candidates, we would be required to undertake and fund further development, clinical trials, manufacturing and commercialization activities solely at our own expense and risk. If we are unable to finance and/or successfully execute those expensive activities, or we delay such activities due to capital availability, our business could be materially and adversely affected, and potential future product launch could be materially delayed, be less successful, or we may be forced to discontinue clinical development of these product candidates.

Our product candidates may cause undesirable and potentially serious side effects during clinical trials that could delay or prevent their regulatory approval or commercialization.

Since patients in our clinical trials have advanced stages of cancer, we expect that additional adverse events, including serious adverse events, will occur.

Undesirable side effects caused by any of our product candidates could cause us or regulatory authorities to amend, interrupt, delay or halt clinical trials and could result in the denial of regulatory approval by regulatory agencies for any or all targeted indications or decrease the competitive opportunity of the product candidate which may decrease sales potential. This, in turn, could prevent us from commercializing our product candidates and generating revenue from their sale. In addition, if our product candidates receive marketing approval and we or others later identify undesirable side effects caused by the product:

- we may elect to terminate the ongoing clinical trials and cease development of the product;
- regulatory authorities may withdraw their approval of the product;
- we may be required to recall the product, change the way the product is administered, conduct additional clinical trials or change the labeling of the product;
- a product may become less competitive and product sales may decrease; and
- our reputation may suffer.

Any one or a combination of these events could prevent us from achieving or maintaining market acceptance of the affected product or could substantially increase the costs and expenses of commercializing the product, which in turn could delay or prevent us from generating significant revenue from the sale of the product. Historic events have raised questions about the safety of other companies' marketed drugs and may result in increased cautiousness by regulatory agencies in reviewing new drugs based on safety, efficacy or other regulatory considerations and may result in significant delays in obtaining regulatory approvals, additional clinical trials being required, or more stringent product labeling requirements. Any delay in obtaining, or the inability to obtain, applicable regulatory approvals would prevent us from commercializing our product candidates.

If we were to be successfully sued related to our products or operations, we could face substantial liabilities that may exceed our resources.

We may be held liable if any of our products or operations cause injury or death or are found otherwise unsuitable during product testing, manufacturing, marketing or sale. These risks are inherent in the development of pharmaceutical products. We currently maintain commercial general and umbrella liability policies with combined limits of $10.0 million per occurrence and in the aggregate, in addition to a $10.0 million per claim and annual aggregate product liability insurance policy related to our clinical trials consistent with industry standards. When necessary for our products, we intend to obtain additional product liability insurance. Insurance coverage may be prohibitively expensive, may not fully cover potential liabilities or may not be available in the future. Inability to obtain sufficient insurance coverage at an acceptable cost or otherwise to protect against potential product liability claims

could prevent or inhibit the commercialization of our products. If we were to be sued for any injury caused by or associated with our products or operations, the litigation could consume substantial time and attention of our management, and the resulting liability could exceed our total assets.

If our competitors develop and market products that are more effective, safer or less expensive than our future product candidates, our clinical trials and commercial opportunities will be negatively affected.

The life sciences industry is highly competitive, and we face significant competition from many pharmaceutical, biopharmaceutical and biotechnology companies that are researching and marketing products designed to address cancer indications for which we are currently developing products or for which we may develop products in the future. We are aware of several other companies that are developing therapeutics that seek to promote tumor cell death. Several therapies have been recently approved by the FDA, and we expect more to be approved in the future.

Some of our product candidates' development plans include pursuing prostate and lung cancer indications. Substantial advancements in the treatment of prostate and lung cancer have occurred in the past two years and new products from our competitors have been approved for marketing on the basis of showing a survival advantage. Any products we may develop in the future are also likely to face competition from other drugs and therapies. Many of our competitors have significantly greater financial, manufacturing, marketing and drug development resources than we do. Large pharmaceutical companies, in particular, have extensive experience in clinical testing and in obtaining regulatory approvals for drugs. These companies also have significantly greater research and marketing capabilities than we do. In addition, many universities and private and public research institutes are, or may become, active in cancer research, and develop products that may directly compete with ours. If our competitors market products that are more effective, safer or less expensive than our future product candidates, if any, or that reach the market sooner than our future product candidates, if any, we may not achieve commercial success.

If new therapies become broadly used, we may need to conduct clinical trials of our product candidates in combination with these new therapies to demonstrate safety and efficacy of the combination. Additional trials will delay the development of our product candidates and increase our costs. The failure of certain of our product candidates to work in combination with these new therapies would have an adverse effect on our business.

Our intention is to combine certain of our product candidates with therapies that are broadly used by clinicians and considered highly effective. As new therapies are developed, we will need to assess these therapies to determine whether to conduct clinical trials of our product candidates in combination with them to demonstrate safety and efficacy of the combination. If we determine that it is appropriate to conduct additional clinical trials of our product candidates in combination with these new therapies, the development of our product candidates will be delayed and our costs will be increased. If these clinical trials generate safety concerns or lack of efficacy, our business would be adversely affected.

Even if we receive regulatory approval to market our product candidates, the market may not be receptive to our products.

Even if our product candidates obtain regulatory approval, they may not gain market acceptance among physicians, patients, healthcare payors and/or the medical community. We believe that the degree of market acceptance will depend on a number of factors, including:

- efficacy, safety and tolerability of our products;
- timing of market introduction of competitive products;
- availability of coverage and reimbursement from government and other third-party payors;
- potential advantages or disadvantages over alternative treatments;
- strength of marketing and distribution support;
- price of our products, both in absolute terms and relative to alternative treatments; and
- sequencing of available products.

If our future product candidates fail to achieve market acceptance, we may not be able to generate significant revenue or achieve or sustain profitability.

We will need to retain additional personnel and expand our other resources in order to develop ourother product candidates. If we fail to effectively expand our operations, including attracting and retaining key management and scientific personnel, we may be unable to successfully develop or commercialize our product candidates and our business may be materially adversely affected.

We will need to expand and effectively manage our managerial, operational, financial, development, commercialization and other resources in order to successfully pursue our development and commercialization efforts for our existing and future product candidates. In connection with the termination of the Collaboration Agreement with Teva, we took on additional management activities such as regulatory, drug supply and pharmacovigilance that was previously managed by Teva. Our success depends on our continued ability to attract, retain and motivate highly qualified personnel, such as management, clinical and preclinical personnel, including our executive officers Scott Cormack, John Bencich and Cindy Jacobs. In addition, although we have entered into employment agreements with each of Mr. Cormack, Mr. Bencich and Dr. Jacobs, such agreements permit the executive to terminate his or her employment with us at any time, subject to providing us with advance written notice.

Should custirsen receive marketing approval in the United States, Canada, or elsewhere in the world, we would need to hire a substantial number of specialized personnel, including field-based medical affairs representatives. In turn, we would need to increase our administrative headcount to support such expanded development and commercialization operations with respect to our product candidates. Our ability to attract and retain qualified personnel in the future is subject to intense competition for qualified personnel among biotechnology, pharmaceutical and other businesses and our current financial position. The loss of the services of any of our senior management could delay or prevent the development and commercialization of our product candidates, or have other adverse effects on our business for an indefinite term. In particular, if we lose any members of our current senior management team, we may not be able to find suitable replacements in a timely fashion, if at all, and our business may be harmed as a result.

We have scientific and clinical advisors who assist us in formulating our development and clinical strategies. These advisors are not our employees and may have commitments to, or consulting or advisory contracts with, other entities that may limit their availability to us. In addition, our advisors may have arrangements with other companies to assist those companies in developing products or technologies that may compete with ours.

We may encounter difficulties in managing our expected growth and in expanding our operations successfully.

As we advance our product candidates through development, we will need to develop or expand our development, regulatory, manufacturing, marketing and sales capabilities or contract with third parties to provide these capabilities for us. Maintaining additional relationships and managing our future growth will impose significant added responsibilities on members of our management. We must be able to manage our development efforts effectively, manage our clinical trials effectively, hire, train and integrate additional management, development, administrative and sales and marketing personnel, improve our managerial, development, operational and finance systems, and expand our facilities, all of which may impose a strain on our administrative and operational infrastructure.

Furthermore, we may acquire additional businesses, products or product candidates that complement or augment our existing business. Integrating any newly acquired business, product or product candidate could be expensive and time-consuming. We may not be able to integrate any acquired business, product or product candidate successfully or operate any acquired business profitably. Our future financial performance will depend, in part, on our ability to manage any future growth effectively and our ability to integrate any acquired businesses. We may not be able to accomplish these tasks, which failure could prevent us from successfully growing our business.

The successful commercialization of our product candidates will depend in part on the extent to which governmental authorities and health insurers establish adequate coverage and reimbursement levels and pricing policies.

Successful sales of any future products will depend, in part, on the extent to which coverage and reimbursement for our products will be available from government and health administration authorities, private health insurers and other third-party payors. To manage healthcare costs, many governments and third-party payors increasingly scrutinize the pricing of new products and require greater levels of evidence of favorable clinical outcomes and cost-effectiveness before extending coverage. In light of such challenges to prices, we cannot be sure that we will achieve coverage for any product candidate that we commercialize and, if available, that the reimbursement rates will be adequate. If we are unable to obtain adequate levels of coverage and reimbursement for our product candidates, their marketability will be negatively and materially impacted.

Moreover, eligibility for coverage and reimbursement does not imply that a drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. In addition, obtaining and maintaining adequate coverage and reimbursement status is time-consuming and costly. Third party payors may deny coverage and reimbursement status altogether of a given drug product, or cover the product but may also establish prices at levels that are too low to enable us to realize an appropriate return on our investment in product development. Further, one payor’s determination to provide coverage for a product does not

assure that other payors will also provide coverage for the product. Because the rules and regulations regarding coverage andreimbursement change frequently, in some cases at short notice, even when there is favorable coverage and reimbursement, future changes may occur that adversely impact the favorable status.

The unavailability or inadequacy of third-party coverage and reimbursement could have a material adverse effect on the market acceptance of any of our future products and the future revenues we may expect to receive from those products. In addition, we are unable to predict what additional legislation or regulation relating to the healthcare industry or third-party coverage and reimbursement may be enacted in the future, or what effect such legislation or regulation would have on our business.

If we fail to acquire and develop products or product candidates at all or on commercially reasonable terms, we may be unable to grow our business.

We currently do not have internal discovery capabilities and depend on pharmaceutical and biotechnology companies and other researchers to sell or license products or product candidates to us. To date, three of our product candidates have been derived from technologies discovered by the Vancouver Prostate Centre and licensed to us by UBC. We intend to continue to rely on research institutions and other biotechnology or pharmaceutical companies as sources of product candidates. We cannot guarantee that the Vancouver Prostate Centre or UBC will continue to develop new product candidate opportunities, that we will continue to have access to such opportunities or that we will be able to purchase or license these product candidates on commercially reasonable terms, if at all. If we are unable to purchase or license new product candidates from the Vancouver Prostate Centre or UBC, we will be required to identify alternative sources of product candidates.

The success of our product pipeline strategy depends on our ability to identify, select and acquire pharmaceutical product candidates. Proposing, negotiating and implementing an economically viable product acquisition or license is a lengthy and complex process. We compete for partnering arrangements and license agreements with pharmaceutical and biotechnology companies and academic research institutions. Our competitors may have stronger relationships with third parties with whom we are interested in collaborating and/or may have more established histories of developing and commercializing products. As a result, our competitors may have a competitive advantage in entering into partnering arrangements with such third parties. In addition, even if we find promising product candidates, and generate interest in a partnering or strategic arrangement to acquire such product candidates, we may not be able to acquire rights to additional product candidates or approved products on terms that we find acceptable, if at all. If we fail to acquire and develop product candidates from others, we may be unable to grow our business.

We expect that any product candidate that we acquire rights to will require additional development efforts prior to commercial sale, including extensive clinical evaluation and approval by regulatory agencies. All product candidates are subject to the risks of failure inherent in pharmaceutical product development, including the possibility that the product candidate will not be shown to be sufficiently safe and effective for approval by regulatory authorities. Even if the product candidates are approved, we can make no assurance that we would be capable of economically producing the product or that the product would be commercially successful.

We may be adversely affected if our controls over financial reporting fail or are circumvented.

We regularly review and update our internal controls, disclosure controls and procedures, and corporate governance policies. In addition, we are required under the Sarbanes Oxley Act of 2002 to report annually on our internal control over financial reporting. If it were to be determined that our internal control over financial reporting is not effective, such shortcoming could have an adverse effect on our business and financial results and the price of our common stock could be negatively affected. This reporting requirement could also make it more difficult or more costly for us to obtain certain types of insurance, including director and officer liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. Any system of internal controls, however well designed and operated, is based in part on certain assumptions and can provide only reasonable, not absolute, assurances that the objectives of the system are met. Any failure or circumvention of the controls and procedures or failure to comply with regulation concerning control and procedures could have a material effect on our business, results of operation and financial condition. Any of these events could result in an adverse reaction in the financial marketplace due to a loss of investor confidence in the reliability of our financial statements, which ultimately could negatively affect the market price of our shares, increase the volatility of our stock price and adversely affect our ability to raise additional funding. The effect of these events could also make it more difficult for us to attract and retain qualified persons to serve on our Board and our Board committees and as executive officers.

Risks Related to Our Intellectual Property

Our proprietary rights may not adequately protect our technologies and product candidates.

Our commercial success will depend on our ability to obtain patents and/or regulatory exclusivity and maintain adequate protection for our technologies and product candidates in the United States and other countries. We will be able to protect our proprietary rights from

unauthorized use by third parties only to the extent that our proprietary technologies and future product candidates are covered by valid and enforceable patents or are effectively maintained as trade secrets.

We and our collaborators intend to apply for additional patents covering both our technologies and product candidates, as we deem appropriate. We or our collaborators may, however, fail to apply for patents on important technologies or product candidates in a timely fashion, if at all. Our existing patents and any future patents we or our collaborators obtain may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products and technologies. In addition, we do not always control the patent prosecution of subject matter that we license from others. Accordingly, we are sometimes unable to exercise a significant degree of control over such intellectual property as we would over our own.

Moreover, the patent positions of biopharmaceutical companies are highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. As a result, the validity and enforceability of our patents cannot be predicted with certainty. In addition, the U.S. Supreme Court has revised certain tests regarding granting patents and assessing the validity of patents to make it more difficult to obtain patents. As a consequence, issued patents may be found to contain invalid claims according to the revised standards. Some of our patents or those of our collaborators may be subject to challenge and subsequent invalidation or significant narrowing of claim scope in a re-examination proceeding, or during litigation, under the revised criteria. We cannot guarantee that:

- we or our licensors were the first to make the inventions covered by each of our issued patents and pending patent applications;
- we or our licensors were the first to file patent applications for these inventions;
- others will not independently develop similar or alternative technologies or duplicate any of our technologies;
- any of our or our licensors' pending patent applications will result in issued patents;
- any of our or our licensors' patents will be valid or enforceable;
- any patents issued to us or our licensors and collaboration partners will provide us with any competitive advantages, or will not be challenged by third parties; and
- we will develop additional proprietary technologies that are patentable, or the patents of others will not have an adverse effect on our business.

The actual protection afforded by a patent varies on a product-by-product basis, from country to country and depends on many factors, including the type of patent, the scope of its coverage, the availability of regulatory related extensions, the availability of legal remedies in a particular country and the validity and enforceability of the patents. Our ability or the ability of our collaborators to maintain and solidify our proprietary position for our product candidates will depend on our success in obtaining effective claims and enforcing those claims once granted. Our issued patents and those that may issue in the future, or those licensed to us or our collaborators, may be challenged, invalidated, unenforceable or circumvented, and the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages against competitors with similar products. Due to the extensive amount of time required for the development, testing and regulatory review of a potential product, it is possible that, before any of our product candidates can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent.

We also rely on trade secrets to protect some of our technology, especially where it is believed that patent protection is not appropriate or obtainable. However, trade secrets are difficult to maintain. While we use reasonable efforts to protect our trade secrets, our or our collaboration partners' employees, consultants, contractors or scientific and other advisors may unintentionally or willfully disclose our proprietary information to competitors. For example, under our Termination Agreement with Teva, Teva is not permitted to use our confidential information which would include our trade secrets. We may not be able to adequately determine whether Teva uses any of our trade secrets and if they do, we may not be able to sufficiently enforce their non-use. Enforcement of claims that a third party has illegally obtained and is using trade secrets is expensive, time consuming and uncertain. In addition, non-U.S. courts are sometimes less willing than U.S. courts to protect trade secrets. If our competitors independently develop equivalent knowledge, methods and know-how, we would not be able to assert our trade secrets against them and our business could be harmed.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on all of our product candidates and products, when and if we have any, in every jurisdiction would be prohibitively expensive. Competitors may use our technologies in jurisdictions where we or our licensors have not obtained patent protection to develop their own products. These products may compete with our products, when and if we have any, and may not be covered by any of our or our licensors' patent claims or other intellectual property rights.

The laws of some non-U.S. countries do not protect intellectual property rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology and/or pharmaceuticals, which could make it difficult for us to stop the infringement of our patents. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business.

We may become involved in disputes with past or potential future collaborators over intellectual property ownership, and publications by our research collaborators and scientific advisors could impair our ability to obtain patent protection or protect our proprietary information, which, in either case, could have a significant effect on our business.

Inventions discovered under research, material transfer or other such collaborative agreements may become jointly owned by us and the other party to such agreements in some cases and the exclusive property of either party in other cases. Under some circumstances, it may be difficult to determine who owns a particular invention, or whether it is jointly owned, and disputes could arise regarding ownership of those inventions. These disputes could be costly and time consuming and an unfavorable outcome could have a significant adverse effect on our business if we were not able to protect or license rights to these inventions. In addition, our research collaborators and scientific advisors generally have contractual rights to publish our data and other proprietary information, subject to our prior review. Publications by our research collaborators and scientific advisors containing such information, either with our permission or in contravention of the terms of their agreements with us, may impair our ability to obtain patent protection or protect our proprietary information, which could significantly harm our business.

The intellectual property protection for our product candidates depends on third parties.

With respect to custirsen, apatorsen and OGX-225, we have exclusively licensed from UBC certain issued patents and pending patent applications covering the respective antisense sequences underlying these product candidates and their commercialization and use, and we have licensed from Ionis certain issued patents and pending patent applications directed to product compositions and chemical modifications used in product candidates for commercialization, use and the manufacturing thereof, as well as some alternative antisense sequences. We have also received a sublicense from Ionis under certain third-party patent portfolios directed to such modifications.

The patents and pending patent applications underlying our licenses do not cover all potential product candidates, modifications and uses. In the case of patents and patent applications licensed from Ionis, we do not have and have not had any control over the filing, prosecution or enforcement of these patents or patent applications. We cannot be certain that such prosecution efforts have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents. We also cannot be assured that our licensors or their respective licensing partners will agree to enforce any such patent rights at our request or devote sufficient efforts to attain a desirable result. Any failure by our licensors or any of their respective licensing partners to properly protect the intellectual property rights relating to our product candidates could have a material adverse effect on our financial condition and results of operation.

If we breach any of the agreements under which we license rights to our product candidates or technology from third parties, we could lose license rights that are important to our business. Certain of our license agreements may not provide an adequate remedy for a breach by the licensor.

We license the development and commercialization rights for most of our product candidates, including custirsen, apatorsen and OGX-225, and we expect to enter into similar licenses in the future. Under such licenses, we are subject to various obligations such as sublicensing, royalty and milestone payments, annual maintenance fees, limits on sublicensing, insurance obligations and the obligation to use commercially reasonable best efforts to develop and exploit the licensed technology. If we fail to comply with any of these obligations or otherwise breach these agreements, our licensors may have the right to terminate the license in whole or in part or to terminate the exclusive nature of the license. We may also become involved in disputes with licensors regarding the meaning of certain terms in the license agreements, including terms related to royalty and milestone payments, which may result in costly and time consuming litigation. Loss of any of these licenses or the exclusivity rights provided by the licenses could harm our financial condition and results of operations. In addition, certain of our license agreements with UBC eliminate our ability to obtain money damages in respect of certain claims against UBC.

If we are unable to successfully defend or settle our pending litigation with Ionis, we may be required to make a significant payment to Ionis and may lose certain development and commercialization rights related to our product candidates.

During 2015, we received communications from Ionis requesting payment of 30% of the $23.2 million paid by Teva under the Termination Agreement, as well as 30% of any amounts paid by Teva upon release of the $3.0 million holdback amount. In January 2016, Ionis filed a lawsuit and claimed that OncoGenex Technologies is in breach of the license agreement with Ionis for failing to

pay Ionis a share of the advance reimbursement payment from Teva and other non-monetary consideration received from Teva in connection with the termination of the Collaboration Agreement. Ionis seeks damages in the amount of at least $10 million and a declaratory judgment that, based on OncoGenex Technologies' alleged breach, Ionis has the right to terminate the license agreement. We do not, however, believe that any payments are due to Ionis. Under the Ionis license agreement, no payment is due to Ionis on any consideration that we receive for the reimbursement for research and development activities. The amounts paid or payable by Teva under the Termination Agreement constitute an advanced reimbursement for certain continuing research and development activities related to custirsen and certain other antisense inhibitors of clusterin, and therefore, no payments are owed to Ionis.

Litigation is costly and time consuming, and may result in a diversion of management's attention and resources. If this litigation does not result in a successful outcome or we are otherwise unable to settle the dispute on acceptable terms, we may be required to pay Ionis a significant portion of the amounts that were paid by Teva, which may require us to revise our operating budget and clinical development plans, and delay or suspend clinical development. Ionis may also attempt to terminate the license agreement, which could result in our loss of certain development and commercialization rights relating to our product candidates and harm our ability to advance our product candidates.

The patent protection for our product candidates or products may expire before we are able to maximize their commercial value, which may subject us to increased competition and reduce or eliminate our opportunity to generate product revenue.

The patents for our product candidates have varying expiration dates and, when these patents expire, we may be subject to increased competition and we may not be able to recover our development costs. For example, certain of the U.S. patents directed to custirsen and its use that have been licensed from UBC are scheduled to expire in 2020 and 2021. In some of the larger economic territories, such as the United States and Europe, patent term extension/restoration may be available to compensate for time taken during aspects of the product candidate's regulatory review. We cannot, however, be certain that an extension will be granted or, if granted, what the applicable time period or the scope of patent protection afforded during any extended period will be. In addition, even though some regulatory agencies may provide some other exclusivity for a product candidate under its own laws and regulations, we may not be able to qualify the product candidate or obtain the exclusive time period.

If we are unable to obtain patent term extension/restoration or some other exclusivity, we could be subject to increased competition and our opportunity to establish or maintain product revenue could be substantially reduced or eliminated. Furthermore, we may not have sufficient time to recover our development costs prior to the expiration of our U.S. and non-U.S. patents.

We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights and we may be unable to protect our rights to, or use of, our technology.

If we choose to go to court to stop someone else from using the inventions claimed in our patents or our licensed patents, that individual or company has the right to ask the court to rule that these patents are invalid and/or should not be enforced against that third party. These lawsuits are expensive and would consume time and other resources even if we were successful in stopping the infringement of these patents. In addition, there is a risk that the court will decide that these patents are invalid or unenforceable and that we do not have the right to stop the other party from using the inventions. The U.S. Supreme Court has revised certain tests regarding granting patents and assessing the validity of patents to make it more difficult to obtain patents. Some of our issued patents may be subject to challenge and subsequent invalidation under the revised criteria. There is also the risk that, even if the validity or unenforceability of these patents is upheld, the court will narrow the scope of our claim or will refuse to stop the other party on the grounds that such other party's activities do not infringe our rights.

If we wish to use the technology or compound claimed in issued and unexpired patents owned by others, we will need to obtain a license from the owner, enter into litigation to challenge the validity or enforceability of the patents or incur the risk of litigation in the event that the owner asserts that we infringed its patents. The failure to obtain a license to technology or the failure to challenge an issued patent that we may require to discover, develop or commercialize our product candidates may have a material adverse effect on us.

If a third party asserts that we infringed its patents or other proprietary rights, we could face a number of risks that could seriously harm our results of operations, financial condition and competitive position, including:

- patent infringement and other intellectual property claims, which would be costly and time consuming to defend, whether or not the claims have merit, and which could delay the regulatory approval process and divert management's attention from our business;
- substantial damages for past infringement, which we may have to pay if a court determines that our product candidates or technologies infringe a competitor's patent or other proprietary rights;

- a court prohibiting us from selling or licensing our technologies or future drugs unless the third party licenses its patents or other proprietary rights to us on commercially reasonable terms, which it is not required to do; and
- if a license is available from a third party, we may have to pay substantial royalties or lump-sum payments or grant cross licenses to our patents or other proprietary rights to obtain that license.

The biotechnology industry has produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. If we are sued for patent infringement, we would need to demonstrate that our product candidates or methods of use either do not infringe the patent claims of the relevant patent, and/or that the patent claims are invalid, and/or that the patent is unenforceable and we may not be able to do this. Proving invalidity, in particular, is difficult since it requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents.

U.S. patent laws as well as the laws of some foreign jurisdictions provide for provisional rights in published patent applications beginning on the date of publication, including the right to obtain reasonable royalties, if a patent subsequently issues and certain other conditions are met.

Because some patent applications in the United States may be maintained in secrecy until the patents are issued, because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing and because publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for technology covered by our licensors' issued patents or our pending applications or our licensors' pending applications, or that we or our licensors were the first to invent the technology.

Patent applications filed by third parties that cover technology similar to ours may have priority over our or our licensors' patent applications and could further require us to obtain rights to issued patents covering such technologies. If another party files a U.S. patent application on an invention similar to ours, we may elect to participate in or be drawn into an interference proceeding declared by the U.S. Patent and Trademark Office to determine priority of invention in the United States. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful, resulting in a loss of our U.S. patent position with respect to such inventions. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations. We cannot predict whether third parties will assert these claims against us or against the licensors of technology licensed to us, or whether those claims will harm our business. If we are forced to defend against these claims, whether they are with or without any merit and whether they are resolved in favor of or against us or our licensors, we may face costly litigation and diversion of management's attention and resources. As a result of these disputes, we may have to develop costly non-infringing technology, or enter into licensing agreements. These agreements, if necessary, may be unavailable on terms acceptable to us, if at all, which could seriously harm our business or financial condition.

We may be subject to damages resulting from claims that we, or our employees or consultants, have wrongfully used or disclosed alleged trade secrets of third parties.

Many of our employees were previously employed, and certain of our consultants are currently employed, at universities or biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we have not received any claim to date, we may be subject to claims that these employees or consultants or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of these current or former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. We may be subject to claims that employees of our partners or licensors of technology licensed by us have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. We may become involved in litigation to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel.

Risks Related to our Common Stock

The price for our common stock is volatile.

The market prices for our common stock and that of emerging life science companies generally have historically been highly volatile. For example, after the announcement of data from recent custirsen and apatorsen clinical trials, we experienced a significant decreases in our stock price. Future announcements concerning us, the results of our clinical trials or our competitors may also have a significant effect on the market price of our common stock. The stock markets also experience significant price and volume fluctuation unrelated to the operating performance of particular companies. These market fluctuations may also adversely affect the market price of our common stock.

An increase in the market price of our common stock, which is uncertain and unpredictable, may be the sole source of gain from an investment in our common stock. An investment in our common stock may not be appropriate for investors who require dividend income. We have never declared or paid cash dividends on our capital stock and do not anticipate paying any cash dividends on our capital stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. As a result, capital appreciation, if any, of our common stock will be the sole source of gain for stockholders for the foreseeable future. Accordingly, an investment in our common stock may not be appropriate for investors who require dividend income or investors who are not prepared to bear a significant risk of losses from such an investment.

The price of our common stock does not meet the requirements for continued listing on The NASDAQ Capital Market. If we fail to regain compliance with the minimum listing requirements, our common stock will be subject to delisting. Our ability to publicly or privately sell equity securities and the liquidity of our common stock could be adversely affected if our common stock is delisted.

The continued listing standards of The NASDAQ Capital Market require, among other things, that the minimum bid price of a listed company's stock be at or above $1.00. If the minimum bid price is below $1.00 for a period of more than 30 consecutive trading days, the listed company will fail to be in compliance with The NASDAQ Capital Market's listing rules and, if it does not regain compliance within the grace period, will be subject to delisting. As previously reported, on February 25, 2016, we received a notice from the NASDAQ Listing Qualifications Department notifying us that for 30 consecutive trading days, the bid price of our common stock had closed below the minimum $1.00 per share requirement. In accordance with The NASDAQ Capital Market's listing rules, we were afforded 180 calendar days, or until August 23, 2016, to regain compliance with the bid price requirement. In order to regain compliance, the bid price of our common stock must close at a price of at least $1.00 per share for a minimum of 10 consecutive trading days. If we fail to regain compliance, our common stock will be subject to delisting. Delisting from The NASDAQ Capital Market could adversely affect our ability to raise additional financing through the public or private sale of equity securities, would significantly affect the ability of investors to trade our securities and would negatively affect the value and liquidity of our common stock. Delisting could also have other negative results, including the potential loss of confidence by employees, the loss of institutional investor interest and fewer business development opportunities

We are at risk of securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities, including in circumstances where such declines occur in close proximity to the announcement of clinical trial results. This risk is especially relevant for us because our stock price and those of other biotechnology and biopharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

If we raise additional capital, the terms of the financing transactions may cause dilution to existing stockholders or contain terms that are not favorable to us.

To date, our sources of cash have been limited primarily to proceeds from the private or public placement of our securities and reimbursement for custirsen-related development expenses from our prior strategic collaboration with Teva, which terminated in April 2015. In the future, we may seek to raise additional financing through private placements or public offerings of our equity or debt securities. We cannot be certain that additional funding will be available on acceptable terms, if at all. To the extent that we raise additional financing by issuing equity securities, we may do so at a price per share that represents a discount to the then-current per share trading price of our common stock and our stockholders may experience significant dilution. Any debt financing, if available, may involve restrictive covenants, such as limitations on our ability to incur additional indebtedness, limitations on our ability to acquire or license intellectual property rights and other operating restrictions that could adversely affect our ability to conduct our business.

Anti-takeover provisions in our stockholder rights plan, our charter documents and under Delaware law could make a third-party acquisition of us difficult.

We have a stockholder rights plan that may have the effect of discouraging unsolicited takeover proposals. Specifically, the rights issued under the stockholder rights plan could cause significant dilution to a person or group that attempts to acquire us on terms not approved in advance by our Board. In addition, our certificate of incorporation and bylaws contain provisions that may discourage unsolicited takeover proposals that stockholders may consider to be in their best interests. These provisions include the ability of our Board to designate the terms of and issue new series of preferred stock and the ability of our Board to amend our bylaws without stockholder approval. In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless certain specific requirements are met as set forth in Section 203. Collectively, these provisions could make a third-party acquisition of us difficult or could discourage transactions that otherwise could involve payment of a premium over prevailing market prices for our common stock.

Risks Related to Our Industry

There is a high risk that our drug development activities will not result in commercial products.

Our product candidates are in various stages of development and are prone to the risks of failure inherent in drug development. We will need to complete significant additional clinical trials before we can demonstrate that our product candidates are safe and effective to the satisfaction of regulatory agencies. Clinical trials are expensive and uncertain processes that take years to complete. Failure can occur at any stage of the process, and successful early clinical trials do not ensure that later clinical trials will be successful. Product candidates in later-stage clinical trials may fail to show desired efficacy and safety traits despite having progressed through initial clinical trials. For example, in April 2014, we announced that top-line survival results indicated that the addition of custirsen to standard first-line docetaxel/prednisone therapy did not meet the primary endpoint of a statistically significant improvement in overall survival in men with metastatic CRPC, compared to docetaxel/prednisone alone. Additionally, in January 2016, we announced that data from the phase 2 Spruce trial evaluating the combination of apatorsen with carboplatin and pemetrexed in patients with untreated metastatic NSCLC did not reach the statistical significance required to demonstrate a PFS benefit. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier clinical trials. In addition, a clinical trial may prove successful with respect to a secondary objective, but fail to demonstrate clinically significant benefits with respect to a primary objective. Failure to satisfy a primary objective in a phase 3 clinical trial (registration trial) would generally mean that a product candidate would not receive regulatory approval.

The regulatory approval process is expensive, time consuming and uncertain and may prevent us from obtaining approvals for the commercialization of some or all of our product candidates.

The research, testing, manufacturing, labeling, approval, selling, marketing and distribution of drug products are subject to extensive regulation by regulatory agencies, which regulations differ from country to country. We are not permitted to market our product candidates in the United States until we receive approval of an application for market approval from regulatory agencies. We have not submitted an application for or received marketing approval for any of our product candidates. Obtaining approval of an application for market approval can be a lengthy, expensive and uncertain process. In addition, failure to comply with regulatory agencies' requirements may, either before or after product approval, if any, subject us to administrative or judicially imposed sanctions, including:

- restrictions on the products, manufacturers or manufacturing process;
- warning letters;
- civil and criminal penalties;
- injunctions;
- suspension or withdrawal of regulatory approvals;
- product seizures, detentions or import bans;
- voluntary or mandatory product recalls and publicity requirements;
- total or partial suspension of production;
- imposition of restrictions on operations, including costly new manufacturing requirements; and
- refusal to approve pending applications for market approval or supplements to approved applications for market approval.

Regulatory approval of an application for market approval or application for market approval supplement is not guaranteed, and the approval process is expensive and may take several years. Regulatory agencies also has substantial discretion in the drug approval process. Even though we have received support for our protocol amendment to the AFFINITY trial, this does not guarantee that regulatory agencies will be supportive of an application for market approval. Despite the time and expense exerted, failure can occur at any stage, and we could encounter problems that could cause us to abandon clinical trials or to repeat or perform additional preclinical studies and clinical trials. The number of preclinical studies and clinical trials that will be required for regulatory agencies' approval varies depending on the drug candidate, the disease or condition that the drug candidate is designed to address, and the regulations applicable to any particular drug candidate. Regulatory agencies can delay, limit or deny approval of a drug candidate for many reasons, including:

- a drug candidate may not be deemed safe or effective;
- regulatory agencies may not find the data from preclinical studies and/or clinical trials sufficient;
- regulatory agencies might not approve our third-party manufacturer's processes or facilities;

- regulatory agencies may change its approval policies or adopt new regulations; and
- third-party products may enter the market and change approval requirements.

Even if we obtain regulatory approvals for our product candidates, the terms of approvals and ongoing regulation of our product candidates may limit how we manufacture and market our product candidates, which could materially affect our ability to generate revenue.

If any of our product candidates are approved, the approved product and its manufacturer will be subject to continual review. Any regulatory approval that we receive for a product candidate is likely to be subject to limitations on the indicated uses for which the end product may be marketed, or include requirements for potentially costly post-approval follow-up clinical trials. In addition, if regulatory agencies approve any of our product candidates, the labeling, packaging, adverse event reporting, storage, advertising and promotion for the end product will be subject to extensive regulatory requirements. We and the manufacturers of our products, when and if we have any, will also be required to comply with cGMP regulations, which include requirements relating to quality control and quality assurance, as well as the corresponding maintenance of records and documentation. Further, regulatory agencies must approve these manufacturing facilities before they can be used to manufacture our products, when and if we have any, and these facilities are subject to ongoing regulatory inspection. If we fail to comply with the regulatory requirements of regulatory agencies, or if previously unknown problems with our products, when and if we have any, manufacturers or manufacturing processes are discovered, we could be subject to administrative or judicially imposed sanctions, including:

- restrictions on the products, manufacturers or manufacturing process;
- warning letters;
- civil or criminal penalties or fines;
- injunctions;
- product seizures, detentions or import bans;
- voluntary or mandatory product recalls and publicity requirements;
- suspension or withdrawal of regulatory approvals;
- total or partial suspension of production;
- imposition of restrictions on operations, including costly new manufacturing requirements; and
- refusal to approve pending applications for market approval or supplements to approved applications for market approval.

In addition, regulatory agencies may change their policies and additional regulations may be enacted that could prevent or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States, Canada or abroad. If we are not able to maintain regulatory compliance, we would likely not be permitted to market our future product candidates and we may not achieve or sustain profitability.

If government and third-party payors fail to provide coverage and adequate reimbursement rates for our product candidates, our revenue and potential for profitability will be reduced.

In the United States and elsewhere, our product revenue will depend principally on the reimbursement rates established by third-party payors, including government health administration authorities, managed-care providers, public health insurers, private health insurers and other organizations. These third-party payors are increasingly challenging the price, and examining the cost-effectiveness, of medical products and services. In addition, significant uncertainty exists as to the reimbursement status, if any, of newly approved drugs, pharmaceutical products or product indications. We may need to conduct post-marketing clinical trials in order to demonstrate the cost-effectiveness of our products, if any. Such clinical trials may require us to commit a significant amount of management time and financial and other resources. If reimbursement of such product is unavailable or limited in scope or amount or if pricing is set at unsatisfactory levels, our revenue could be reduced.

In some countries other than the United States, particularly the countries of the European Union and Canada, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, obtaining pricing approval from governmental authorities can take six to 12 months or longer after the receipt of regulatory marketing approval of a product for an indication. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of one of our product candidates to other available therapies. If reimbursement of such product candidate is unavailable or limited in scope or amount or if pricing is set at unsatisfactory levels, our revenue could be reduced.

Domestic and foreign governments continue to propose and pass legislation designed to reduce the cost of healthcare, including drugs. In the United States, there have been, and we expect that there will continue to be, federal and state proposals to implement similar governmental control. In addition, increasing emphasis on managed care in the United States will continue to put pressure on the pricing of pharmaceutical products. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, or collectively, PPACA, became law in the United States. PPACA substantially changes the way healthcare is financed by both governmental and private insurers and significantly affects the pharmaceutical industry.

We anticipate that the PPACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and downward pressure on the price for any approved product, and could seriously harm our prospects. In addition, the Medicare and Medicaid program and state healthcare laws and regulations may also be modified to change the scope of covered products and/or reimbursement methodology. Cost control initiatives could decrease the established reimbursement rates that we receive for any products in the future, which would limit our revenue and profitability. Legislation and regulations affecting the pricing of pharmaceutical products, including custirsen, or apatorsen may change at any time, which could further limit or eliminate reimbursement rates for custirsen, apatorsen or other product candidates.

Failure to obtain regulatory approval outside of the United States and Canada would prevent us from marketing our product candidates abroad.

We intend to market certain of our existing and future product candidates outside of the United States and Canada. In order to market our existing and future product candidates in the European Union and many other non-North American markets, we must obtain separate regulatory approvals. We have had limited interactions with non-North American regulatory authorities. Approval procedures vary among countries and can involve additional testing, and the time required to obtain approval may differ from that required to obtain FDA approval. Approval by the FDA or other regulatory authorities does not ensure approval by regulatory authorities in other countries, and approval by one or more non-North American regulatory authorities does not ensure approval by regulatory authorities in other countries or by the FDA. The non-North American regulatory approval process may include all of the risks associated with obtaining FDA approval. We may not obtain non-North American regulatory approvals on a timely basis, if at all. We may not be able to file for non-North American regulatory approvals and may not receive necessary approvals to commercialize our existing and future product candidates in any market.

Item 6. Exhibits

Exhibit Number	Description
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2*	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted 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

* The certifications attached as Exhibits 32.1 and 32.2 accompany this Quarterly Report on Form 10-Q pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ONCOGENEX PHARMACEUTICALS, INC.

Date: May 12, 2016

By: /s/ Scott Cormack
Scott Cormack
President and Chief Executive Officer

Date: May 12, 2016

By: /s/ John Bencich
John Bencich
Chief Financial Officer

EXHIBIT INDEX

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32.2*	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted 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

* The certifications attached as Exhibits 32.1 and 32.2 accompany this Quarterly Report on Form 10-Q pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

Exhibit 31.1

Certification Pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934

I, Scott Cormack, certify that:

1. I have reviewed this quarterly report on Form 10-Q of OncoGenex Pharmaceuticals, 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 and I 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 and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

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

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

Date: May 12, 2016

/s/ Scott Cormack
Scott Cormack
President and Chief Executive Officer

Exhibit 31.2

Certification Pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934

I, John Bencich, certify that:

1. I have reviewed this quarterly report on Form 10-Q of OncoGenex Pharmaceuticals, 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 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 and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

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

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

Date: May 12, 2016

/s/ John Bencich
John Bencich
Chief Financial Officer

Exhibit 32.1

Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

I, Scott Cormack, President and Chief Executive Officer of OncoGenex Pharmaceuticals, Inc. (the "Company"), certify, pursuant to Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, that:

(1) the Quarterly Report on Form 10-Q of the Company for the three months ended March 31, 2016 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 780(d)); and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 12, 2016

/s/ Scott Cormack
Scott Cormack
President and Chief Executive Officer

Exhibit 32.2

Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

I, John Bencich, Chief Financial Officer of OncoGenex Pharmaceuticals, Inc. (the "Company"), certify, pursuant to Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, that:

(1) the Quarterly Report on Form 10-Q of the Company for the three months ended March 31, 2016 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 780(d)); and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 12, 2016

/s/ John Bencich
John Bencich
Chief Financial Officer