Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2018

OR

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

For the transition period from to

Commission file number: 001-35890

OVASCIENCE, INC.

(Exact name of registrant as specified in its charter)

Delaware	**45-1472564**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
9 4th Avenue **Waltham, Massachusetts**	**02451**
(Address of principal executive offices)	(Zip Code)

617-500-2802
(Registrant's telephone number, including area code)

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

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

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

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

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

As of April 30, 2018, there were 35,758,907 shares of the registrant's Common Stock, par value $0.001 per share, outstanding.

Table of Contents

OVASCIENCE, INC.
Quarterly Report on Form 10-Q
For the Quarterly Period Ended March 31, 2018
INDEX

Part I. Financial Information

Item 1. Financial Statements

OvaScience, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)
(In thousands, except share and per share data)

	As of March 31, 2018	As of December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 19,721	$ 15,703
Short-term investments	38,577	51,500
Prepaid expenses and other current assets	835	1,578
Total current assets	59,133	68,781
Property and equipment, net	2,935	3,113
Investment in joint venture	146	146
Long-term restricted cash	791	789
Other long-term assets	24	24
Total assets	$ 63,029	$ 72,853
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 1,024	$ 2,242
Accrued expenses and other current liabilities	4,008	5,562
Total current liabilities	5,032	7,804
Other non-current liabilities	664	751
Total liabilities	5,696	8,555
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Preferred stock, $0.001 par value; 5,000,000 shares authorized, no shares issued and outstanding	—	—
Common stock, $0.001 par value; 100,000,000 shares authorized; 35,758,907 and 35,725,230 shares issued and outstanding at March 31, 2018 and December 31, 2017, respectively	36	36
Additional paid-in capital	366,178	365,769
Accumulated other comprehensive loss	(31)	(27)
Accumulated deficit	(308,850)	(301,480)
Total stockholders' equity	57,333	64,298
Total liabilities and stockholders' equity	$ 63,029	$ 72,853

See accompanying notes.

OvaScience, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(In thousands, except per share data)

	Three Months Ended March 31,	
	2018	2017
Revenues	$ 67	$ 63
Costs and expenses:		
Costs of revenues	112	269
Research and development	2,621	5,764
Selling, general and administrative	4,224	7,129
Restructuring	692	1,488
Total costs and expenses	7,649	14,650
Loss from operations	(7,582)	(14,587)
Interest income, net	191	182
Other income (expense), net	21	(60)
Loss from equity method investment	—	(421)
Loss before income taxes	(7,370)	(14,886)
Income tax expense	—	9
Net loss	$ (7,370)	$ (14,895)
Net loss per share—basic and diluted	$ (0.21)	$ (0.42)
Weighted average number of shares used in net loss per share—basic and diluted	35,726	35,642
Net loss	$ (7,370)	$ (14,895)
Other comprehensive loss:		
Unrealized gains (losses) on available-for-sale securities	(4)	1
Comprehensive loss	$ (7,374)	$ (14,894)

See accompanying notes.

OvaScience, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(In thousands)

	Three Months Ended March 31,	
	2018	**2017**
Cash flows from operating activities:		
Net loss	$ (7,370)	(14,895)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	330	461
Amortization of (discount) premium on debt securities	(35)	27
Stock-based compensation expense	382	1,360
Issuance of common stock for director fees	27	38
Net loss on equity method investment	—	421
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	743	458
Accounts payable	(1,370)	184
Accrued expenses, deferred rent and other non-current liabilities	(1,641)	(3,239)
Net cash used in operating activities	(8,934)	(15,185)
Cash flows from investing activities:		
Purchases of plant and equipment	—	(75)
Maturities of short-term investments	29,200	23,325
Purchases of short-term investments	(16,246)	(26,562)
Net cash provided by (used in) investing activities	12,954	(3,312)
Cash flows from financing activities:		
Net cash provided by financing activities	—	—
Net decrease in cash, cash equivalents and restricted cash	4,020	(18,497)
Cash, cash equivalents and restricted cash at beginning of period	16,492	44,369
Cash, cash equivalents and restricted cash at end of period	$ 20,512	$ 25,872
Supplemental disclosure of non-cash investing activity		
Additions of property and equipment included in accounts payable	$ 152	$ 26

The following table provides a reconciliation of cash, cash equivalents and restricted cash to amounts reported within the condensed consolidated balance sheets.

	As of March 31, 2018	As of March 31, 2017
Cash and cash equivalents	$ 19,721	$ 25,433
Restricted cash	791	439
Total cash, cash equivalents and restricted cash	$ 20,512	$ 25,872

See accompanying notes.

OvaScience, Inc.
Notes to Unaudited, Condensed Consolidated Financial Statements

1. Organization

OvaScience, Inc., incorporated on April 5, 2011 as a Delaware corporation, is a company focused on the development of new treatment options for women and couples struggling with infertility. Each OvaScience treatment is based on the company's proprietary technology platform that leverages the discovery of egg precursor, or EggPC℠, cells. As used in these consolidated financial statements, the terms "OvaScience," "the Company," "we," "us," and "our" refer to the business of OvaScience, Inc. and its wholly owned subsidiaries. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, acquiring and developing our technology, identifying potential fertility treatments, developing the OvaPrime℠ treatment, the OvaTure℠ treatment and the AUGMENT℠ treatment, introducing AUGMENT in select international in vitro fertilization ("IVF") clinics and determining the regulatory and development path for our fertility treatments. We have generated limited revenues to date, and do not anticipate significant revenues in the near term. On June 21, 2017, we announced that we would continue to focus on advancing OvaPrime in clinical development and OvaTure in preclinical development and would discontinue ongoing efforts related to the AUGMENT treatment outside of North America. To better align our organization with these strategic priorities, we restructured our workforce and reduced our workforce by approximately 50%. On January 3, 2018, we announced a further restructuring of our organization and a workforce reduction of approximately 50%. On May 3, 2018, we announced that our board of directors had approved a corporate restructuring plan furthering its on-going efforts to effectively align Company resources. Additionally, our management team and board of directors have initiated a process to explore a range of strategic alternatives for enhancing shareholder value, including the potential sale or merger of the Company. In connection with the restructuring plan, the Company plans to reduce its workforce by approximately 70%, with the majority of the reduction in personnel expected to be completed by June 30, 2018. As a result, we expect to realize annualized cost savings beginning in the fourth quarter of 2018. We estimate that we will incur one-time costs of approximately $0.5 million to $1.0 million in the form of termination benefits and retention arrangements related to the restructuring plan.

We are subject to a number of risks similar to other life science companies, including, but not limited to, risks associated with clinical and preclinical development, the need to develop and obtain marketing approval for certain of our fertility treatments, competitors developing new technological innovations, the need to successfully commercialize and gain market acceptance of our fertility treatments and protection of proprietary technology, and the outcome of our exploration of strategic alternatives. If we do not successfully develop and commercialize any of our fertility treatments, we will be unable to generate treatment revenue or achieve profitability. As of March 31, 2018, we had an accumulated deficit of approximately $308.9 million.

Liquidity

We have incurred annual net operating losses in each year since our inception. We have generated limited treatment revenues related to our primary business purpose and have financed our operations primarily through private placements of our preferred stock, which was subsequently converted to common stock, and public sales of our common stock and interest income earned on cash, cash equivalents, and short-term investments balances.

We have devoted substantially all of our financial resources and efforts to the research and development of our OvaPrime and OvaTure fertility treatments and the introduction of AUGMENT in select international IVF clinics. We expect to continue to incur significant expenses related to the research and development of OvaPrime and OvaTure and incur operating losses for the next several years.

We believe that our cash, cash equivalents and short-term investments of $58.3 million at March 31, 2018, will be sufficient to fund our current operating plan for at least the next 12 months from the date of filing this Form 10-Q. There can be no assurances, however, that the current operating plan will be achieved or that additional funding, if needed, will be available on terms acceptable to us, or at all.

2. Basis of presentation and significant accounting policies

Basis of Presentation

The accompanying interim unaudited condensed consolidated financial statements have been prepared by us in accordance with accounting principles generally accepted in the United States of America ("US GAAP"). These condensed consolidated financial statements include our accounts and the accounts of our wholly-owned subsidiaries. All intercompany transactions have been eliminated in consolidation.

Certain information and footnote disclosures normally included in our annual financial statements have been omitted. In the opinion of management, the unaudited interim financial statements reflect all adjustments, which with the exception of restructuring accruals described in Note 9, consisted of normal and recurring adjustments, necessary for the fair presentation of our financial position at March 31, 2018, results of our operations and cash flows for the three months ended March 31, 2018 and 2017.

The results for the three months ended March 31, 2018 are not necessarily indicative of future results. These condensed consolidated financial statements should be read in conjunction with the audited financial statements for the year ended December 31, 2017, which are contained in our Annual Report on Form 10-K for the year ended December 31, 2017 ("2017 Annual Report on Form 10-K") that was filed with the Securities and Exchange Commission ("SEC") on March 15, 2018.

Use of estimates and summary of significant accounting policies

These condensed consolidated financial statements are presented in conformity with US GAAP, which requires management to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

Our significant accounting policies are described in Note 2, "Summary of Significant Accounting Policies," in our 2017 Annual Report on Form 10-K.

Net loss per share

Basic and diluted net loss per common share are calculated by dividing net loss by the weighted average number of shares outstanding during the period. Potentially dilutive shares, including outstanding stock options and unvested restricted stock units, are only included in the calculation of diluted net loss per share when their effect is dilutive.

The amounts in the table below were excluded from the calculation of diluted net loss per share due to their anti-dilutive effect (in thousands):

	As of March 31,	
	2018	2017
Outstanding stock options and restricted stock units	6,356	5,468

Collaborations

In December 2013, we entered into a collaboration agreement, the OvaTure Collaboration, with Intrexon Corporation, or Intrexon, governing the use of Intrexon's synthetic biology technology platform for the accelerated development of our OvaTure platform. The OvaTure Collaboration provided that Intrexon would deliver laboratory and animal data to support the successful filing of an IND for OvaTure.

We participated as an equal member on the Joint Steering Committee, or JSC and Intellectual Property Committee, or IPC. The JSC agreed upon the services and the activities to be included in the work plan, and the IPC had authority over intellectual property matters. We had the tie-breaking vote if there were any disputes with the JSC.

On February 1, 2018, we provided Intrexon with written notice of termination of the OvaTure Collaboration. We believed that we could continue the development of OvaTure by building out our internal capabilities and expertise under the leadership of Dr. James Lillie, our Chief Scientific Officer, and engaging with contract research organizations that have specific, complementary capabilities to our own.

Recent accounting pronouncements

In November 2016, the FASB issued ASU No. 2016-18, Statement of Cash Flows (Topic 230) - Restricted Cash. ASU 2016-18 requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. This update is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years using a retrospective transition method to each period presented. The Company adopted this standard as of January 1, 2018 on a retrospective basis, which resulted in the recast of the prior reporting period in the statement of cash flows. For the three months ended March 31, 2018 and 2017, $0.8 million and $0.8 million, respectively, of restricted cash is included in the total of cash and restricted cash balance at the end of period. A reconciliation of cash and restricted cash from our condensed consolidated statement of cash flows to the amounts reported within our condensed consolidated balance sheet is also included in a table below our condensed consolidated statement of cash flows.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. ASU 2016-15 requires changes in the presentation of debt prepayment or debt extinguishment costs, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, proceeds from the settlement of corporate-owned life insurance policies and distributions received from equity method investees. This update is effective for annual and interim periods beginning after December 15, 2017 using a retrospective transition method to each period presented. We adopted this standard as of January 1, 2018 with no material impact on our consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases, which is intended to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. Under ASU 2016-02, a lessee will be required to recognize assets and liabilities for both operating and financing leases with lease terms of more than 12 months. In addition, ASU 2016-02 requires the use of the modified retrospective method, which will require adjustment to all comparative periods presented in the consolidated financial statements. The amendment is effective for annual periods beginning after December 15, 2018, and interim periods within those annual periods. Early adoption is permitted. We are currently assessing the impact ASU 2016-02 will have on our consolidated financial statements and footnote disclosures thereto.

In August 2015, the FASB issued ASU No. 2015-14 Revenue from Contracts with Customers, which defers the effective date of ASU No. 2014-09 by one year. ASU 2014-09 amends the guidance for accounting for revenue from contracts with customers. ASU 2014-09 supersedes the revenue recognition requirements in ASC Topic 605, Revenue Recognition, and creates a new Topic 606, Revenue from Contracts with Customers. This guidance is now effective for fiscal years beginning after December 15, 2017, with early adoption permitted for annual periods beginning after December 15, 2016. Two adoption methods are permitted: retrospectively to all prior reporting periods presented, with certain practical expedients permitted; or retrospectively with the cumulative effect of initially adopting the ASU 2014-09 recognized at the date of initial application. We adopted ASU 2015-14 effective January 1, 2018 and elected to adopt ASU 2015-14 using the modified retrospective approach and applied the standard only to contracts that have not yet been completed as of January 1, 2018. The impact under this methodology to our previously reported revenues is insignificant in the periods reported, and therefore the Company did not record a cumulative catch-up to deferred revenue and accumulated deficit upon adoption of the new standard on January 1, 2018.

3. OvaXon Joint Venture

In December 2013, we entered into a joint venture with Intrexon to leverage Intrexon's synthetic biology technology platform and our technology relating to EggPC cells to focus on developing significant improvements in human and animal health. We and Intrexon formed OvaXon, LLC ("OvaXon") to conduct the joint venture. Each party contributed $1.5 million of cash to OvaXon, each party has a 50% equity interest and all costs and profits will be split accordingly. Each party will also have 50% control over OvaXon and any disputes between us and Intrexon will be resolved through arbitration, if necessary.

Starting in August 2017, Intrexon continued bovine EggPC work for us under the OvaTure Collaboration rather than under the OvaXon joint venture (the "August 2017 Amendment"). We are in discussions with Intrexon regarding the future of the OvaXon joint venture.

OvaXon no longer qualifies as a variable interest entity as a result of the August 2017 Amendment, and our future losses associated with OvaXon are now limited. We and Intrexon have equal ability to direct the activities of OvaXon through JSC and IPC membership and 50% voting rights and therefore ability to exert significant influence over OvaXon. As we have the ability to exert significant influence over OvaXon, in accordance with ASC 323 *Equity Method and Joint Ventures*, we will continue to account for OvaXon under the equity method and not consolidate its financial results with ours.

We recorded losses from equity method investments related to OvaXon of a de minimis amount and $0.4 million for the three months ended March 31, 2018 and 2017, respectively. As of March 31, 2018 and December 31, 2017, our investment in OvaXon was approximately $0.1 million and $0.1 million, respectively.

4. Fair value

The fair value of our financial assets reflects our estimate of amounts that we would have received in connection with the sale of such asset in an orderly transaction between market participants at the measurement date. In connection with measuring the fair value of our assets, we seek to maximize the use of observable inputs (market data obtained from independent sources) and to minimize the use of unobservable inputs (our assumptions about how market participants would price assets and liabilities). We use the following fair value hierarchy to classify assets based on the observable inputs and unobservable inputs we used to value our assets and liabilities:

- Level 1—quoted prices (unadjusted) in active markets for identical assets.
- Level 2—quoted prices for similar assets in active markets or inputs that are observable for the asset, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument.
- Level 3—unobservable inputs based on our assumptions used to measure assets at fair value.

The following tables summarize our assets that are measured at fair value as of March 31, 2018 and December 31, 2017 (in thousands):

Description	Balance as of March 31, 2018	Level 1	Level 2	Level 3
Assets:				
Cash and money market funds	$ 19,721	$ 19,721	$ —	$ —
Corporate debt securities (including commercial paper)	24,113	—	24,113	—
U.S. government securities	14,464	—	14,464	—
Total	$ 58,298	$ 19,721	$ 38,577	$ —

Description	Balance as of December 31, 2017	Level 1	Level 2	Level 3
Assets:				
Cash and money market funds	$ 15,703	$ 15,703	$ —	$ —
Corporate debt securities (including commercial paper)	35,531	—	35,531	—
U.S. government securities	15,969	—	15,969	—
Total	$ 67,203	$ 15,703	$ 51,500	$ —

5. Cash, cash equivalents and short-term investments

The following tables summarize our cash, cash equivalents and short-term investments as March 31, 2018 and December 31, 2017 (in thousands):

March 31, 2018	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Cash and money market funds	$ 19,721	$ —	$ —	$ 19,721
Corporate debt				
Due in one year or less	24,140	—	(27)	24,113
U.S. government securities				
Due in one year or less	14,467	—	(3)	14,464
Total	$ 58,328	$ —	$ (30)	$ 58,298
Reported as:				
Cash and cash equivalents	$ 19,721	$ —	$ —	$ 19,721
Short-term investments	38,607	—	(30)	38,577
Total	$ 58,328	$ —	$ (30)	$ 58,298

December 31, 2017	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Cash and money market funds	$ 15,703	$ —	$ —	$ 15,703
Corporate debt				
Due in one year or less	38,053	—	(21)	38,032
U.S. government securities				
Due in one year or less	13,474	—	(6)	13,468
Total	$ 67,230	$ —	$ (27)	$ 67,203
Reported as:				
Cash and cash equivalents	$ 15,703	$ —	$ —	$ 15,703
Short-term investments	51,527	—	(27)	51,500
Total	$ 67,230	$ —	$ (27)	$ 67,203

At March 31, 2018 and December 31, 2017, we held ten and ten debt securities that had been in an unrealized loss position for less than 12 months, respectively. At March 31, 2018 and December 31, 2017, the aggregate fair value of the securities in an unrealized loss position for less than 12 months was $20.7 million and $22.9 million, respectively. At March 31, 2018, we did not hold any investments that have been in a continuous unrealized loss position for 12 months or longer.

We evaluate our securities for other-than-temporary impairments based on quantitative and qualitative factors, and we considered the decline in market value for the ten debt securities in an unrealized loss position as of March 31, 2018, to be primarily attributable to the then current economic and market conditions. We will likely not be required to sell these securities, and do not intend to sell these securities before the recovery of their amortized cost bases, which recovery is expected within the next 12 months. Based on our analysis, we do not consider these investments to be other-than-temporarily impaired as of March 31, 2018.

As of March 31, 2018, we held $5.4 million in financial institution debt securities and other corporate debt securities located in Canada and Australia. As of December 31, 2017, we held $12.0 million in financial institution debt securities and other corporate debt securities located in Australia, Luxembourg, Japan, Norway and Sweden.

We had no realized gains or losses on our short-term investments for the three months ended March 31, 2018 and 2017.

6. Property and equipment

Property and equipment and related accumulated depreciation and amortization are as follows (in thousands):

	As of March 31, 2018	As of December 31, 2017
Laboratory equipment	$ 3,632	$ 3,480
Furniture	371	371
Computer equipment	208	208
Leasehold improvements	2,754	2,754
Total property and equipment, gross	6,965	6,813
Less: accumulated depreciation and amortization	(4,030)	(3,700)
Total property and equipment, net	$ 2,935	$ 3,113

We recorded depreciation and amortization expense of $0.3 million and $0.5 million for the three months ended March 31, 2018 and 2017, respectively.

In December 2016, we initiated a corporate restructuring and in January 2017, we commenced a search to find a buyer for certain excess fixed assets, primarily comprised of laboratory equipment. As of January 31, 2017, we met the criteria to classify such assets as held-for-sale and estimated the fair value less costs to sell these assets at $0.5 million. In June 2017, we initiated the first part of our plan to sell a portion of the fixed assets classified as held-for-sale, consisting primarily of fixed assets located domestically. In July 2017, we completed the sale of these assets with a carrying value of $0.2 million and received net proceeds of $0.3 million. We recorded a gain on the sale of these excess assets of $0.1 million.

In February 2018, we completed the sale of the remaining $0.3 million of assets, primarily those located internationally and received net proceeds of $0.2 million. We recorded an immaterial loss on the sale of these assets, which is

included in loss from continuing operations in our condensed consolidated statement of operations and comprehensive loss for the three months ending March 31, 2018.

7. Accrued expenses and other current liabilities

Accrued expenses and other current liabilities consist of the following as of March 31, 2018 and December 31, 2017 (in thousands):

	As of March 31, 2018	As of December 31, 2017
Compensation and related benefits	$ 1,028	$ 2,215
Development, site costs and contract manufacturing	484	519
Legal, audit and tax services	1,647	1,542
Consulting	171	160
Other accrued expenses and other current liabilities	678	1,126
	$ 4,008	$ 5,562

Other accrued expenses consist of accrued costs related to travel, equipment purchases, lab supplies and other miscellaneous costs.

8. Stock-based compensation

Stock options

A summary of our stock option activity and related information as of March 31, 2018 is as follows:

	Shares	Weighted average exercise price per share	Weighted average remaining contractual term (years)	Aggregate intrinsic value (in thousands)
Outstanding at December 31, 2017	5,745,815	$ 7.28	8.32	$ 43
Granted	1,179,877	0.96		
Forfeited/Canceled	(569,399)	—		
Outstanding at March 31, 2018	6,356,293	5.81	8.40	24
Exercisable at March 31, 2018	2,349,399	11.98	6.89	24

No stock options were exercised during the three months ended March 31, 2018 or March 31, 2017.

The fair value of each stock-based option award is estimated on the grant date using the Black-Scholes option pricing model with the following assumptions:

	Three months ended March 31,	
	2018	2017
Risk-free interest rate	2.7%	2.0-2.2%
Dividend yield	—	—
Volatility	83-85%	92%
Expected term (years)	6.1	6.1-9.9

As of March 31, 2018, we had approximately $4.0 million of total unrecognized compensation cost, related to unvested stock options, which we expect to recognize over a weighted-average period of 2.9 years.

During the three months ended March 31, 2018, we granted options to purchase 1,179,877 shares of our common stock to employees at a weighted average grant date fair value of $0.70 per share, and with a weighted average exercise price of $0.96 per share. During the three months ended March 31, 2017, we granted options to purchase 1,832,250 shares of our common stock at a weighted average grant date fair value of $1.20 per share and with a weighted average exercise price of $1.58 per share.

We did not grant any options to purchase common stock to non-employees for the three months ended March 31, 2018. We granted 150,000 options to purchase common stock with a weighted average exercise price of $1.60 per share to non-employees for the three months ended March 31, 2017. Stock-based awards issued to non-employees are revalued at each reporting date until vested.

9. Restructuring

In December 2016, we initiated a reduction in workforce of approximately 30% in connection with our change in corporate strategy. As of December 31, 2017, we had recognized all restructuring charges related to our December 2016 restructuring activities, approximately $6.9 million comprised of $2.4 million recorded as one-time termination benefits, $1.7 million as a benefit under an ongoing benefit plan, $2.0 million of fixed asset impairment charges and $0.9 million of other restructuring related charges including legal fees and contract cancellation fees.

On June 21, 2017, we initiated a reduction in workforce of approximately 50% in connection with our decision to focus on the development and advancing of OvaPrime and OvaTure and to no longer offer the AUGMENT treatment on a commercial basis outside of North America. As of December 31, 2017, we had recognized all restructuring charges related to our June 2017 restructuring activities, approximately $2.3 million comprised of $1.7 million recorded as one-time termination benefits, $0.3 million as a benefit under an ongoing benefit plan, $0.2 million of fixed asset impairment charges and $0.1 million of other restructuring related charges including legal fees.

In January 2018, we initiated a reduction in workforce of approximately 50% in connection with a decision to streamline our operations and reduce our cost structure. During the three months ended March 31, 2018, we recognized restructuring charges of $0.7 million primarily comprised of $0.7 million of one-time termination benefits all attributable to our January 2018 restructuring activities. As of March 31, 2018, we have recognized substantially all restructuring charges related to our January 2018 restructuring activities. Our restructuring charges for the three months ended March 31, 2018, are included in our condensed consolidated statements of operations and comprehensive loss.

For the three months ended March 31, 2018, we made cash payments of $0.8 million primarily related to severance benefits and other restructuring costs, all of which relate to our January 2018 restructuring activities, respectively. For the three months ended March 31, 2017, we made cash payments of $2.2 million primarily related to severance benefits, of which all related to our December 2016 restructuring activities.

As of March 31, 2018, our restructuring accrual was $0.5 million and was recorded in accrued expenses and other current liabilities in our condensed consolidated balance sheet. Since the execution of our restructuring activities, we have incurred a total of $9.9 million of restructuring charges, of which $6.9 million relates to our December 2016 restructuring activities and $2.4 million relates to our June 2017 restructuring activities and $0.7 million to our January 2018 restructuring activities.

The following table outlines our restructuring activities for the three months ended March 31, 2018 (in thousands):

Accrued restructuring balance as of December 31, 2017	$	403
Plus:		
Severance		692
Other		112
Less:		
Payments		(756)
Accrued restructuring balance as of March 31, 2018	$	451

Other restructuring costs consist primarily of professional fees including legal fees and contract termination fees.

10. Commitments and contingencies

On October 9, 2015, a purported class action lawsuit was filed in the Suffolk County Superior Court in the Commonwealth of Massachusetts against us, several of our officers and directors and certain of the underwriters from our January 2015 follow-on public offering of our common stock. The plaintiffs purported to represent those persons who purchased shares of our common stock pursuant or traceable to our January 2015 follow-on public offering. The plaintiffs alleged, among other things, that the Company made false and misleading statements and failed to disclose material information in the Company's January 2015 Registration Statement and incorporated offering materials. Plaintiffs allege violations of Sections 11, 12 and 15 of the Securities Act of 1933, as amended, and seek, among other relief, unspecified compensatory damages, rescission, pre-and post-judgment interest and fees, costs and disbursements. On December 7, 2015, the OvaScience defendants filed a notice of removal with the Federal District Court for the District of Massachusetts. On December 30, 2015, plaintiffs filed a motion to remand the action to the Superior Court. Oral argument on the motion to remand was held on February 19, 2016. On February 23, 2016, the District Court granted plaintiffs' motion to remand the action to the Superior Court. On February 26, 2016, a second putative class action suit was filed in the Suffolk County Superior Court in the Commonwealth of Massachusetts against the Company, several of our officers and directors and certain of the underwriters from the January 2015 follow-on public offering of the Company's common stock. The complaint is substantially similar to the complaint filed in October 2015. The two actions subsequently were consolidated and plaintiffs filed a First Amended Class Action Complaint on June 17, 2016. Defendants filed motions to dismiss the complaint. Those motions were denied by order dated December 22, 2016. On August 17, 2016, an additional plaintiff, Westmoreland County Employee Retirement System ("Westmoreland") moved to intervene in the consolidated action. The defendants opposed Westmoreland's motion to intervene. The Superior Court granted Westmoreland's motion to intervene on October 27, 2017. On August 7, 2017, the plaintiffs filed their motion for class certification, which the defendants opposed. Oral argument on the motion for class certification was held on September 29, 2017. On November 7, 2017, the Superior Court denied the plaintiffs' motion for class certification. On August 14, 2017, the defendants filed their motion for summary judgment against plaintiffs Heather Carlson, Cesar Castellanos, Philipp Hofmann, and Carlos Rivas, which the plaintiffs opposed. Oral argument on the motion for summary judgment was held on October 18, 2017. On November 21, 2017, the Superior Court allowed the defendants' motion for summary judgment, and the claims asserted by plaintiffs Heather Carlson, Cesar Castellanos, Philipp Hofmann, and Carlos Rivas in the consolidated actions were dismissed, leaving Westmoreland as the sole remaining plaintiff. On November 22, 2017, Westmoreland filed a putative class action complaint in the U.S. District Court for the District of Massachusetts against the same defendants alleging the same claims as are alleged in the state court case (the "Westmoreland Federal Action"). On January 17, 2018, the lead plaintiff in a different case, a purported shareholder class action alleging violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 (the "Dahhan Action") filed a motion to intervene in the Westmoreland Federal Action and to consolidate the Westmoreland Federal Action with the Dahhan Action. We have opposed this motion, which is pending. In the Westmoreland Federal Action, on January 22, 2018, Westmoreland moved for appointment of lead plaintiff and approval of lead and liaison counsel. The lead plaintiff in the Dahhan Action opposed the motion. With the court's leave, on April 26, 2018, the defendants opposed Westmoreland's motion on statute of limitations grounds. This motion is pending. On January 22, 2018, Westmoreland filed a motion to voluntarily dismiss the Superior Court action without prejudice. The defendants opposed that motion. Oral argument on Westmoreland's motion for voluntary dismissal was held on April 3, 2018. On April 5, 2018, the Superior Court allowed Westmoreland's motion for voluntary dismissal with prejudice. The Superior Court entered final judgment on April 10, 2018, dismissing Westmoreland's claims without prejudice and dismissing the claims of plaintiffs Heather Carlson, Cesar Castellanos, Philipp Hofmann, and Carlos Rivas with prejudice. We believe that the complaints in both cases are without merit and intend to defend against the remaining pending litigation. There can be no assurance, however, that we will be successful. A resolution of these lawsuits adverse to the Company or the other defendants could have a material effect on our consolidated financial position and results of operations in the period in which the lawsuit is resolved. At present, we are unable to estimate potential losses, if any, related to the lawsuit.

On November 9, 2016, a purported shareholder derivative action was filed in the Business Litigation Session of the Suffolk County Superior Court in the Commonwealth of Massachusetts against certain of our present and former officers and directors alleging breaches of fiduciary duty, unjust enrichment, abuse of control, gross mismanagement and corporate waste for purported actions related to the January 2015 follow-on public offering. On February 23, 2017, the court approved the parties' joint stipulation to stay all proceedings in the action until further notice. Following a status conference in December 2017, the stay was lifted. On January 25, 2018, at the parties' request, the court entered a second order staying all proceedings in the action under further order of the court. We believe that the complaint is without merit and intend to defend against the litigation. There can be no assurance, however, that we will be successful. A resolution of this lawsuit adverse to the Company or the other defendants could have a material effect on our consolidated financial position and results of operations in the period in which the lawsuit is resolved. At present, we are unable to estimate potential losses, if any, related to the lawsuit.

On March 24, 2017, a purported shareholder class action lawsuit was filed in the U.S. District Court for the District of Massachusetts against the Company and certain of our present and former officers alleging violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934. On July 5, 2017, the Court entered an order approving the appointment of Freedman Family Investments LLC as lead plaintiff, the firm of Robins Geller Rudman & Dowd LLP as lead counsel, and the Law Office of Alan L. Kovacs as local counsel. Plaintiff filed an amended complaint on August 25, 2017. We have filed a motion to dismiss the amended complaint, which is pending. On January 17, 2018, the lead plaintiff moved to consolidate the Westmoreland Federal Action with this case. We have opposed this motion, which is pending. We believe that the complaint is without merit and intend to defend against the litigation. There can be no assurance, however, that we will be successful. A resolution of this lawsuit adverse to the Company or the other defendants could have a material effect on our consolidated financial position and results of operations in the period in which the lawsuit is resolved. At present, we are unable to estimate potential losses, if any, related to the lawsuit.

On June 30, 2017, a purported shareholder derivative complaint was filed in the U.S. District Court for the District of Delaware against certain of our present and former directors and the Company as a nominal defendant, alleging breach of fiduciary duties, waste of corporate assets, unjust enrichment, and violations of Section 14(a) of the Securities Exchange Act of 1934, alleging that compensation awarded to the director defendants was excessive. We have filed a motion to dismiss the complaint, which is pending. At the parties' request, the court stayed all deadlines in this case and cancelled the hearing on defendants' motion to dismiss while the parties engage in settlement negotiations. We believe that the complaint is without merit and intend to defend against the litigation. There can be no assurance, however, that we will be successful. At present, we are unable to estimate potential losses, if any, related to the lawsuit.

On July 27, 2017, a purported shareholder derivative complaint was filed in the U.S. District Court for the District of Massachusetts against certain of our present and former directors and the Company as a nominal defendant, alleging breach of fiduciary duty, unjust enrichment and violations of Section 14(a) of the Securities Exchange Act of 1934 alleging that compensation awarded to the director defendants was excessive and seeking redress for purported actions related to the Company's January 2015 follow-on public offering and public statements. On September 26, 2017, the plaintiffs filed an amended complaint which eliminated all claims regarding allegedly excessive director pay. On October 27, 2017, the defendants filed a motion to dismiss the amended complaint. The court heard oral argument on the motion to dismiss on April 5, 2018. On April 13, 2018, the court granted the defendants' motion to dismiss the complaint for failure to state a claim for relief under Section 14(a). The court also dismissed the plaintiffs' pendent state law claims without prejudice, based on lack of subject matter jurisdiction. On April 25, 2018, the plaintiffs moved for leave to amend the complaint, and to stay this case pending the outcome of the Westmoreland Federal Action and the Dahhan Action. The defendants do not believe that the proposed amended complaint cures the defects in the current complaint, but have informed plaintiffs' counsel that, in the interest of judicial economy, the defendants would not oppose the proposed amendment if the court would consider staying the case pending the resolution of the pending Westmoreland Federal Action and the Dahhan Action. On April 27, 2018, the court granted the plaintiffs' motion for leave to amend the complaint and for a stay. On April 30, 2018, the plaintiffs filed their second amended complaint. Per the court's order of April 27, 2018, the case will be stayed upon the filing of the second amended complaint. We believe that the complaint is without merit and intend to defend against the litigation. There can be no assurance, however, that we will be successful. At present, we are unable to estimate potential losses, if any, related to the lawsuit.

We are not party to any other material litigation in any court.

11. Subsequent Events

On May 3, 2018, we provided a strategic update on our business. We announced that we will scale back investments in our research and development efforts, including putting a hold on our planned Phase 1b/2a clinical trial of OvaPrime, in order to preserve resources while we evaluate the results of our ongoing preclinical studies and continue to monitor patients in our Phase 1 clinical trial of OvaPrime. Under the leadership of Dr. James Lillie, our Chief Scientific Officer, a small internal scientific team will continue to leverage specialized contract research organizations and select academic partners to progress our OvaTure program. We will also continue to offer AUGMENT to patients in Japan through an exclusive license to IVF Japan.

Additionally, we announced that we have initiated a process to explore a range of strategic alternatives for enhancing shareholder value, including the potential sale or merger of the Company. Our Board of Directors has established a Business Development Committee that will work with management to oversee this process and has engaged Ladenburg Thalmann & Co. Inc. to act as its strategic financial advisor.

In conjunction with these decisions, we will also restructure our organization to streamline operations and reduce our cost structure, including reducing our workforce by approximately 70 percent. We anticipate the majority of the reduction in personnel will be completed by June 30, 2018. We expect to realize annualized cost savings beginning in the fourth quarter of 2018. We anticipate incurring one-time costs related to our restructuring initiatives of approximately $0.5 million to $1.0 million, which primarily consist of severance-related termination benefits.

On May 3, 2018, the Company's Board of Directors approved retention arrangements for the Company's Chief Executive Officer, Senior Vice President - Finance, Chief Scientific Officer and other employees, substantially as described below.

CEO Retention Arrangements: Pursuant to Dr. Kroeger's Employment Agreement with the Company, dated June 21, 2017, Dr. Kroeger is entitled to a payment of 12 months' base salary in the event of a termination of his employment without cause or for good reason (as defined in the Employment Agreement) within one year following a Change in Control Event (as defined in the Employment Agreement). Pursuant to the retention arrangements, under those circumstances Dr. Kroeger will also be entitled to his full bonus opportunity for the year (60% of his then-current base salary).

In addition, Dr. Kroeger will be entitled to receive a cash bonus equal to 1% of the OvaScience Deal Value (defined below) implied in a Change in Control Event, which will fully vest six months after the closing of such transaction, would be immediately payable in the event of a termination of his employment without cause or for good reason within one year following a Change in Control Event, and shall be forfeited if no strategic transaction is entered into within eighteen months of May 3, 2018.

On May 10, 2018, Dr. Kroeger will also receive a new grant of options to purchase 715,000 shares of the Company's common stock at an exercise price equal to the closing price of the Company's common stock on the grant date, which shall vest in full upon the closing of a Change in Control Event, and shall be forfeited by Dr. Kroeger if no strategic transaction is entered into within eighteen months. Dr. Kroeger will have the right to exercise this option for a three-year period after any termination of his employment (other than a termination for cause) following a Change in Control Event. The "OvaScience Deal Value" shall be the product of the number of shares of the Company outstanding immediately prior to the closing of a Change in Control Event multiplied by the closing price of the Company's common stock on the date of the closing of the Change in Control Event.

As previously reported, when he joined the Company, Dr. Kroeger received a grant of 1,783,108 options to purchase common stock of the Company at an exercise price of $1.46 per share (the "Kroeger New Hire Options"), which are currently under water relative to the closing price of the common stock on May 2, 2018 of $0.91. Under their original terms, each of the Kroeger New Hire Options can be exercised for 90 days after termination of employment. The retention arrangements approved for Dr. Kroeger provide that 1,069,864 of the Kroeger New Hire Options may be exercised for three years after his termination (other than for cause). The remaining 713,242 Kroeger New Hire Options shall retain a 90 day post-termination exercise period.

Retention Arrangements for Other Officers and for Employees: Pursuant to the employment agreements between the Company and Jonathan Gillis, Senior Vice President - Finance and Dr. James Lillie, Chief Scientific Officer, respectively, Mr. Gillis and Dr. Lillie are each entitled to a payment of six months' base salary in the event of a termination of employment without cause or for good reason. Pursuant to the retention arrangements, Mr. Gillis and Dr. Lillie will each also be entitled to a payment of his full bonus opportunity for the year (35% and 40% of his then-current base salary, respectively) in the event of a termination of his employment without cause or for good reason following a Change in Control Event. Two other non-

executive employees of the Company will also receive the same provision with respect to their bonus payment in the event of a termination of employment without cause or for good reason following a Change in Control Event.

In addition, Mr. Gillis, Dr. Lillie and two non-executive employees will be entitled to receive cash bonuses in an amount equal to an aggregate of 1.25% of the OvaScience Deal Value implied by a Change in Control Event, which will fully vest six months after the closing of such transaction for Mr. Gillis and Dr. Lillie, will fully vest immediately upon the closing of such transaction for the non-executive employees, and shall be forfeited if no strategic transaction is entered into within eighteen months of the date hereof. The cash bonuses would be paid in full in the event of a termination of Mr. Gillis' or Dr. Lillie's employment without cause or for good reason following a Change in Control Event.

On May 10, 2018, Mr. Gillis and Dr. Lillie will also receive new grants of 75,000 and 125,000 options, respectively, to purchase shares of the Company's common stock, with an exercise price equal to the closing price of the Company's common stock on the grant date, which shall vest in full upon the closing of a strategic transaction, and shall be forfeited if no strategic transaction is entered into within eighteen months. Mr. Gillis and Dr. Lillie will have the right to exercise these options for a one-year period after any termination of their respective employment (other than for cause). Three other non-executive employees and a consultant will receive option grants (in an aggregate amount of 260,000 options) in connection with the retention arrangements, which shall vest in full upon the closing of a strategic transaction and shall be forfeited if no strategic transaction is entered into within eighteen months. In addition, pursuant to the retention arrangements, all outstanding option grants held by Mr. Gillis (206,145 options), Dr. Lillie (357,057 options) and four other non-executive employees and one consultant (in an aggregate amount of 789,632 options) will be exercisable for a one-year period (increased from a 90 day period in the original grants) after any termination of such employee's employment (other than for cause) following a Change in Control Event.

The Company will enter into definitive agreements reflecting these terms with each affected employee and executive.

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

This Quarterly Report on Form 10-Q contains forward-looking statements that involve risks and uncertainties. The statements contained in this Quarterly Report on Form 10-Q that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Without limiting the foregoing, the words "may," "shall," "will," "should," "could," "expects," "plans," "intends," "anticipates," "believes," "estimates," "predicts," "potential," "continue," "target," "goal", "seek", "likely," "hope" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these words. All forward-looking statements included in this Quarterly Report on Form 10-Q are based on information available to us up to, and including, the date of this document, and we expressly disclaim any obligation to update any such forward-looking statements to reflect events or circumstances that arise after the date hereof. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain important factors, including those set forth in this Item 2 — "Management's Discussion and Analysis of Financial Condition and Results of Operations," as well as under the heading "Risk Factors" contained in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2017 and in Part II, Item 1A "Risk Factors" of this Quarterly Report.

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Overview

OvaScience, Inc. is a company focused on the discovery and development of new treatment options for women and couples struggling with infertility. OvaScience is leveraging the breakthrough discovery of egg precursor, or EggPC℠, cells to transform the treatment landscape for women's fertility.

OvaPrime is a potential fertility treatment that could help restore a woman's egg production. With OvaPrime, a woman's own EggPC cells are isolated from a niche within her ovary where they are quiescent and repositioned such that they receive the appropriate signals to mature *in vivo* into new, fertilizable eggs. The addressable market for OvaPrime is women undergoing IVF diagnosed with Diminished Ovarian Reserve, including Premature Ovarian Insufficiency and Poor Ovarian Response. Based on a 2015 report from the CDC, this represents approximately thirty one percent of all IVF cycles, or 0.6 million women per year globally.

OvaTure is a potential fertility treatment that eliminates the need for hormone stimulation typically required as part of standard in vitro fertilization (IVF). With OvaTure, a woman's own EggPC cells are isolated from her ovary and matured in *vitro* into new, fertilizable eggs. This potential treatment may be an option for all women undergoing IVF, which represents approximately 1.9 million women per year globally.

AUGMENT is a fertility treatment designed to improve embryo development and pregnancy rates. With AUGMENT, mitochondria from a woman's own EggPC cells are isolated and injected into the egg during IVF.

AUGMENT was introduced in select clinics outside of the United States. AUGMENT is currently available to patients in Japan through a collaborative access agreement with the IVF Japan Group. AUGMENT is not available in the United States.

OvaScience is completing preclinical animal studies designed to evaluate its egg precursor (EggPC℠) cell technology platform and inform the future development of OvaPrime. Based on preliminary data from these experiments, OvaScience has decided to scale back investments in its OvaPrime research and development efforts, including halting its planned Phase 1b/2a clinical trial. The Company has done so in order to preserve resources while it completes these experiments and awaits the final results, and while it continues to monitor patients in its ongoing Phase 1 clinical trial. Under the leadership of Dr. James Lillie, Chief Scientific Officer, a small internal scientific team will continue in-house efforts to progress the Company's OvaTure program in conjunction with specialized contract research organizations and select academic partners. The Company will also continue to offer AUGMENT to patients in Japan through an exclusive license to IVF Japan Group.

Additionally, OvaScience's management team and Board of Directors have initiated a process to explore a range of strategic alternatives for enhancing shareholder value, including the potential sale or merger of the Company. There can be no assurance that this process will result in any such transaction.

In conjunction with these decisions, OvaScience will restructure its organization to streamline operations and reduce its cost structure, including reducing its workforce by approximately 70 percent. The majority of the reduction in personnel is expected to be completed by June 30, 2018.

Critical Accounting Policies and Significant Judgments and Estimates

The discussion and analysis of our financial condition and results of operations is based on our condensed consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of our condensed consolidated financial statements requires us to make judgments, estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. We evaluate our estimates, on an ongoing basis, including those related to accrued expenses and assumptions in the valuation of stock-based compensation. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable in the circumstances. Actual results could differ from those estimates.

Refer to Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the year ended December 31, 2017 for a discussion of our critical accounting policies and estimates.

There were no other significant changes to our critical accounting policies and estimates in the three months ended March 31, 2018.

Results of Operations

The following table summarizes our results of operations for the three months ended March 31, 2018 and 2017, together with the changes from period to period (in thousands of dollars except for percentages):

	Three Months Ended, March 31,		2018/ 2017 Comparison Increase / (Decrease)	
	2018	2017	$	%
Revenues	$ 67	$ 63	$ 4	6 %
Costs of revenues	112	269	(157)	(58)%
Research and development expenses	2,621	5,764	(3,143)	(55)%
Selling, general and administrative expenses	4,224	7,129	(2,905)	(41)%
Restructuring	692	1,488	(796)	(53)%
Interest income, net	191	182	9	5 %
Other income (expense), net	21	(60)	81	(135)%
Loss from equity method investment	—	421	(421)	(100)%
Income tax expense	—	9	(9)	(100)%
Net loss	$ (7,370)	$ (14,895)	$ 7,525	(51)%

Revenues

Revenues for the three months ended March 31, 2018 and 2017, were $67,000 and $63,000, respectively. Since AUGMENT is only available to patients in Japan through our collaborative access agreement with the IVF Japan Group, we do not anticipate significant revenue from this or any other program in the near term.

Cost of Revenues

Costs of revenues for the three months ended March 31, 2018 and 2017 were $0.1 million and $0.3 million, respectively. The decrease in cost of revenues for the three months ended March 31, 2018 is attributable to the decrease in the number of biopsies performed primarily as a result of our shift in corporate priorities related to AUGMENT resulting from our restructuring activities and the related pricing programs offered, as well as a $0.1 million decrease in compensation costs resulting from our restructuring activities. Our costs of revenues include the cost of processing patient tissue that corresponds to treatment revenues for the reporting period. Given our shift in corporate priorities and focus on research and development, we expect cost of revenues to decrease in the future.

Research and Development Expense

The $3.1 million, or 55%, decrease in our research and development expense for the three months ended March 31, 2018 as compared to the three months ended March 31, 2017, from $5.8 million to $2.6 million was primarily attributable to:

- a $1.7 million decrease in employee compensation, including stock-based compensation, as a result of our corporate restructuring activities;
- a $1.0 million decrease in travel, facilities and other costs primarily attributable to the decrease in our headcount as result of our corporate restructuring initiatives; and
- a $0.4 million decrease in marketing, professional and commercial related costs primarily attributable to our shift in corporate strategy to focus on research and development activities.

Our research and development expense would increase if our programs were to successfully advance towards commercialization. We do not believe that our historical costs are indicative of the future costs associated with these programs nor do they represent what any other future treatment program we initiate may cost. Due to the variability in the length of time and scope of activities necessary to develop a fertility treatment and uncertainties related to cost estimates and our ability to commercialize and/or obtain marketing approval for our fertility treatments, accurate and meaningful estimates of the total costs required to bring our fertility treatments to market are not available.

Additionally, because of the risks inherent in drug discovery and development, we cannot reasonably estimate or know:

- the nature, timing and estimated costs of the efforts necessary to complete the development of our treatments;
- the anticipated completion dates of our treatment development efforts, if any; or
- the period in which material net cash in-flows are expected to commence, if at all, from our current treatments and any potential future treatments.

Selling, General and Administrative Expense

The $2.9 million, or 41% decrease in selling, general and administrative expense for the three months ended March 31, 2018 as compared to the three months ended March 31, 2017, from $7.1 million to $4.2 million was primarily attributable to:

- a $2.6 million decrease in employee compensation, including stock-based compensation, a result of both our corporate restructuring activities;
- a $0.3 million decrease in travel, facilities and other costs primarily attributable to the decrease in our headcount as result of our corporate restructuring initiatives;
- a $0.2 million decrease in marketing and commercial related activities primarily attributable to our shift in corporate strategy to focus on research and development activities; and
- a $0.2 million increase in professional costs.

We expect selling, general and administrative expense to decrease as a result of the corporate restructuring announcements in December 2016, June 2017 and January 2018. We do not believe that our historical costs of supporting AUGMENT represent what any other future commercial treatment program we initiate may cost to support and do not anticipate substantial costs associated with supporting AUGMENT.

Restructuring Expense

Restructuring expenses were $0.7 million for the three months ended March 31, 2018 relating to one-time termination benefits. For the three months ended March 31, 2017 we recognized restructuring charges of $1.5 million, including $1.0 million of one-time termination benefits, and $0.5 million of other restructuring related costs, primarily consisting of legal fees.

Interest Income, Net

Interest income, net was $0.2 million for the three months ended March 31, 2018 and 2017, which for both periods was comprised of $0.2 million of interest income related to short-term investments.

Loss from Equity Method Investment

Loss from equity method investment from our OvaXon joint venture was de minimis for the three months ended March 31, 2018. Loss from equity method investment from this joint venture was $0.4 million for the three months ended March 31, 2017.

Income Tax Expense

Income tax expense was immaterial for the three months ended March 31, 2018. Income tax expense was immaterial for the three months ended March 31, 2017. Income tax expense primarily consists of taxes incurred in the state and foreign jurisdictions in which we operate.

Liquidity and Capital Resources

Sources of Liquidity

We have generated limited AUGMENT treatment revenue to date and do not anticipate any significant revenues in the near-term. We have relied on the proceeds from sales of equity securities to fund our operations. Our short-term investments primarily trade in liquid markets, and the average days to maturity of our portfolio as of March 31, 2018 are less than 12 months. Because our fertility treatments are in various stages of development and the outcome of these efforts is uncertain, we cannot estimate the actual amounts necessary to successfully complete the development and commercialization of our fertility treatments, or whether or when we may achieve profitability.

Our significant capital resources are as follows (in thousands):

	March 31, 2018	December 31, 2017
Cash, cash equivalents and short-term investments	$ 58,298	$ 67,203
Working capital	54,101	60,977

	Three Months Ended March 31,	
	2018	2017
Cash (used in) provided by:		
Operating activities	$ (8,934)	$ (15,185)
Investing activities	12,954	(3,312)
Capital expenditures (included in investing activities above)	—	(75)
Financing activities	—	—

Cash Flows

Cash used in operating activities in both of the periods presented was primarily driven by our net loss. Cash flows used in operations can vary significantly due to various factors, including changes in the net loss and the timing of disbursements made for accounts payable and accruals.

Cash provided by investing activities for the three months ended March 31, 2018 included purchases of $16.2 million of short-term investments, which were offset by $29.2 million of proceeds from maturities of short-term investments.

Cash provided by investing activities for the three months ended March 31, 2017 included purchases of $26.6 million of short-term investments and capital expenditures of $0.1 million, which were offset by $23.3 million of proceeds from maturities of short-term investments. Capital expenditures in the three months ended March 31, 2017 primarily consisted of laboratory equipment.

Net cash provided by financing activities for both the three months ended March 31, 2018 and March 31, 2017 was zero.

We will need substantial additional funds to support our planned operations. We expect that our existing cash, cash equivalents and short-term investments of $58.3 million at March 31, 2018 will enable us to fund our current operating plan for at least the next 12 months. We have based this estimate on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Because of the numerous risks and uncertainties associated with the development and commercialization of our fertility treatments, and the extent to which we may enter into collaborations with third parties for development and commercialization of our fertility treatments, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the development of our current treatments in development. Our future capital requirements will depend on many factors, including:

- the costs associated with clinical development of OvaPrime and its subsequent adoption by IVF clinics;
- the costs associated with preclinical development and subsequent clinical trials of OvaTure and other potential fertility treatments;
- the costs associated with a domestic and international sales, marketing, manufacturing and distribution infrastructure to commercialize any fertility treatments that we successfully develop, as well as costs associated with our restructuring initiatives and related cash payments;
- the costs associated with clinical studies and trials;
- the costs of continuing the development and optimization of the OvaTure treatment and our success in defining a clinical pathway;
- the costs involved in collaborating with our academic and commercial partners, and any contract research organizations;
- following any applicable regulatory process in the United States and abroad, including the premarketing and marketing approval requirements, to which any of our potential fertility treatments may be subject;
- following any regulatory or institutional review board review of our potential fertility treatments that are subject to such review;
- preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- establishing collaborations and partnerships on favorable terms, if at all; and
- developing, acquiring or in-licensing other potential fertility treatments and technologies.

Until such time, if ever, as we can generate sufficient revenues from our fertility treatments to become profitable, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements. We do not have any committed external source of funds. In addition, we may elect to raise additional funds even before we need them if the conditions for raising capital are favorable. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of common stockholders. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or treatments or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our fertility treatment development or future commercialization efforts or grant rights to develop and market treatments that we would otherwise prefer to develop and market ourselves.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined under SEC rules.

Contractual Obligations

There have been no material changes to our contractual obligations set forth under the heading “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Contractual Obligations” in our Annual Report on Form 10-K for the year ended December 31, 2017.

Recent Accounting Pronouncements

In May 2017, the Financial Accounting Standards Board ("FASB") issued ASU No. 2017-09, Compensation - Stock Compensation (Topic 718) - Scope of Modification Accounting. ASU 2017-09 clarifies the term modification and provides guidance on when to apply modification accounting, specifically when changes to the terms or conditions of a share-based payment occur. Entities should account for the effects of a modification unless all of the following conditions are met: (1) there is no change in the fair value of the award, (2) there is no change in the vesting conditions, and (3) there is no change in classification of the award as liability or equity. We adopted ASU 2017-09 for the period ending June 30, 2017, and the adoption of ASU 2017-09 did not have a material impact on our financial statements and the footnote disclosures thereto.

In November 2016, the FASB issued ASU No. 2016-18, Statement of Cash Flows (Topic 230) - Restricted Cash. ASU 2016-18 requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. This update is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years using a retrospective transition method to each period presented. The Company adopted this standard as of January 1, 2018 on a retrospective basis, which resulted in the recast of the prior reporting period in the statement of cash flows. For the three months ended March 31, 2018 and 2017, $0.8 million and $0.8 million, respectively, of restricted cash is included in the total of cash and restricted cash balance at the end of period. A reconciliation of cash and restricted cash from our condensed consolidated statement of cash flows to the amounts reported within our condensed consolidated balance sheet is also included in a table below our condensed consolidated statement of cash flows.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. ASU 2016-15 requires changes in the presentation of debt prepayment or debt extinguishment costs, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, proceeds from the settlement of corporate-owned life insurance policies and distributions received from equity method investees. This update is effective for annual and interim periods beginning after December 15, 2017 using a retrospective transition method to each period presented. We adopted this standard as of January 1, 2018 with no material impact on our consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases, which is intended to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. Under ASU 2016-02, a lessee will be required to recognize assets and liabilities for both operating and financing leases with lease terms of more than 12 months. In addition, ASU 2016-02 requires the use of the modified retrospective method, which will require adjustment to all comparative periods presented in the consolidated financial statements. The amendment is effective for annual periods beginning after December 15, 2018, and interim periods within those annual periods. Early adoption is permitted. We are currently assessing the impact ASU 2016-02 will have on our consolidated financial statements and footnote disclosures thereto.

In August 2015, the FASB issued ASU No. 2015-14 Revenue from Contracts with Customers, which defers the effective date of ASU No. 2014-09 by one year. ASU 2014-09 amends the guidance for accounting for revenue from contracts with customers. ASU 2014-09 supersedes the revenue recognition requirements in ASC Topic 605, Revenue Recognition, and creates a new Topic 606, Revenue from Contracts with Customers. This guidance is now effective for fiscal years beginning after December 15, 2017, with early adoption permitted for annual periods beginning after December 15, 2016. Two adoption methods are permitted: retrospectively to all prior reporting periods presented, with certain practical expedients permitted; or retrospectively with the cumulative effect of initially adopting the ASU 2014-09 recognized at the date of initial application. We adopted ASU 2015-14 as of January 1, 2018, using the modified retrospective approach and applied the standard only to contracts that had not yet been completed as of the adoption date. The impact under this methodology to our previously reported revenues is insignificant in the periods reported, with no effect to reported revenues in the fiscal year ended December 31, 2017.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Our interest income is sensitive to changes in the general level of U.S. interest rates, particularly since a significant portion of our investments are in money market funds and corporate obligations. We do not enter into investments for trading or speculative purposes. We maintain our cash, cash equivalents and short-term investments with a high quality, accredited financial institution. Our marketable securities are subject to interest rate risk and will fall in value if market interest rates increase.

A hypothetical 100 basis point increase in interest rates would result in an approximately $0.2 million and $0.1 million decrease in the fair value of our investments as of March 31, 2018 and December 31, 2017, respectively. We have the ability to hold our fixed income investments until maturity and, therefore, we do not expect our operating results or cash flows to be affected to any significant degree by the effect of a change in market interest rates on our investments.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures. Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2018. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2018, our principal executive officer and principal financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Controls. No change in our internal control over financial reporting occurred during the fiscal quarter ended March 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Part II. Other Information

Item 1. Legal Proceedings

On October 9, 2015, a purported class action lawsuit was filed in the Suffolk County Superior Court in the Commonwealth of Massachusetts against the Company, several of the Company's officers and directors and certain of the underwriters from the Company's January 2015 follow-on public offering of the Company's common stock. The plaintiffs purported to represent those persons who purchased shares of the Company's common stock pursuant or traceable to the Company's January 2015 follow-on public offering. The plaintiffs alleged, among other things, that the Company made false and misleading statements and failed to disclose material information in the Company's January 2015 Registration Statement and incorporated offering materials. Plaintiffs alleged violations of Sections 11, 12 and 15 of the Securities Act of 1933, as amended, and seek, among other relief, unspecified compensatory damages, rescission, pre-and post-judgment interest and fees, costs and disbursements. On December 7, 2015, the OvaScience, Inc. defendants filed a notice of removal with the Federal District Court for the District of Massachusetts. On December 30, 2015, plaintiffs filed a motion to remand the action to the Superior Court. Oral argument on the motion to remand was held on February 19, 2016. On February 23, 2016, the District Court granted plaintiffs' motion to remand the action to the Superior Court. On February 26, 2016, a second putative class action suit was filed in the Suffolk County Superior Court in the Commonwealth of Massachusetts against the Company, several of the Company's officers and directors and certain of the underwriters from the Company's January 2015 follow-on public offering of the Company's common stock. The complaint is substantially similar to the complaint filed in October 2015. The two actions subsequently were consolidated and plaintiffs filed a First Amended Class Action Complaint on June 17, 2016. Defendants filed motions to dismiss the complaint. Those motions were denied by order dated December 22, 2016. On August 17, 2016, an additional plaintiff, Westmoreland County Employee Retirement System ("Westmoreland") moved to intervene in the consolidated action. The defendants opposed Westmoreland's motion to intervene. The Superior Court granted Westmoreland's motion to intervene on October 27, 2017. On August 7, 2017, the plaintiffs filed their motion for class certification, which the defendants opposed. Oral argument on the motion for class certification was held on September 29, 2017. On November 7, 2017, the Superior Court denied the plaintiffs' motion for class certification. On August 14, 2017, the Defendants filed their motion for summary judgment against plaintiffs Heather Carlson, Cesar Castellanos, Philipp Hofmann, and Carlos Rivas, which the plaintiffs opposed. Oral argument on the motion for summary judgment was held on October 18, 2017. On November 21, 2017, the Superior Court allowed the defendants' motion for summary judgment, and the claims asserted by plaintiffs Heather Carlson, Cesar Castellanos, Philipp Hofmann, and Carlos Rivas in the consolidated actions were dismissed, leaving Westmoreland as the sole remaining plaintiff. On November 22, 2017, Westmoreland filed a putative class action complaint in the U.S. District Court for the District of Massachusetts against the same defendants alleging the same claims as are alleged in the state court case (the "Westmoreland Federal Action"). On January 17, 2018, the lead plaintiff in a different case, a purported shareholder class action alleging violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 (the "Dahhan Action") filed a motion to intervene in the Westmoreland Federal Action and to consolidate the Westmoreland Federal Action with the Dahhan Action. We have opposed this motion, which is pending. In the Westmoreland Federal Action, on January 22, 2018, Westmoreland moved for appointment of lead plaintiff and approval of lead and liaison counsel. The lead plaintiff in the Dahhan Action opposed the motion. With the court's leave, on April 26, 2018, the defendants opposed Westmoreland's motion on statute of limitations grounds. This motion is pending. On January 22, 2018, Westmoreland filed a motion to voluntarily dismiss the Superior Court action without prejudice. The defendants opposed that motion. Oral

argument on Westmoreland's motion for voluntary dismissal was held on April 3, 2018. On April 5, 2018, the Superior Court allowed Westmoreland's motion for voluntary dismissal with prejudice. The Superior Court entered final judgment on April 10, 2018, dismissing Westmoreland's claims without prejudice and dismissing the claims of plaintiffs Heather Carlson, Cesar Castellanos, Philipp Hofmann, and Carlos Rivas with prejudice. The Company believes that the complaint in the remaining Westmoreland Federal Action is without merit and intends to defend against the litigation. There can be no assurance, however, that the Company will be successful. A resolution of this lawsuit adverse to the Company or the other defendants could have a material effect on the Company's consolidated financial position and results of operations in the period in which the lawsuit is resolved. At present, we are unable to estimate potential losses, if any, related to the lawsuit.

On November 9, 2016, a purported shareholder derivative action was filed in the Business Litigation Session of the Suffolk County Superior Court in the Commonwealth of Massachusetts against certain present and former officers and directors of the Company alleging breaches of fiduciary duty, unjust enrichment, abuse of control, gross mismanagement and corporate waste for purported actions related to the Company's January 2015 follow-on public offering. On February 23, 2017, the court approved the parties' joint stipulation to stay all proceedings in the action until further notice. Following a status conference in December 2017, the stay was lifted. On January 25, 2018, at the parties' request, the court entered a second order staying all proceedings in the action under further order of the court. The Company believes that the complaint is without merit and intends to defend against the litigation. There can be no assurance, however, that the Company will be successful. At present, we are unable to estimate potential losses, if any, related to the lawsuit.

On March 24, 2017, a purported shareholder class action lawsuit was filed in the U.S. District Court for the District of Massachusetts against the Company and certain of our present and former officers alleging violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934. On July 5, 2017, the Court entered an order approving the appointment of Freedman Family Investments, LLC as lead plaintiff, the firm of Robins Geller Rudman & Dowd LLP as lead counsel and the Law Office of Alan L. Kovacs as local counsel. Plaintiff filed an amended complaint on August 25, 2017. We have filed a motion to dismiss the amended complaint, which is pending. On January 17, 2018, the lead plaintiff moved to consolidate the Westmoreland Federal Action with this case. The Company has opposed this motion, which is pending. We believe that the complaint is without merit and intend to defend against the litigation. There can be no assurance, however, that we will be successful. A resolution of this lawsuit adverse to the Company or the other defendants could have a material effect on our consolidated financial position and results of operations in the period in which the lawsuit is resolved. At present, we are unable to estimate potential losses, if any, related to the lawsuit.

On June 30, 2017, a purported shareholder derivative complaint was filed in the U.S. District Court for the District of Delaware against certain of our present and former directors and the Company as a nominal defendant alleging breach of fiduciary duties, waste of corporate assets, unjust enrichment and violations of Section 14(a) of the Securities Exchange Act of 1934 alleging that compensation awarded to the director defendants was excessive. We have filed a motion to dismiss the complaint, which is pending. At the parties' request, the court stayed all deadlines in this case and cancelled the hearing on defendants' motion to dismiss while the parties engage in settlement negotiations. We believe that the complaint is without merit and intend to defend against the litigation. There can be no assurance, however, that we will be successful. At present, we are unable to estimate potential losses, if any, related to the lawsuit.

On July 27, 2017, a purported shareholder derivative complaint was filed in the U.S. District Court for the District of Massachusetts against certain of our present and former directors and the Company as a nominal defendant alleging breach of fiduciary duty, unjust enrichment and violations of Section 14(a) of the Securities Exchange Act of 1934 alleging that compensation awarded to the director defendants was excessive and seeking redress for purported actions related to the Company's January 2015 follow-on public offering and public statements. On September 26, 2017, the plaintiff filed an amended complaint which eliminated all claims regarding allegedly excessive director pay. On October 27, 2017, the defendants filed a motion to dismiss the amended complaint. The court heard oral argument on the motion to dismiss on April 5, 2018. On April 13, 2018, the court granted the defendants' motion to dismiss the complaint for failure to state a claim for relief under Section 14(a). The court also dismissed the plaintiffs' pendent state law claims without prejudice, based on lack of subject matter jurisdiction. On April 25, 2018, the plaintiffs moved for leave to amend the complaint, and to stay this case pending the outcome of the Westmoreland Federal Action and the Dahhan Action. The defendants do not believe that the proposed amended complaint cures the defects in the current complaint, but have informed plaintiffs' counsel that, in the interest of judicial economy, the defendants would not oppose the proposed amendment if the court would consider staying the case pending the resolution of the pending Westmoreland Federal Action and the Dahhan Action. On April 27, 2018, the court granted the plaintiffs' motion for leave to amend the complaint and for a stay. On April 30, 2018, the plaintiffs filed their second amended complaint. Per the court's order on April 27, 2018, the case will be stayed upon the filing of the second amended complaint. We believe that the complaint is without merit and intend to defend against the litigation. There can be no assurance, however, that we will be successful. At present, we are unable to estimate potential losses, if any, related to the lawsuit.

We are not party to any other material litigation in any court.

Item 1A. Risk Factors

In addition to the other information set forth in this report, you should carefully consider the risk factors discussed in Part I, Item 1A "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017. With the exception of the risk factors below, there here have been no material changes in or additions to the risk factors included in our Annual Report on Form 10-K for the year ended December 31, 2017.

We currently do not meet the continued listing standards of The Nasdaq Capital Market, which require a minimum closing bid price of $1.00 per share. Our failure to meet Nasdaq's continued listing standards could result in the delisting of our common stock, negatively impact the price of our common stock and negatively impact our ability to raise additional capital.

Our common stock is listed on The Nasdaq Capital Market. Nasdaq provides various continued listing requirements that a company must meet in order for its stock to continue trading on The Nasdaq Capital Market. Among these requirements is the requirement that the Company's stock trades at a minimum closing bid price of $1.00 per share. Our stock has recently and consistently traded below $1.00 per share, including closing bid prices below $1.00 per share. On April 27, 2018, we received a deficiency letter from The Nasdaq Stock Market which provided us a grace period of 180 calendar days, or until October 24, 2018, to regain compliance with the minimum bid price requirement. We may achieve compliance during this 180-day period if the closing bid price of our common stock is at least $1.00 per share for a minimum of 10 consecutive business days before October 24, 2018. If we fail to regain compliance on or prior to October 24, 2018, we may be eligible for an additional 180 day compliance period. Additionally, if we fail to comply with any other continued listing standards of Nasdaq, our common stock will also be subject to delisting. If that were to occur, our common stock would be subject to rules that impose additional sales practice requirements on broker-dealers who sell our securities. The additional burdens imposed upon broker-dealers by these requirements could discourage broker-dealers from effecting transactions in our common stock. This would significantly and negatively affect the ability of investors to trade our securities and would significantly and negatively affect the value and liquidity of our common stock. These factors could contribute to lower prices and larger spreads in the bid and ask prices for our common stock. If we seek to implement a reverse stock split in order to remain listed on The Nasdaq Capital Market, the announcement and/or implementation of a reverse stock split could significantly negatively affect the price of our common stock.

We may experience difficulties, delays or unexpected costs as a result of, and may not achieve the anticipated benefits and savings from, our recently announced corporate restructuring plan, and our restructuring activities may adversely affect our business. Further, the exploration of our strategic alternatives may not result in the consummation of any transaction.

On May 3, 2018, we announced the reduction of our workforce by approximately 70%. This reduction in force will result in the loss of long-term employees, the loss of institutional knowledge and expertise and the reallocation of certain job responsibilities, all of which could adversely affect operational efficiencies and employee performance. Although our Board has approved retention arrangements for our key remaining employees, to the extent that we are unable to effectively reallocate employee responsibilities, retain key employees, establish and maintain agreements with competent third-party contractors on terms that are acceptable to us, or effectively manage the work performed by any retained third-party contractors, our ability effectively to operate our business may be impaired and our strategic goals and our financial results may be adversely affected.

Restructuring plans may yield unintended consequences, such as attrition beyond our intended reduction in workforce and reduced employee morale. Additionally, as a result of our restructuring activities we may experience a loss of continuity, loss of accumulated knowledge and/or inefficiency during transitional periods. If we cannot successfully manage the transition of our restructured operations, we may be unsuccessful in executing our business strategy, which would have a material adverse effect on our financial condition and results of operations.

Further, also as announced on May 3, 2018, we are considering potential strategic alternatives to enhance stockholder value. Such strategic alternatives include, but are not limited to, a potential sale or merger of the company. We do not know if we will be successful in pursuing any strategic alternative or that any transaction will occur; however, we are committed to pursuing a strategic direction that our Board of Directors believes is in the best interests of our stockholders.

Item 5. Other Information

On May 3, 2018, the Company's Board of Directors approved retention arrangements for the Company's Chief Executive Officer, Senior Vice President - Finance, Chief Scientific Officer and other employees, substantially as described below.

CEO Retention Arrangements: Pursuant to Dr. Kroeger's Employment Agreement with the Company, dated June 21, 2017, Dr. Kroeger is entitled to a payment of 12 months' base salary in the event of a termination of his employment without cause or for good reason (as defined in the Employment Agreement) within one year following a Change in Control Event (as defined in the Employment Agreement). Pursuant to the retention arrangements, under those circumstances Dr. Kroeger will also be entitled to his full bonus opportunity for the year (60% of his then-current base salary).

In addition, Dr. Kroeger will be entitled to receive a cash bonus equal to 1% of the OvaScience Deal Value (defined below) implied in a Change in Control Event, which will fully vest six months after the closing of such transaction, would be immediately payable in the event of a termination of his employment without cause or for good reason within one year following a Change in Control Event, and shall be forfeited if no strategic transaction is entered into within eighteen months of May 3, 2018.

On May 10, 2018, Dr. Kroeger will also receive a new grant of options to purchase 715,000 shares of the Company's common stock at an exercise price equal to the closing price of the Company's common stock on the grant date, which shall vest in full upon the closing of a Change in Control Event, and shall be forfeited by Dr. Kroeger if no strategic transaction is entered into within eighteen months. Dr. Kroeger will have the right to exercise this option for a three-year period after any termination of his employment (other than a termination for cause) following a Change in Control Event. The "OvaScience Deal Value" shall be the product of the number of shares of the Company outstanding immediately prior to the closing of a Change in Control Event multiplied by the closing price of the Company's common stock on the date of the closing of the Change in Control Event.

As previously reported, when he joined the Company, Dr. Kroeger received a grant of 1,783,108 options to purchase common stock of the Company at an exercise price of $1.46 per share (the "Kroeger New Hire Options"), which are currently under water relative to the closing price of the common stock on May 2, 2018 of $0.91. Under their original terms, each of the Kroeger New Hire Options can be exercised for 90 days after termination of employment. The retention arrangements approved for Dr. Kroeger provide that 1,069,864 of the Kroeger New Hire Options may be exercised for three years after his termination (other than for cause). The remaining 713,242 Kroeger New Hire Options shall retain a 90 day post-termination exercise period.

Retention Arrangements for Other Officers and for Employees: Pursuant to the employment agreements between the Company and Jonathan Gillis, Senior Vice President - Finance and Dr. James Lillie, Chief Scientific Officer, respectively, Mr. Gillis and Dr. Lillie are each entitled to a payment of six months' base salary in the event of a termination of employment without cause or for good reason. Pursuant to the retention arrangements, Mr. Gillis and Dr. Lillie will each also be entitled to a payment of his full bonus opportunity for the year (35% and 40% of his then-current base salary, respectively) in the event of a termination of his employment without cause or for good reason following a Change in Control Event. Two other non-executive employees of the Company will also receive the same provision with respect to their bonus payment in the event of a termination of employment without cause or for good reason following a Change in Control Event.

In addition, Mr. Gillis, Dr. Lillie and two non-executive employees will be entitled to receive cash bonuses in an amount equal to an aggregate of 1.25% of the OvaScience Deal Value implied by a Change in Control Event, which will fully vest six months after the closing of such transaction for Mr. Gillis and Dr. Lillie, will fully vest immediately upon the closing of such transaction for the non-executive employees, and shall be forfeited if no strategic transaction is entered into within eighteen months of the date hereof. The cash bonuses would be paid in full in the event of a termination of Mr. Gillis' or Dr. Lillie's employment without cause or for good reason following a Change in Control Event.

On May 10, 2018, Mr. Gillis and Dr. Lillie will also receive new grants of 75,000 and 125,000 options, respectively, to purchase shares of the Company's common stock, with an exercise price equal to the closing price of the Company's common stock on the grant date, which shall vest in full upon the closing of a strategic transaction, and shall be forfeited if no strategic transaction is entered into within eighteen months. Mr. Gillis and Dr. Lillie will have the right to exercise these options for a one-year period after any termination of their respective employment (other than for cause). Three other non-executive employees and a consultant will receive option grants (in an aggregate amount of 260,000 options) in connection with the retention arrangements, which shall vest in full upon the closing of a strategic transaction and shall be forfeited if no strategic transaction is entered into within eighteen months. In addition, pursuant to the retention arrangements, all outstanding option grants held by Mr. Gillis (206,145 options), Dr. Lillie (357,057 options) and four other non-executive employees and one consultant (in an aggregate amount of 789,632 options) will be exercisable for a one-year period (increased from a 90 day period in the original grants) after any termination of such employee's employment (other than for cause) following a Change in Control Event.

The Company will enter into definitive agreements reflecting these terms with each affected employee and executive.

Item 6. Exhibits

The exhibits filed as part of this Quarterly Report on Form 10-Q are set forth in the following Exhibit Index.

Exhibit Index

Exhibit	Description
10.1#	Nonstatutory Stock Option Agreement, dated March 6, 2018, by and between the Registrant and James W. Lillie, Ph.D
10.2†	Exclusive License Agreement, dated June 27, 2011, between the Registrant and The General Hospital Corporation.
10.3†	Amendment No. 1 to the Exclusive License Agreement dated September 7, 2011, between the Registrant and the General Hospital Corporation.
10.4#	Termination Agreement, dated as of April 30, 2018, by and between the Registrant and Dr. Michelle Dipp.
31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 by Principal Executive Officer.
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 by Principal Financial Officer.
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Principal Executive Officer.
32.2	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Principal Financial Officer.
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 Presentation Linkbase Document

# Indicates a management contract or compensatory plan.

† Confidential treatment has been requested as to portions of the exhibit. Confidential materials omitted and filed separately with the SEC.

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 hereunto duly authorized.

OVASCIENCE, INC.

By: /s/ Christopher Kroeger
Name: Christopher Kroeger, M.D., M.B.A.
Date: May 3, 2018 Title: *Chief Executive Officer (Principal Executive Officer)*

By: /s/ Jonathan Gillis
Name: Jonathan Gillis
Date: May 3, 2018 Title: *SVP, Finance (Principal Accounting and Financial Officer)*

Exhibit 10.1

OVASCIENCE, INC.

Nonstatutory Stock Option Agreement

1.Grant of Option.

This agreement evidences the grant by OvaScience, Inc., a Delaware corporation (the "Company"), on March 6, 2018 (the "Grant Date") to James W. Lillie, Ph.D., an employee, consultant and/or director of the Company (the "Participant"), of an option to purchase, in whole or in part, on the terms provided herein, a total of 357,057 shares (the "Shares") of common stock, $0.001 par value per share, of the Company ("Common Stock") at $1.02 per Share as an inducement material to the Participant's entering into employment as Chief Scientific Officer of the Company (pursuant to Rule 5635(c)(4) of the Nasdaq Listed Company Manual), on January 16, 2018, in accordance with the terms of a letter agreement with the Company dated December 21, 2017 (the "Employment Agreement"). Unless earlier terminated, this option shall expire at 5:00 p.m., Eastern time, on March 5, 2028 (the "Final Exercise Date").

It is intended that the option evidenced by this agreement shall not be an incentive stock option as defined in Section 422 of the Internal Revenue Code of 1986, as amended, and any regulations promulgated thereunder (the "Code"). Except as otherwise indicated by the context, the term "Participant", as used in this option, shall be deemed to include any person who acquires the right to exercise this option validly under its terms.

2.Vesting Schedule.

This option will become exercisable ("vest") as to 25% of the original number of Shares on the first anniversary of the Vesting Commencement Date and as to an additional 6.25% of the original number of Shares at the end of each successive three-month period following the first anniversary of the Vesting Commencement Date until the fourth anniversary of the Vesting Commencement Date. For purposes of this Agreement, "Vesting Commencement Date" shall mean January 16, 2018.

The right of exercise shall be cumulative so that to the extent the option is not exercised in any period to the maximum extent permissible it shall continue to be exercisable, in whole or in part, with respect to all Shares for which it is vested until the earlier of the Final Exercise Date or the termination of this option under Section 3 hereof.

Notwithstanding the foregoing, if within one (1) year of the date of a Change in Control Event (as defined in the Employment Agreement) the Participant's employment is terminated by the Company (or any successor) without Cause (as defined in the Employment Agreement) or by the Participant for Good Reason (as defined in the Employment Agreement), then 100% of the unvested portion of this option shall vest as of the date of such termination.

3.Exercise of Option.

(a) Form of Exercise. Each election to exercise this option shall be accompanied by a completed Notice of Stock Option Exercise in the form attached hereto as Exhibit A, signed by the Participant, and received by the Company at its principal office, accompanied by this agreement, and payment in full in accordance with paragraph (b) below. The Participant may purchase less than the number of Shares covered hereby, provided that no partial exercise of this option may be for any fractional share.

(b) Payment Upon Exercise. Common Stock purchased upon the exercise of this option shall be paid for as follows:

(1) in cash or by check, payable to the order of the Company;

(2) by (i) delivery of an irrevocable and unconditional undertaking by a creditworthy broker to deliver promptly to the Company sufficient funds to pay the exercise price and any required tax withholding or (ii) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a creditworthy broker to deliver promptly to the Company cash or a check sufficient to pay the exercise price and any required tax withholding;

(3) to the extent approved by the Board of Directors of the Company (the "Board"), in its sole discretion, by delivery

(either by actual delivery or attestation) of shares of Common Stock owned by the Participant valued at their fair market value per share (as defined below) ("Fair Market Value"), provided (i) such method of payment is then permitted under applicable law, (ii) such Common Stock, if acquired directly from the Company, was owned by the Participant for such minimum period of time, if any, as may be established by the Board in its discretion and (iii) such Common Stock is not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements;

(4) to the extent approved by the Board in its sole discretion, by delivery of a notice of "net exercise" to the Company, as a result of which the Participant would pay the exercise price for the portion of this option being exercised by cancelling a portion of this option for such number of shares as is equal to the exercise price divided by the excess of the Fair Market Value on the date of exercise over the option exercise price per share;

(5) to the extent permitted by applicable law and approved by the Board, in its sole discretion, payment of such other lawful consideration as the Board may determine; or

(6) by any combination of the above permitted forms of payment.

Fair Market Value of a share of Common Stock for purposes of this Agreement will be the closing sale price (for the primary trading session) on the date of grant (or other date for which a determination is being made). For any date that is not a trading day, the Fair Market Value of a share of Common Stock for such date will be determined by using the closing sale price for the immediately preceding trading day and with the timing in the formulas above adjusted accordingly. The Board can substitute a particular time of day or other measure of "closing sale price" because of exchange or market procedures or can, in its sole discretion, use weighted averages either on a daily basis or such longer period as complies with Section 409A of Code. The Board has sole discretion to determine the Fair Market Value for purposes of this Agreement, and the Board's determination is conclusive and binding.

(c) Continuous Relationship with the Company Required. Except as otherwise provided in this paragraph 3, this option may not be exercised unless the Participant, at the time he or she exercises this option, is, and has been at all times since the Grant Date, an employee, officer or director of, or consultant or advisor to, the Company or any other entity the employees, officers, directors, consultants, or advisors of which are eligible to receive option grants from the Company (an "Eligible Participant").

(d) Termination of Relationship with the Company. If the Participant ceases to be an Eligible Participant for any reason, then, except as provided in paragraphs (e) and (f) below, the right to exercise this option shall terminate three months after such cessation (but in no event after the Final Exercise Date), provided that this option shall be exercisable only to the extent that the Participant was entitled to exercise this option on the date of such cessation. Notwithstanding the foregoing, if the Participant, prior to the Final Exercise Date, violates the non-competition or confidentiality provisions of any employment contract, confidentiality and nondisclosure agreement or other agreement between the Participant and the Company, the right to exercise this option shall terminate immediately upon such violation.

(e) Exercise Period Upon Death or Disability. If the Participant dies or becomes disabled (within the meaning of Section 22(e)(3) of the Code) prior to the Final Exercise Date while he or she is an Eligible Participant and the Company has not terminated such relationship for "Cause" as specified in paragraph (f) below, this option shall be exercisable, within the period of one year following the date of death or disability of the Participant, by the Participant (or in the case of death by an authorized transferee), provided that this option shall be exercisable only to the extent that this option was exercisable by the Participant on the date of his or her death or disability, and further provided that this option shall not be exercisable after the Final Exercise Date.

(f) Termination for Cause. If, prior to the Final Exercise Date, the Participant's employment or other relationship with the Company is terminated by the Company for Cause (as defined in the Employment Agreement), the right to exercise this option shall terminate immediately upon the effective date of such termination of employment or other relationship. If, prior to the Final Exercise Date, the Participant is given notice by the Company of the termination of his or her employment or other relationship by the Company for Cause, and the effective date of such employment or other termination is subsequent to the date of the delivery of such notice, the right to exercise this option shall be suspended from the time of the delivery of such notice until the earlier of (i) such time as it is determined or otherwise agreed that the Participant's employment or other relationship shall not be terminated for Cause as provided in such notice or (ii) the effective date of such termination of employment or other relationship (in which case the right to exercise this option shall, pursuant to the preceding sentence, terminate immediately upon the delivery of the notice of such termination of employment or other relationship for Cause). The Participant's employment shall be considered to have been terminated for Cause if the Company determines, within 30 days after the Participant's resignation, that termination for Cause was warranted.

(g) Conditions on Delivery of Stock. The Company will not be obligated to deliver any shares of Common Stock pursuant to this option until (i) all conditions of this option have been met or removed to the satisfaction of the Company, (ii) in the opinion of the Company's counsel, all other legal matters in connection with the issuance and delivery of such shares have been satisfied, including any applicable securities laws and regulations and any applicable stock exchange or stock market rules and regulations, and (iii) the

Participant has executed and delivered to the Company such representations or agreements as the Company may consider appropriate to satisfy the requirements of any applicable laws, rules or regulations.

4. Withholding. The Participant must satisfy all applicable federal, state, and local or other income and employment tax withholding obligations before the Company will deliver stock certificates or otherwise recognize ownership of Common Stock under this option. The Company may decide to satisfy the withholding obligations through additional withholding on salary or wages. If the Company elects not to or cannot withhold from other compensation, the Participant must pay the Company the full amount, if any, required for withholding or have a broker tender to the Company cash equal to the withholding obligations. Payment of withholding obligations is due before the Company will issue any shares on exercise of this option or at the same time as payment of the exercise price unless the Company determines otherwise. If approved by the Board in its sole discretion, the Participant may satisfy such tax obligations in whole or in part by delivery (either by actual delivery or attestation) of shares of Common Stock, including shares retained from this option creating the tax obligation, valued at their Fair Market Value; provided, however, except as otherwise provided by the Board, that the total tax withholding where stock is being used to satisfy such tax obligations cannot exceed the Company's minimum statutory withholding obligations (based on minimum statutory withholding rates for federal and state tax purposes, including payroll taxes, that are applicable to such supplemental taxable income). Shares used to satisfy tax withholding requirements cannot be subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements.

5. Transfer Restrictions.

This option may not be sold, assigned, transferred, pledged, hypothecated or otherwise encumbered by the Participant, either voluntarily or by operation of law, except by will or the laws of descent and distribution or pursuant to a qualified domestic relations order and, during the life of the Participant, shall be exercisable only by the Participant.

6. Adjustments for Changes in Common Stock and Certain Other Events.

(a) Changes in Capitalization. In the event of any stock split, reverse stock split, stock dividend, recapitalization, combination of shares, reclassification of shares, spin-off or other similar change in capitalization or event, or any dividend or distribution to holders of Common Stock other than an ordinary cash dividend, the number and class of securities and exercise price per share of this option shall be equitably adjusted by the Company (or substituted options may be made, if applicable) in the manner determined by the Board. Without limiting the generality of the foregoing, in the event the Company effects a split of the Common Stock by means of a stock dividend and the exercise price of and the number of shares subject to this option are adjusted as of the date of the distribution of the dividend (rather than as of the record date for such dividend), then the Participant, if he or she exercises this option between the record date and the distribution date for such stock dividend, shall be entitled to receive, on the distribution date, the stock dividend with respect to the shares of Common Stock acquired upon such exercise, notwithstanding the fact that such Shares were not outstanding as of the close of business on the record date for such stock dividend.

(b) Reorganization Events.

(1) Definition. A "Reorganization Event" shall mean: (a) any merger or consolidation of the Company with or into another entity as a result of which all of the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property or is cancelled, (b) any transfer or disposition of all of the Common Stock of the Company for cash, securities or other property pursuant to a share exchange or other transaction or (c) any liquidation or dissolution of the Company.

(2) Consequences of a Reorganization Event.

(i) In connection with a Reorganization Event, the Board may take any one or more of the following actions as to all (or any portion) of this option on such terms as the Board determines: (A) provide that this option shall be assumed, or substantially equivalent options shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof), (B) upon written notice to the Participant, provide that all of the Participant's unexercised options will terminate immediately prior to the consummation of such Reorganization Event unless exercised by the Participant (to the extent then exercisable) within a specified period following the date of such notice, (C) provide that outstanding options shall become exercisable, in whole or in part prior to or upon such Reorganization Event, (D) in the event of a Reorganization Event under the terms of which holders of Common Stock will receive upon consummation thereof a cash payment for each share surrendered in the Reorganization Event (the "Acquisition Price"), make or provide for a cash payment to the Participant with respect to each option held by the Participant equal to (1) the number of shares of Common Stock subject to the vested portion of this option (after giving effect to any acceleration of vesting that occurs upon or immediately prior to such Reorganization Event) multiplied by (2) the excess, if any, of (I) the Acquisition Price over (II) the exercise, measurement or purchase price of this option and any applicable tax withholdings, in exchange for the termination of this option, (E) provide that, in connection with a liquidation or dissolution of the Company, this option shall convert into the right to receive liquidation proceeds (if applicable, net of the exercise, measurement or purchase price thereof and any applicable tax withholdings) and (F) any combination of the foregoing. In taking any of the actions permitted under this paragraph 6(b)(2), the Board shall not be obligated to treat all options held by the Participant or all options of the same type, identically.

(ii) For purposes of paragraph 6(b)(2)(i)(A), this option shall be considered assumed if, following consummation of the Reorganization Event, this option confers the right to purchase or receive pursuant to the terms of this option, for each share of

Common Stock subject to this option immediately prior to the consummation of the Reorganization Event, the consideration (whether cash, securities or other property) received as a result of the Reorganization Event by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Reorganization Event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); provided, however, that if the consideration received as a result of the Reorganization Event is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise or settlement of this option to consist solely of such number of shares of common stock of the acquiring or succeeding corporation (or an affiliate thereof) that the Board determined to be equivalent in value (as of the date of such determination or another date specified by the Board) to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Reorganization Event.

7.Amendment of Option.

(a) Except as set forth in paragraph 7(b) below, the Board may amend, modify or terminate this option, including but not limited to, substituting therefor another option or other stock-based award of the same or a different type and changing the date of exercise. The Participant's consent to such action shall be required unless (i) the Board determines that the action, taking into account any related action does not materially and adversely affect the Participant's rights under this option or (ii) the change is permitted under paragraph 6, above.

(b) The Board may not, without stockholder approval, (1) amend this option to provide an exercise price per share that is lower than the then-current exercise price per share of this option, (2) cancel this option and grant in substitution therefor new options or other stock-based awards covering the same or a different number of shares of Common Stock and having an exercise price per share lower than the then-current exercise price per share of the cancelled option, (3) cancel in exchange for a cash payment any portion of this option if the exercise price per share is above the then-current Fair Market Value, or (4) take any other action under the Plan that constitutes a "repricing" within the meaning of the rules of the Nasdaq Stock Market.

8.Miscellaneous.

(a) No Right To Employment or Other Status. The grant of this option shall not be construed as giving the Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with the Participant free from any liability or claim except as expressly provided in this option.

(b) No Rights As Stockholder. Subject to the provisions of this option, the Participant shall not have any rights as a stockholder with respect to any shares of Common Stock to be distributed with respect to this option until becoming the record holder of such Shares.

(c) Governing Law. The provisions of this option shall be governed by and interpreted in accordance with the laws of the State of Delaware, excluding choice-of-law principles of the law of such state that would require the application of the laws of a jurisdiction other than the State of Delaware.

[Remainder of Page Intentionally Left Blank.]

IN WITNESS WHEREOF, the Company has caused this option to be executed under its corporate seal by its duly authorized officer. This option shall take effect as a sealed instrument.

OVASCIENCE, INC.

By: /s/ Jonathan Gillis
Name: Jonathan Gillis
Title: Senior Vice President, Finance

PARTICIPANT'S ACCEPTANCE

The undersigned hereby accepts the foregoing option and agrees to the terms and conditions thereof.

PARTICIPANT:

/s/ James W. Lillie
James W. Lillie, Ph.D.

Address: c/o
OvaScience, Inc.
9 Fourth Avenue
Waltham, Massachusetts 02451

Exhibit A

NOTICE OF STOCK OPTION EXERCISE

Date: _____

OvaScience, Inc.
9 Fourth Avenue
Waltham, Massachusetts 02451
Attention: Chief Financial Officer

Dear Sir or Madam:

I am the holder of a Nonstatutory Stock Option granted to me by OvaScience, Inc. (the "Company") on March 6, 2018 for the purchase of 357,057 shares of Common Stock of the Company at a purchase price of $1.02 per share.

I hereby exercise my option to purchase _____ shares of Common Stock (the "Shares"), for which I have enclosed _____ in the amount of _____. Please register my stock certificate as follows:

Name(s): _____

_____

Address: _____

Exhibit 10.2

CONFIDENTIAL TREATMENT REQUESTED

THE GENERAL HOSPITAL CORPORATION

EXCLUSIVE LICENSE AGREEMENT

MGH Agreement No: A209968
MGH Case Nos: 02595 and 21131

This Exclusive License Agreement ("Agreement") is made as of the 27th day of June, 2011 ("Effective Date"), by and between **OvaScience, Inc**., a Delaware corporation, having a principal place of business at The Prudential Tower, 800 Boylston Street, Suite 1555, Boston, MA 02199 ("Company") and **The General Hospital Corporation**, d/b/a Massachusetts General Hospital, a not-for-profit Massachusetts corporation, with a principal place of business at 55 Fruit Street, Boston, Massachusetts 02114 ("Hospital"), each referred to herein individually as a "Party" and collectively as the "Parties".

RECITALS

Hospital, as a center for patient care, research and education, is the owner of certain Patent Rights (defined below) and desires to grant a license of those Patent Rights to Company in order to benefit the public by disseminating the results of its research via the commercial development, manufacture, distribution and use of Products and Processes (defined below).

Company has the capability to commercially develop, manufacture, distribute and use Products and Processes for public use and benefit and desires to license such Patent Rights.

For good and valuable consideration, the sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

1. CERTAIN DEFINITIONS

As used in this Agreement, the following terms shall have the following meanings, unless the context requires otherwise.

1.1 "Affiliate" with respect to either Party shall mean any corporation or other legal entity other than that Party, in whatever country organized, that controls, is controlled by or is under common control with that Party. The term "control" shall mean (i) in the case of Company, direct or indirect ownership of fifty percent (50%) or more of the voting securities having the right to elect directors, or the power, direct or indirect, to cause the direction of management and policies, whether by contract or otherwise and (ii) in the case of Hospital, the power, direct or indirect, to elect or appoint fifty percent (50%) or more of the directors or trustees, or to cause direction of management and policies, whether through the ownership of voting securities, by contract or otherwise.

1.2 "Claim" shall mean any pending or issued claim of any Patent Right that has not been abandoned or permanently revoked, nor held unenforceable or invalid by a decision of a court or other governmental agency of competent jurisdiction that is unappealable or unappealed in the time allowed for appeal.

1.3 "Clinical End User" shall mean those fertility clinics and medical practices that purchase and/or use Products and/or Processes for patients (end users) pursuant to agreements with Company or any of its Affiliates or Sublicensees.

1.4 "Clinical Proof of Concept" shall mean the completion of a clinical study conducted by or on behalf of Company or any of its Affiliates or Sublicensees using a Product or Process, consisting of a minimum of [***] women patients, in which the average pregnancy rate (as measured by fetal heart beat) of all women in such study is at least [***] percent ([***]%) above the average pregnancy rate via fresh embryo transfer in the most recent National SART Clinic Summary Report for the age group adjusted average, as a result of the use of such Product or Process.

1.5 "Distributor" shall mean any third party entity to whom Company or any of its Affiliates or Sublicensees has granted, express or implied, the right to distribute any Product or Process pursuant to Section 2.1(b)(ii).

1.6 "First Commercial Sale" shall mean the initial Sale anywhere in the applicable License Territory of a Product or Process that is either (a) to any party that is not part of a clinical study sponsored by Company or any of its Affiliates or Sublicensees, or (b) not used or intended to be used for a patient enrolled in a clinical study sponsored by Company or any of its Affiliates or Sublicensees; and provided Company or any of its Affiliates or Sublicensees has either (i) received all approvals from the FDA or other equivalent regulatory authority necessary for the commercial marketing of such Product or Process or (ii) completed enrollment and treatment of at least [***] women in a Clinical Proof of Concept study.

1.7 "License Field" shall mean human female fertility and shall specifically exclude (a) treatments of menopause associated symptoms

or diseases other than treatments of infertility; (b) treatments to delay menopause or menopause associated symptoms or diseases other than treatments of infertility; (c) diagnostics; (d) research tools, or any other field not specifically set forth herein.

1.8 "License Territory" shall mean worldwide.

1.9 "Net Sales" shall be calculated as set forth in this Section 1.9.

(a) Subject to the conditions set forth below, "Net Sales" shall mean:

(i) the gross amount billed or invoiced, or if no bill or invoice is issued the amount received, whichever is greatest, by Company and its Affiliates and Sublicensees for or on account of Sales of Products and/or Processes; provided that, with respect to the sale and/or use of Products and/or Processes by Clinical End Users (in their capacities as Clinical End Users), the amounts paid by Clinical End Users to Company, its Affiliates and Sublicensees shall be considered gross amounts billed or invoiced for purposes of calculating Net Sales and the amounts billed or invoiced by Clinical End Users to fertility patients (or such patients' insurers or other third party payers) shall be excluded from the calculation of Net Sales;

(ii) less the following amounts:

(A) to the extent separately stated on the applicable bill or invoice, actually paid by Company and its Affiliates and Sublicensees in effecting such Sale:

1. amounts repaid or credited by reason of rejection or return of applicable Products or Processes;

2. reasonable and customary trade, quantity or cash rebates or discounts to the extent allowed and taken;

3. amounts for outbound transportation, insurance, handling and shipping, but only to the extent separately invoiced in a manner that clearly specifies the charges applicable to the applicable Products; and

4. taxes, customs duties and other governmental charges levied on or measured by Sales of Products or Processes, to the extent separately invoiced, whether paid by or on behalf of Company so long as Company's price is reduced thereby, but not franchise or income taxes of any kind whatsoever.

(B) the gross amount received by Company and its Affiliates and Sublicensees for or on account of Sales of Products and Processes to Hospital and Hospital's Affiliates.

(C) gross amounts billed or invoiced by Company and its Affiliates and Sublicensees in prior periods for or on account of Sales of Products and Processes that are not received within [***] months of billing or invoicing and are charged off or written off as uncollectable, such amounts not to exceed [***] percent ([***]%) of gross amounts billed or invoiced.

(b) Specifically excluded from the definition of "Net Sales" are amounts attributable to any Sale of any Product or Process between or among Company and any Company Affiliate and/or Sublicensee, unless the transferee is the end purchaser, user or consumer of such Product or Process.

(c) No deductions shall be made for any commissions paid to any individuals or for any costs or expenses of collections.

(d) Net Sales shall be deemed to have occurred and the applicable Product or Process "Sold" on the earliest of the date of billing, invoicing, delivery or payment or the due date for payment.

(e) If any Product or Process is Sold for non-cash consideration, Net Sales shall be calculated based on the average cash amount charged to independent third parties for the Product or Process during the same Reporting Period or, in the absence of such transactions, on the fair market value of the Product or Process. Non-cash consideration that could affect any payment due to Hospital hereunder shall not be accepted without the prior written consent of Hospital. In addition, Company shall not grant discounts on Sales of Products or Processes in exchange for any consideration other than the Sale price of such Products or Processes without the prior written consent of Hospital.

(f) Notwithstanding the foregoing, if Company or any of its Affiliates (or Sublicensees for which Net Sales are not established pursuant to clause (a)(i) above, if any) use and/or sell Products and/or Processes as a Clinical End User, such use and/or sale shall be deemed a Sale and Net Sales based on such Sale shall be deemed to be an amount determined as follows:

(i) the average Net Sales amount resulting from equivalent uses and/or sales of Products and/or Processes by independent third party Clinical End Users during the same Reporting Period; or

(ii) in the absence of transactions referenced in clause (f)(i) above, the Parties shall first discuss an alternative Net Sales amount to use until such time, if ever, there are independent third party Clinical End User transactions that can be used to calculate imputed Net Sales. Absent agreement on an alternative Net Sales amount, a royalty in the amount of [***] dollars ($[***]) shall be payable (during the royalty term specified in Section 10.1) on each use and/or sale by Company or its Affiliates (or Sublicensees for which Net Sales are not established pursuant to clause (a)(i) above, if any) in lieu of the royalty amount calculated in Section 4.5(a) until such time, if ever, as there are independent third party Clinical End User transactions that can be used to calculate Net Sales in accordance clause (f)(i) above.

(iii) The Net Sales or royalty determined in accordance with the foregoing clauses (f)(i) and (f)(ii) shall be in lieu of any other calculation of Net Sales or royalties, as applicable, based on such use and/or sale.

1.10 "Patent Rights" shall mean, inclusively, the U.S. Patent Applications listed in **Appendix A** and/or the equivalent of such application, including any divisional, continuation (including claims of continuations-in-part only to the extent entirely supported by the specification of the application on which such continuations-in-part are based), foreign counterpart patent application, Letters Patent and/or the equivalent thereof issuing thereon, and/or reissue, reexamination or extension thereof, or supplementary protection certificate or patents of addition relating thereto.

1.11 "Process" shall mean any process, method or service the use or performance of which, in whole or in part:

(a) absent the license granted hereunder would infringe, or is covered by, one or more Claims of Patent Rights; or

(b) employs, is based upon or is derived from Technological Information.

1.12 "Product" shall mean any article, device or composition, the manufacture, use, or sale of which, in whole or in part:

(a) absent the license granted hereunder would infringe, or is covered by, one or more Claims of Patent Rights; or

(b) employs, is based upon or is derived from Technological Information.

1.13 "Reporting Period" shall mean each three month period ending March 31, June 30, September 30 and December 31.

1.14 "Sell" (and "Sale" and "Sold" as the case may be) shall mean to sell or have sold, to lease or have leased, to import or have imported or otherwise to transfer or have transferred a Product or Process for valuable consideration (in the form of cash or otherwise), and further in the case of a Process to use or perform such Process for the benefit of a third party for valuable consideration (in the form of cash or otherwise).

1.15 "Sublicense Income" shall mean consideration in any form received by Company and/or Company's Affiliate(s) in connection with or otherwise attributable to a grant of a sublicense or any other right, license, privilege or immunity (regardless of whether such grantee is a "Sublicensee" as defined in this Agreement) to make, have made, use, have used, Sell or have Sold Products or Processes, but excluding consideration included within Net Sales. Sublicense Income shall include without limitation any license signing fee, license maintenance fee, unearned portion of any minimum royalty payment, distribution or joint marketing fee, research and development funding solely to the extent exceeding the reasonable cost (including reasonable allocations of overhead) of performing such research and development, funding for training in the use of Products and Processes solely to the extent exceeding reasonable cost-based funding (including without limitation travel costs and costs of training materials) and any consideration received for an equity interest in, extension of credit to or other investment in Company or Company's Affiliates to the extent such consideration exceeds the fair market value of the equity or other interest received as determined by agreement of the Parties or by an independent appraiser mutually agreeable to the Parties (but shall exclude such consideration not exceeding fair market value).

1.16 "Sublicensee" shall mean any sublicensee of rights granted in accordance with Section 2.1 (a)(ii). For purpose of this Agreement, a Distributor of a Product or Process shall not be included in the definition of Sublicensee unless such Distributor (i) is granted any right to make, have made, use or have used Products or Processes in accordance with Section 2.1(a)(ii), or (ii) has agreed to pay to Company or its Affiliate(s) royalties on such Distributor's sales of Products or Processes, in which case such Distributor shall

be a Sublicensee for all purposes of this Agreement.

1.17 "Technological Information" shall mean research data, designs, formulae, process information and other information pertaining to the invention(s) claimed in the Patent Rights which is created by Dr. Tilly and owned by Hospital and is not confidential information of or otherwise obligated to any third party and which Dr. Tilly knows as of the Effective Date and reasonably believes is necessary in order for Company to utilize the licenses granted hereunder, as further described in **Appendix D**. Company agrees to treat all Technological Information in accordance with the provisions of **Appendix E**.

2. LICENSE

2.1 Grant of License.

(a) Subject to the terms of this Agreement and Hospital's rights in Patent Rights, Hospital hereby grants to Company in the License Field in the License Territory:

(i) an exclusive, royalty-bearing license under its rights in Patent Rights to make, have made, use, have used, Sell and have Sold Products and Processes; and

(ii) the right to grant sublicenses under the rights granted in Section 2.1 (a)(i) to Sublicensees, provided that in each case Company shall be responsible for the performance of any obligations of Sublicensees relevant to this Agreement as if such performance were carried out by Company itself, including, without limitation, the payment of any royalties or other payments provided for hereunder, regardless of whether the terms of any sublicense provide for such amounts to be paid by the Sublicensee directly to Hospital.

(iii) the nonexclusive right to use Technological Information disclosed by Hospital to Company hereunder in accordance with this Agreement.

(b) The license granted in Section 2.1 (a) above includes:

(i) the right to grant to Clinical End Users and to final purchasers, users or consumers of Products or Processes the right to use such purchased Products or Processes in a method coming within the scope of Patent Rights within the License Field and License Territory; and

(ii) the right to grant a Distributor the right to Sell (but not to make, have made, use or have used) such Products and/or Processes for or on behalf of Company, its Affiliates and Sublicensees in a manner consistent with this Agreement.

(c) The foregoing license grant shall include the grant of such license to any Affiliate of Company, provided that such Affiliate shall assume the same obligations as those of Company and be subject to the same terms and conditions hereunder; and further provided that Company shall be responsible for the performance of all of such obligations and for compliance with all of such terms and conditions by Affiliate. Company shall provide to Hospital a fully signed, non-redacted copy of each agreement with each Affiliate that assumes the aforesaid obligations, including all exhibits, attachments and related documents and any amendments, within [***] days of request by Hospital.

2.2 Sublicenses. Each sublicense granted hereunder shall be consistent with and comply with all terms of this Agreement and shall incorporate terms and conditions sufficient to enable Company to comply with this Agreement and shall provide that Hospital is a third party beneficiary of the terms thereof directed to enabling Company's compliance with this Agreement. Company shall notify Hospital, in confidence, of its (or any of its Sublicensees') intent to enter into a sublicense agreement, and shall provide Hospital with the name of prospective Sublicensee at least [***] days prior to the execution of a sublicense. Company shall provide to Hospital a fully signed non-redacted copy of all sublicense agreements (including further sublicenses entered into by Sublicensees) and amendments thereto, including all exhibits, attachments and related documents, within [***] days of executing the same; provided that Hospital shall not disclose any such sublicense agreement to any third party, shall not use such sublicense agreements for any purpose other than monitoring Company's compliance with this Agreement and shall limit access to such sublicense agreements to Hospital personnel with a need for such access for the foregoing monitoring purpose. Upon termination of this Agreement or any license granted hereunder for any reason, any sublicenses shall be addressed in accordance with Section 10.7. Any sublicense which is not in accordance with the forgoing provisions shall be null and void.

2.3 Retained Rights; Requirements. Any and all licenses granted hereunder are subject to:

(a) the right of Hospital and Hospital's Affiliates as listed in Appendix F to make and to use the subject matter described and/or claimed in the Patent Rights for research and educational purposes; and

(b) The right of Hospital and Hospital's Affiliates as listed in Appendix F to purchase Products and Processes from Company or any of its Affiliates or Sublicensees for use by Hospital and such listed Affiliates as Clinical End Users at a cost reasonably similar to other Clinical End Users in the Northeast region, subject to supply terms and conditions to be reasonably negotiated upon Hospital's request; and

(c) for Patent Rights supported by federal funding, the rights, conditions and limitations imposed by U.S. law (*see* 35 U.S.C. § 202 et seq. and regulations pertaining thereto), including without limitation:

(i) the royalty-free non-exclusive license granted to the U.S. government; and

(ii) the requirement that any Products used or sold in the United States shall be manufactured substantially in the United States.

2.4 No Additional Rights. It is understood that nothing in this Agreement shall be construed to grant Company or any of its Affiliates a license, express or implied, under any patent owned solely or jointly by Hospital other than the Patent Rights expressly licensed hereunder. Hospital shall have the right to license any Patent Rights to any other party for any purpose outside of the License Field or the License Territory.

2.5 Disclosure of Technological Information. At Company's request prior to execution of this Agreement, Hospital (through Dr. Tilly) shall use reasonable efforts to disclose in confidence within [***] days after execution of this Agreement the Technological Information licensed hereunder.

3. DUE DILIGENCE OBLIGATIONS

3.1 Diligence Requirements. Company shall use, and shall cause its Affiliates and Sublicensees, as applicable, to use, commercially reasonable efforts to develop and make available to the public Products and Processes throughout the License Territory in the License Field. Such efforts shall include achieving the following objectives within the time periods designated below following the Effective Date:

(a) Pre-Sales Requirements.

(i) Company shall use commercially reasonable efforts to carry out development of Products and/or Processes in accordance with development plans mutually agreed by the Parties through their Steering Committee representatives.

(ii) Company shall secure venture capital or other equity financing of at least $[***] within [***] months following the Effective Date.

(iii) Company shall identify one or more study site(s) for a Clinical Proof of Concept study with [***] months following the Effective Date.

(iv) Provide written report to Hospital detailing regulatory strategy for developing a Product or Process within [***] months following the Effective Date.

(v) Enroll the first patient in a Clinical Proof of Concept study within [***] months following the Effective Date.

(vi) Complete a Clinical Proof of Concept study within [***] months following the Effective Date, provided that, this milestone shall be deemed achieved by the completion of a study prospectively intended to demonstrate Clinical Proof of Concept whether or not Clinical Proof of Concept is achieved with such study.

(vii) Achieve a First Commercial Sale within [***] months following the Effective Date.

(b) Post Sales Requirements.

(i) Following the First Commercial Sale in any country in the License Territory, Company shall directly or through its Affiliates and/or Sublicensees make continuing Sales in such country without any elapsed time period of [***] or more in which such Sales do not occur.

(ii) Company shall directly or through an Affiliate or Sublicensee make such First Commercial Sale within the following countries and regions in the License Territory within [***] years after the Effective Date of this Agreement: (a) Canada, Mexico, Argentina, Brazil, Australia, New Zealand and Japan and (b) at least [***] of the following countries: the U.K., France, Germany, Italy and Spain.

Achievement of the foregoing objectives shall be deemed to satisfy Company's obligations to use commercially reasonable efforts under this Section 3.1. Section 3.1(a) above may be updated or modified from time to time by the Steering Committee, and any such update or modification shall be documented in the minutes of the applicable Steering Committee meeting and may be updated hereto through a written amendment.

3.2 Diligence Failures. If Company fails to fulfill any of its obligations under Section 3.1(b) with respect to any of the countries listed in Section 3.1(b)(ii)(a) or with respect to at least [***] of the countries listed in Section 3.1(b)(ii)(b) in any material respect, then, subject to the notice and cure provisions of Section 10.4, Hospital may treat such failure as a default and, at Hospital's option, may, solely with respect to the country(ies) to which such failure relates, either convert the License under 2(a)(i) to non-exclusive or terminate this Agreement and/or any license granted hereunder in accordance with Section 10.4. For the avoidance of doubt, Hospital shall not, based on Company's failure to fulfill it obligations under Section 3.1(b), have the right to terminate this Agreement or Company's licenses hereunder, or convert Company's licenses hereunder to non-exclusive, with respect to countries in which Company satisfies its obligations under Section 3.1 (b). In addition, if Company, together with its Affiliates, Sublicensees and Clinical End Users, ceases all development and commercialization activities with respect to all Products and Processes for more than [***], Hospital may treat such failure as a default and, at Hospital's option, may either convert the License under 2(a)(i) to non-exclusive or terminate this Agreement and/or any license granted hereunder in accordance with Section 10.4.

3.3 Diligence Reports. Company shall provide all reports with respect to its obligations under Section 3.1 as set forth in Section 5.

4. PAYMENTS AND ROYALTIES

4.1 License Issue Fee. Company shall pay Hospital a non-refundable license issue fee in the amount of [***] dollars ($[***]) upon execution of this Agreement.

4.2 Patent Cost Reimbursement. Company shall reimburse Hospital for all costs associated with the preparation, filing, prosecution and maintenance of all Patent Rights ("Patent Costs"). As of the Effective Date, Hospital has incurred approximately [***] Dollars ($[***]) in Patent Costs, which amount Company shall pay to Hospital based upon the following schedule:

- $[***] within [***] days of the Effective Date
- $[***] on the [***] anniversary of the Effective Date
- [***] on the [***] anniversary of the Effective Date

Company shall pay to Hospital, or at Hospital's request directly to patent counsel, all other Patent Costs within [***] days of Company's receipt of an invoice for such Patent Costs either from Hospital or Hospital's patent counsel. Hospital shall instruct patent counsel to provide copies to Hospital for Hospital's administrative files of all invoices detailing Patent Costs which are sent directly to Company.

4.3 Annual License Fee; Annual Maintenance Fee.

(a) Annual License Fee. Company shall pay to Hospital the non-refundable amount of [***] Dollars ($[***]) as an annual license fee (the "Annual License Fee") within [***] days after each of the first (1st) and second (2nd) anniversaries of the Effective Date.

The first [***] Dollars ($[***]) of the Annual License Fees shall be creditable against royalties subsequently due on Net Sales amounts made during the [***] and [***] calendar years following the Effective Date, if any, but shall not be credited against royalties due on Net Sales made in any other subsequent year.

(b) Annual Maintenance Fee. Beginning on the third (3rd) anniversary of the Effective Date, Company shall pay the amount of [***] Dollars ($[***]) as an annual maintenance fee (the "Annual Maintenance Fee") to Hospital within [***] days after each anniversary of the Effective Date. The Annual Maintenance Fee shall be non-refundable and non-creditable against royalties.

4.4 Milestone Payments. In addition to the payments set forth in Sections 4.1 through 4.3 above, Company shall pay Hospital milestone payments as follows:

(a) [***] Dollars ($[***]) within [***] days of achieving Clinical Proof of Concept; and

(b) [***] Dollars ($[***]) within [***] days of [***]; and

(c) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(d) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(e) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(f) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(g) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(h) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(i) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]).

For the avoidance of doubt, should the milestone described in clause (b) above be achieved before the milestone in clause (a) above is achieved, the milestone payments described in clause (a) will be due and payable concurrently with the milestone payment described in clause (b), and should Net Sales amounts be equal to or greater than more than one of the above as yet to be achieved milestones in any given calendar year, all such milestones first achieved in such calendar year shall be due for that calendar year.

All payments due to Hospital under this Section 4.4 shall be due and payable by Company within [***] days after the end of each Reporting Period, and shall be accompanied by a report as set forth in Sections 5.2 and 5.3.

The milestone payments set forth in this Section 4.4 shall each be payable no more than once.

4.5 Royalties and Sublicense Income.

(a) Beginning with the First Commercial Sale in any country in the License Territory, Company shall pay Hospital during the term of any license granted under Section 2.1(a)(i), a royalty of [***] percent ([***]%) of the Net Sales amounts of all Products and Processes. In the event that Company reasonably determines that royalty payments to one or more third parties are required in order to avoid potential infringement of third party patent rights, Company shall notify Hospital via Hospital's Executive Director, Research Ventures and Licensing promptly following Company's decision to pursue a license from the applicable third party and, if such payments are in excess of One Percent (1.0%) of Net Sales, Company may offset a total of [***] Percent ([***]%) of such third-party payments that are in excess of One Percent (1.0%) of Net Sales against any royalty payments that are due under this Section 4.5(a) to Hospital in the same Reporting Period, provided that in no event shall the royalty payments under this Section 4.5(a), when aggregated with any other offsets and credits allowed under this Agreement, be reduced by more than [***] Percent ([***]%) in any Reporting Period. Without limiting the foregoing, in connection with providing notification to Hospital of Company's intent to pursue a third party license, Company shall provide an explanation of its rationale for pursuing the license. In the event that Hospital notifies Company that Hospital has concerns regarding Company's determination to seek such license, the Steering Committee shall be convened to review the determination. Failing satisfactory resolution from the Steering Committee the matter shall be discussed between Company CEO or Chairman and the Hospital's Executive Director, Research Ventures and Licensing; provided that, Company's CEO shall have final decision-making authority with respect to such matter and Company shall not be required to delay obtaining the proposed third party license for more than [***] days in total as a result of the foregoing Steering Committee and executive consultation process.

(b) Company shall pay Hospital [***] percent ([***]%) of any and all Sublicense Income received prior to the third anniversary of the Effective Date, and [***] percent ([***]%) of any and all Sublicense Income received on or after the third anniversary of the Effective Date.

(c) All payments due to Hospital under this Section 4.5 shall be due and payable by Company within [***] days after the end of each Reporting Period, and shall be accompanied by a report as set forth in Sections 5.3 and 5.4.

4.6 Liquidity Event Milestone Fee. Company shall pay Hospital One Million Dollars ($1,000,000.00) (the "Liquidity Event Fee"), within [***] days following the first to occur of either:

(a) The closing of the first underwritten public offering of Company's securities (an "IPO"), provided that, if the proceeds to the Company from such IPO are less than [***] Dollars ($[***]), Company shall pay [***] percent ([***]%) of such proceeds to Hospital within [***] days following such closing and thereafter on each anniversary of such closing shall pay to Hospital the lesser of [***] percent ([***]%) of such proceeds or the payment amount that, when combined with prior payments pursuant to this Section 4.6(a), would equal [***] Dollars ($[***]); or

(b) The closing of the first to occur of any of the following transactions (each a "Change of Control"):

(i) a sale, conveyance or other disposition of all or substantially all of the assets of the Company (other than to an Affiliate of Company as part of a reorganization or restructuring); or

(ii) a merger or consolidation of Company with or into any other entity, unless the stockholders of Company immediately before the transaction own fifty percent (50%) or more of the voting or capital stock of the acquiring or surviving corporation following the transaction;

provided that, if the proceeds to the Company of such Change of Control are less than [***] Dollars ($[***]), Company shall pay to Hospital [***] Dollars ($[***]) within [***] days following such Change of Control and thereafter shall pay to Hospital [***] Cents ($[***]) on each of the first three anniversaries of such Change of Control.

Provided, however, that this Section 4.6 shall terminate upon the full payment of the Liquidity Event Fee.

4.7 Form of Payment. All payments due under this Agreement shall be drawn on a United States bank and shall be payable in United States dollars. Each payment shall reference this Agreement and its Agreement Number and identify the obligation under this Agreement that the payment satisfies. Conversion of foreign currency to U.S. dollars shall be made at the conversion rate existing in the United States, as reported in The Wall Street Journal, on the last working day of the applicable Reporting Period. Such payments shall be without deduction of exchange, collection or other charges, and, specifically, without deduction of withholding or similar taxes or other government imposed fees or taxes, except as legally required or permitted in the definition of Net Sales.

Checks for all payments due to the Hospital under this Agreement shall be made payable to the Hospital and addressed as set forth below:

Massachusetts General Hospital
BOA-Lockbox Services
PCSR Lockbox #[***]
MA5-527-02-07
2 Morrissey Blvd
Dorchester, MA 02125
Reference Agreement #: A**209968**

Payments via wire transfer should be made as follows:

ACH Credit: ABA # 011-000-138
Federal Reserve Wire: ABA#026-009-593
SWIFT Code: BOFAUS3N
Account #[***]
Massachusetts General Hospital
Bank of America
100 Federal Street
Boston, MA 02110
Reference Agreement #: A**209968**

4.8 Overdue Payments. The payments due under this Agreement shall, if overdue, bear interest beginning on the first day following the Reporting Period to which such payment was incurred and until payment thereof at a per annum rate equal to two percent (2%) above the prime rate in effect on the due date as reported by The Wall Street Journal, such interest rate being compounded on the last day of each Reporting Period, not to exceed the maximum permitted by law. Any such overdue payments when made shall be accompanied by all interest so accrued. Said interest and the payment and acceptance thereof shall not preclude Hospital from exercising any other rights it may have as a consequence of the lateness of any payment.

5. REPORTS, RECORDS, AND STEERING COMMITTEE

5.1 Diligence Reports. Within [***] days after the end of each calendar year until such time as a First Commercial Sale has been achieved in the United States and the objectives set forth in Section 3.1 (b) have been achieved, Company shall report in writing to Hospital on progress made toward such objectives during such preceding 12 month period, including, without limitation, progress on research and development, status of applications for regulatory approvals, manufacturing, sublicensing and the number of sublicenses entered into and marketing.

5.2 Milestone Achievement Notification. Company shall, along with delivering payment as set forth in Section 4.7, report to Hospital the dates on which it achieves the milestones set forth in Section 4.4 within [***] days after the Reporting Period during which each such milestone was achieved.

5.3 Sales Reports. Company shall report to Hospital the date on which it achieves the First Commercial Sale in each country of the License Territory within [***] days of each such occurrence. Following the First Commercial Sale, Company shall deliver reports to Hospital within [***] days after the end of each Reporting Period. Each report under this Section 5.3 shall have substantially the format outlined in **Appendix B**, shall be certified as correct by an officer of Company and shall contain at least the following information (or as otherwise determined by the Steering Committee) as may be pertinent to a royalty accounting hereunder for the immediately preceding Reporting Period:

(a) the number of Products and Processes Sold by Company, its Affiliates and Sublicensees in each of (i) the United States, (ii) the European Union, (iii) Japan and (iv) all other countries in aggregate (each of (i), (ii), (iii) and (iv), a "Reporting Territory");

(b) the amounts billed, invoiced and received by Company, its Affiliates and Sublicensees for each Product and Process, in each Reporting Territory, and total billings or payments due or made for all Products and Processes;

(c) calculation of Net Sales for the applicable Reporting Period in each Reporting Territory, including an itemized listing of permitted offsets and deductions;

(d) total royalties payable on Net Sales in U.S. dollars, together with the exchange rates used for conversion; and

(e) any other payments due to Hospital under this Agreement.

If no amounts are due to Hospital for any Reporting Period, the report shall so state.

5.4 Sublicense Income Reports. Company shall, along with delivering payment as set forth in Section 4.7, report to Hospital within [***] days after the end of each Reporting Period the amount of all Sublicense Income received by Company during such Reporting Period, and Company's calculation of the amount due and paid to Hospital from such income, including an itemized listing of the source of income comprising such consideration, and the name and address of each entity making such payments in substantially the format outlined in **Appendix C**.

5.5 Audit Rights. Company shall maintain, and shall cause each of its Affiliates and Sublicensees to maintain, complete and accurate records relating to the rights and obligations under this Agreement and any amounts payable to Hospital in relation to this Agreement, which records shall contain sufficient information to permit Hospital and its representatives to confirm the accuracy of any payments and reports delivered to Hospital and compliance in all other respects with this Agreement. Company shall retain and make available, and shall require each of its Affiliates and Sublicensees to retain and make available, such records for at least [***] years following the end of the calendar year to which they pertain, to Hospital and/or its representatives and upon at least [***] days' advance written notice, for inspection during normal business hours, to verify any reports and payments made and/or compliance in other respects under this Agreement. If any examination conducted by Hospital or its representatives pursuant to the provisions of this Section show an underreporting or underpayment of [***] percent ([***]%) or more in any calendar year due to Hospital hereunder, then, subject to Company's right to discuss or dispute the results of such examination, Company shall bear the full cost of such audit and shall remit any amounts due to Hospital (including interest due in accordance with Section 4.8) within [***] days of receiving notice thereof from Hospital.

5.6 Steering Committee.

(a) Purpose. Company and Hospital will establish a steering committee ("Steering Committee") to facilitate the exchange of information regarding the progress of the Company on research and development, regulatory approvals, manufacturing, sublicensing, marketing and sale of Products and the status of any sponsored research projects thereunder, new uses, Technological Information and or new technology as applicable. The Steering Committee shall review and discuss Company's development plans, including Company's timeline for conducting clinical trials with respect to Products and/or Processes, which Company and Hospital anticipate will commence within approximately [***] months following the Effective Date, and Company shall consider recommendations made by the Steering Committee regarding the commercialization of Products and/or Processes, including potential markets beyond those set forth in Section 3.1(b)(ii) in which Company may pursue commercialization.

(b) Membership. Company will appoint at least [***] but not more than [***]members and Hospital will appoint at least [***] but not more than [***] members each to the Steering Committee. A Party may replace any of its members at any time.

(c) Meetings. The Steering Committee will meet quarterly, or as otherwise determined by the committee, in person during the Term of the License until such time as the First Commercial Sale has been achieved or as otherwise determined by the Steering Committee. The schedule and location for meetings will be agreed upon by the Parties in advance, provided that the first such meeting shall occur within [***] days after the Effective Date and thereafter such meetings shall occur no later than [***] days after the end of each calendar quarter. The first meeting of the Steering Committee will focus on discussions to facilitate the Company's formulation of preliminary development plans. The Steering Committee will use reasonable efforts to generate a written summary describing the details of the information exchanged and topics discussed at each Steering Committee meeting and disseminated to the Parties.

6. PATENT PROSECUTION AND MAINTENANCE

6.1 Prosecution. Hospital shall be responsible for the preparation, filing, prosecution and maintenance of all patent applications and patents included in Patent Rights. Company shall reimburse Hospital for Patent Costs incurred by Hospital relating thereto in accordance with Section 4.2; provided that. Hospital and Company shall discuss and agree in advance on the countries in which Hospital will prosecute the Patent Rights, so that Company may elect in advance, pursuant to Section 6.3, not to pay costs for any countries in which Company does not desire to fund such prosecution.

6.2 Copies of Documents. With respect to any Patent Right licensed hereunder, Hospital shall instruct the patent counsel prosecuting such Patent Right to (i) copy Company on patent prosecution documents that are received from or filed with the United States Patent and Trademark Office and foreign equivalent, as applicable; (ii) if requested by Company, provide Company with copies of draft submissions to the USPTO prior to filing; and (iii) give consideration to the comments and requests of Company or its patent counsel.

6.3 Company's Election Not to Proceed. Company may elect to surrender any patent or patent application in Patent Rights in any country upon [***] days advance written notice to Hospital. Such notice shall relieve Company from the obligation to pay for future Patent Costs but shall not relieve Company from responsibility to pay Patent Costs incurred prior to the expiration of the [***] day notice period. Such U.S. or foreign patent application or patent shall thereupon cease to be a Patent Right hereunder, Company shall have no further rights therein and Hospital shall be free to license its rights to that particular U.S. or foreign patent application or patent to any other party on any terms.

6.4 Confidentiality of Prosecution and Maintenance Information. Company agrees to treat all information related to prosecution and maintenance of Patent Rights as Confidential Information in accordance with the provisions of **Appendix E**.

7. THIRD PARTY INFRINGEMENT AND LEGAL ACTIONS

7.1 Hospital Right to Prosecute. Hospital will protect its Patent Rights from infringement and prosecute infringers when, in its sole judgment, such action may be reasonably necessary, proper and justified. If Company shall have supplied Hospital with written evidence demonstrating to Hospital's reasonable satisfaction prima facie infringement of a claim of a Patent Right in the License Field in the License Territory by a third party which poses a material threat to Company's rights under this Agreement, Company may by notice request Hospital to take steps to protect such Patent Right. Hospital shall notify Company within [***] days of the receipt of such notice whether Hospital intends to prosecute the alleged infringement. If Hospital notifies Company that it intends to so prosecute, Hospital shall, within [***] months of its notice to Company either (i) cause such infringement to terminate, or (ii) initiate legal proceedings against the infringer.

7.2 Company Right to Prosecute. In the event Hospital notifies Company that Hospital does not intend to prosecute infringement identified under Section 7.1, Company may, upon notice to Hospital, initiate legal proceedings against the infringer at Company's expense with respect to a claim of a Patent Right in the License Field in the License Territory. Before commencing such action,

Company and, as applicable, any Affiliate, shall consult with Hospital, concerning, among other things, Company's standing to bring suit, the advisability of bringing suit, the selection of counsel and the jurisdiction for such action and shall consider the views of Hospital regarding the proposed action, including without limitation with respect to potential effects on the public interest. Company shall be responsible for all costs, expenses and liabilities in connection with any such action and shall indemnify and hold Hospital harmless therefrom, regardless of whether Hospital is a party-plaintiff, except for the expense of any independent counsel retained by Hospital in accordance with Section 7.5 below.

7.3 Hospital Joined as Party-Plaintiff. If Company elects to commence an action as described in Section 7.2 above, Hospital shall have, in its sole discretion, the option to join such action as a party-plaintiff. If joinder of Hospital as a party-plaintiff is necessary or desirable in order for Company to bring or maintain such action or to prove damages in such action, and Company requests that Hospital be joined, Hospital may either, in its sole discretion, permit itself to be joined as a party-plaintiff at the sole expense of Company, or assign to Company all of Hospital's right, title and interest in and to the Patent Right which is the subject of such action (subject to all of Hospital's obligations to the government under law and any other rights that others may have in such Patent Right). If Hospital makes such an assignment, such action by Company shall thereafter be brought or continued without Hospital as a party; provided, however, that Hospital shall continue to have all rights of prosecution and maintenance with respect to Patent Rights and Company shall continue to meet all of its obligations under this Agreement as if the assigned Patent Right were still licensed to Company hereunder.

7.4 Notice of Actions; Settlement. Company shall promptly inform Hospital of any action or suit relating to Patent Rights and shall not enter into any settlement, consent judgment or other voluntary final disposition of any action relating to Patent Rights, including but not limited to appeals, without the prior written consent of Hospital.

7.5 Cooperation. Each Party agrees to cooperate reasonably in any action under Section 7 which is controlled by the other Party, provided that the controlling Party reimburses the cooperating Party for any costs and expenses incurred by the cooperating Party in connection with providing such assistance, except for the expense of any independent counsel retained by the cooperating Party in accordance with this Section 7.5. Such controlling Party shall keep the cooperating Party informed of the progress of such proceedings and shall make its counsel available to the cooperating Party. The cooperating Party shall also be entitled to independent counsel in such proceedings but at its own expense, said expense to be offset against any damages received by the Party bringing suit in accordance with Section 7.6.

7.6 Recovery. Any award paid by third parties as the result of such proceedings (whether by way of settlement or otherwise) shall first be applied to reimbursement of any legal fees and expenses incurred by either Party and then the remainder shall be divided between the Parties as follows:

(i) Company shall receive an amount equal to its lost profits or a reasonable royalty on the infringing sales, or whichever measure of damages the court shall have applied; and

(ii) Hospital shall receive an amount equal to the royalties and other amounts that Company would have paid to Hospital if Company had Sold the infringing Products and Services rather than the infringer; and

(iii) the balance, if any, remaining after Company and Hospital have been compensated under Section 7.6(a) shall be shall be shared [***] percent ([***]%) to the controlling party and [***] percent ([***]%) to the cooperating party.

8. INDEMNIFICATION AND INSURANCE

8.1 Indemnification.

(a) Company shall indemnify, defend and hold harmless Hospital and its Affiliates and their respective trustees, directors, officers, medical and professional staff, employees, and agents and their respective successors, heirs and assigns (the "Indemnitees"), against any liability, damage, loss or expense (including reasonable attorney's fees and expenses of litigation) incurred by or imposed upon the Indemnitees or any one of them in connection with any claims, suits, actions, demands or judgments arising out of any theory of product liability (including, but not limited to, actions in the form of contract, tort, warranty, or strict liability) concerning any product, process or service made, used, or sold or performed pursuant to any right or license granted under this Agreement.

(b) With respect to Patent Cost Reimbursement under Section 4.2, Company agrees to indemnify, defend and hold Hospital harmless from and against any and all Patent Costs and costs of collection arising from the failure of Company to timely pay such Patent Costs.

(c) Company agrees, at its own expense, to provide attorneys reasonably acceptable to the Hospital to defend against any actions brought or filed against any party indemnified hereunder with respect to the subject of indemnity contained herein, whether or not such actions are rightfully brought; provided, however, that any Indemnitee shall have the right to retain its own counsel, at the expense of Company, if representation of such Indemnitee by counsel retained by Company would be inappropriate because of conflict of interests of such Indemnitee and any other party represented by such counsel. Company agrees to keep Hospital informed of the progress in the defense and disposition of such claim and to consult with Hospital prior to any proposed settlement.

(d) This section 8.1 shall survive expiration or termination of this Agreement.

8.2 Insurance.

(a) Beginning at such time as any such product, process or service is being commercially distributed, sold, leased or otherwise transferred, or performed or used (other than for the purpose of obtaining regulatory approvals), by Company, an Affiliate or Sublicensee, Company shall, at its sole cost and expense, procure and maintain commercial general liability insurance in amounts not less than $[***] per incident and $[***] annual aggregate and naming the Indemnitees as additional insureds. Such commercial general liability insurance shall provide product liability coverage and shall not have a Contractual Liability Limitation Endorsement. If Company elects to self-insure all or part of the limits described above (including deductibles or retentions which are in excess of $[***] annual aggregate) such self-insurance program must be acceptable to the Hospital and the Risk Management Foundation. The minimum amounts of insurance coverage required under this Section 8.2 shall not be construed to create a limit of Company's liability with respect to its indemnification under Section 8.1 of this Agreement.

(b) Company shall provide Hospital with written evidence of such insurance upon request of Hospital. Company shall provide Hospital with written notice at least [***] days prior to the cancellation, non-renewal or material change in such insurance; if Company does not obtain replacement insurance providing comparable coverage prior to the expiration of such [***] day period, Hospital shall have the right to terminate this Agreement effective at the end of such [***] day period without notice or any additional waiting periods.

(c) Company shall maintain such commercial general liability insurance beyond the expiration or termination of this Agreement during (i) the period that any such product, process, or service is being commercially distributed, sold, leased or otherwise transferred, or performed or used (other than for the purpose of obtaining regulatory approvals), by Company or by a licensee, affiliate or agent of Company and (ii) a reasonable period after the period referred to in (c) (i) above which in no event shall be less than [***] years.

(d) This section 8.2 shall survive expiration or termination of this Agreement.

9. DISCLAIMER OF WARRANTIES; LIMITATION OF LIABILITY

9.1 Title to Patent Rights. To the best knowledge of Hospital's Office of Research, Ventures and Licensing, Hospital is the owner by assignment from Dr. Jonathan Tilly and Dr. Joshua Johnson of the Patent Rights and has the authority to enter into this Agreement and license the Patent Rights to Company hereunder.

9.2 No Warranties. HOSPITAL MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING THE PATENT RIGHTS AND THE RIGHTS GRANTED HEREUNDER, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, VALIDITY OF PATENT RIGHTS CLAIMS, WHETHER ISSUED OR PENDING, AND THE ABSENCE OF LATENT OR OTHER DEFECTS, WHETHER OR NOT DISCOVERABLE, AND HEREBY DISCLAIMS THE SAME. SPECIFICALLY, AND NOT TO LIMIT THE FOREGOING, HOSPITAL MAKES NO WARRANTY OR REPRESENTATION (i) REGARDING THE VALIDITY OR SCOPE OF ANY OF THE CLAIM(S), WHETHER ISSUED OR PENDING, OF ANY OF THE PATENT RIGHTS, AND (ii) THAT THE EXPLOITATION OF THE PATENT RIGHTS OR ANY PRODUCT WILL NOT INFRINGE ANY PATENTS OR OTHER INTELLECTUAL PROPERTY RIGHTS OF HOSPITAL OR OF ANY THIRD PARTY.

9.3 Limitation of Liability. IN NO EVENT SHALL EITHER PARTY OR ANY OF ITS AFFILIATES OR ANY OF THEIR RESPECTIVE TRUSTEES, DIRECTORS, OFFICERS, MEDICAL AND PROFESSIONAL STAFF, EMPLOYEES AND AGENTS BE LIABLE TO THE OTHER PARTY OR ANY OF ITS AFFILIATES FOR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING IN ANY WAY OUT OF THIS AGREEMENT OR THE LICENSE RIGHTS GRANTED HEREUNDER, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, INCLUDING WITHOUT LIMITATION SUCH DAMAGES THAT ARE ECONOMIC DAMAGES OR INJURY TO

PROPERTY OR LOST PROFITS, REGARDLESS OF WHETHER SUCH PARTY SHALL BE ADVISED, SHALL HAVE OTHER REASON TO KNOW, OR IN FACT SHALL KNOW OF THE POSSIBILITY OF THE FOREGOING; PROVIDED, HOWEVER, NOTHING IN THIS SECTION 9.3 SHALL BE CONSTRUED TO LIMIT COMPANY'S OBLIGATION TO INDEMNIFY HOSPITAL UNDER SECTION 8 OF THIS AGREEMENT.

10. TERM AND TERMINATION

10.1 Term. The term of this Agreement shall commence on the Effective Date and shall remain in effect on a Product-by-Product, Process-by-Process and country-by-country basis until the date on which all Claims that cover the applicable Product or Process in the applicable country have expired or been abandoned, unless this Agreement is terminated earlier in accordance with any of the other provisions of Section 10. Following expiration of this Agreement with respect to a Product or Process in a particular country, as described in the prior sentence, the licenses and rights granted to Company pursuant to Section 2.1 shall remain in effect on a perpetual, royalty-free and non-exclusive basis.

10.2 Termination for Failure to Pay. If Company fails to make any payment due hereunder, Hospital shall have the right to terminate this Agreement upon [***] days written notice, unless Company makes such payments plus any interest due, as set forth in Section 4.7, within said [***] day notice period. If payments are not made, Hospital may immediately terminate this Agreement at the end of said [***] day period. Company shall be entitled to only one such cure period in a calendar year; for a second failure to make payment on time, Hospital shall have the right to terminate this Agreement immediately upon written notice. Notwithstanding the foregoing, if Company in good faith disputes a payment obligation asserted by Hospital, then, providing Company shall make said disputed payment and Hospital shall place said payment in escrow, such termination right shall be tolled until after such dispute is resolved, and this Agreement shall not terminate based on such dispute if Company pays all amounts ultimately determined to be due within [***] days following the resolution of such dispute in accordance with Section 12.8.

10.3 Termination for Insurance and Insolvency.

(a) Insurance. Hospital shall have the right to terminate this Agreement in accordance with Section 8.2(b) if Company fails to maintain the insurance required by Section 8.2.

(b) Insolvency and other Bankruptcy Related Events. Hospital shall have the right to terminate this Agreement immediately upon written notice to Company with no further notice obligation or opportunity to cure if Company: (i) shall make an assignment for the benefit of creditors; or (ii) or shall have a petition in bankruptcy filed for or against it (provided that in the case of a petition in bankruptcy filed against it, Hospital shall not have the right to terminate this Agreement if such petition is dismissed within sixty (60) days following the filing of such petition).

10.4 Termination for Non-Financial Default. If Company, any of its Affiliates or any Sublicensee shall materially default in the performance of any of its other obligations under this Agreement not otherwise covered by the provisions of Section 10.2 and 10.3, and if such material default has not been cured within [***] days after notice by Hospital in writing of such default, Hospital may immediately terminate this Agreement, and/or any license granted hereunder with respect to the country or countries in which such default has occurred, at the end of said [***] day cure period. Hospital shall also have the right to terminate this Agreement and/or any such license immediately, upon written notice, in the event of [***] or more material defaults in any [***] year period even if cured within such [***] day period

10.5 Challenging Validity. During the term of this Agreement, Company shall not challenge, and shall restrict Affiliates and Sublicensees from challenging the validity of the Patent Rights and in the event of any breach of this provision by Company Hospital shall have the right to terminate this Agreement and any license granted hereunder immediately. In addition, if the Patent Rights are upheld Company shall reimburse Hospital for its legal costs and expenses incurred in defending any such challenge by Company or its Affiliates in any country in which Company and its Affiliates retain a license to such Patent Rights under this Agreement.

10.6 Termination by Company. Company shall have the right to terminate this Agreement by giving ninety (90) days advance written notice to Hospital and upon such termination shall immediately cease all use and Sales of Products and Processes, subject to Section 10.9.

10.7 Effect of Termination on Sublicenses. Any sublicenses granted by Company under this Agreement shall provide for assignment to Hospital of Company's interest therein, upon termination (but not expiration) of this Agreement or upon termination of any license hereunder under which such sublicense has been granted. Upon assignment of any such sublicense to Hospital upon termination, the rights granted to the Sublicensee in such sublicense shall survive; provided that, (a) Hospital shall not be obligated to accept the assignment of any such sublicense if the Sublicensee is then in material default of any of the obligations required to be imposed on Sublicensees pursuant to this Agreement and (b) Hospital shall not have any liability for Company's obligations pursuant to the sublicense beyond Hospital's obligations with respect to the sublicensed rights under this Agreement.

10.8 Effects of Termination of Agreement. Upon termination of this Agreement or any of the licenses hereunder for any reason, final reports in accordance with Section 5 shall be submitted to Hospital and all royalties and other payments, including without limitation any unreimbursed Patent Costs, accrued or due to Hospital as of the termination date shall become immediately payable. Company shall cease, and shall cause its Affiliates and require its Sublicensees to cease under any sublicense granted by Company under this Agreement, all Sales and uses of Products and Processes upon such termination (but not expiration), subject to Sections 10.7 and 10.9. The termination or expiration of this Agreement or any license granted hereunder shall not relieve Company, its Affiliates or Sublicensees of obligations arising before such termination or expiration.

10.9 Inventory. Upon early termination of this Agreement other than for Company default, Company, Company Affiliates and Sublicensees may complete and sell any work-in-progress and inventory of Products that exist as of the effective date of termination, provided that (i) Company pays Hospital the applicable running royalty or other amounts due on such Net Sales amounts in accordance with the terms and conditions of this Agreement, and (ii) Company, Company Affiliates and Sublicensees shall be permitted, but are not required to complete and sell all work-in-progress and inventory of Products within [***] months after the effective date of termination. Upon expiration of this Agreement, Company shall pay to Hospital the royalties set forth in Section 4.5(a) for post-termination Sales pursuant to this Section 10.9 of any Product that was in inventory or was a work-in-progress on the date of termination of this Agreement.

11. COMPLIANCE WITH LAW

11.1 Compliance. Company shall have the sole obligation for compliance with, and shall ensure that any Affiliates and Sublicensees comply with, all government statutes and regulations that relate to Products and Processes, including, but not limited to, those of the Food and Drug Administration and the Export Administration, as amended, and any applicable laws and regulations of any other country in the License Territory. Company agrees that it shall be solely responsible for obtaining any necessary licenses to export, re-export, or import Products or Processes covered by Patent Rights and/or Confidential Information. Company shall indemnify and hold harmless Hospital for any breach of Company's obligations under this Section 11.1.

11.2 Patent Numbers. Company shall cause all Products sold in the United States to be marked with all applicable U.S. Patent Numbers, to the extent required by United States law. Company shall similarly cause all Products shipped to or sold in any other country to be marked in such a manner as to conform with the patent laws and practices of such country.

12. MISCELLANEOUS

12.1 Entire Agreement. This Agreement and the Exclusive Option Agreement between the Parties of even date herewith constitute the entire understanding between the Parties with respect to the subject matter hereof.

12.2 Notices. Any notices, reports, waivers, correspondences or other communications required under or pertaining to this Agreement shall be in writing and shall be delivered by hand, or sent by a reputable overnight mail service (e.g., Federal Express), or by first class mail (certified or registered), or by facsimile confirmed by one of the foregoing methods, to the other Party. Notices will be deemed effective (a) three (3) working days after deposit, postage prepaid, if mailed, (b) the next day if sent by overnight mail, or (c) the same day if sent by facsimile and confirmed as set forth above or delivered by hand. Unless changed in writing in accordance with this Section, the notice address for Hospital shall be as follows:

Executive Director, Research Ventures and Licensing
Massachusetts General Hospital
101 Huntington Avenue, 4th Floor
Boston, MA 02199

Fax No. (617) 954-9361

12.3 Amendment; Waiver. This Agreement may be amended and any of its terms or conditions may be waived only by a written instrument executed by an authorized signatory of the Parties or, in the case of a waiver, by the Party waiving compliance. The failure of either Party at any time or times to require performance of any provision hereof shall in no manner affect its rights at a later time to enforce the same. No waiver by either Party of any condition or term shall be deemed as a further or continuing waiver of such condition or term or of any other condition or term.

12.4 Binding Effect. This Agreement shall be binding upon and inure to the benefit of and be enforceable by the Parties hereto and their respective permitted successors and assigns.

12.5 Assignment. Company shall not assign this Agreement or any of its rights or obligations under this Agreement without the prior written consent of Hospital; provided, however, that no such consent will be required to assign this Agreement to an Affiliate of Company, to a successor to all or substantially all of the Company's business to which this Agreement pertains or to a purchaser of all

or substantially all of the Company's assets related to this Agreement, so long as such Affiliate, successor or purchaser shall agree in writing to be bound by all of the terms and conditions hereof prior to such assignment. Company shall notify Hospital in writing of any such assignment and provide a copy of all assignment documents and related agreements to Hospital within [***] days of such assignment. Failure of an assignee to agree to be bound by the terms hereof or failure of Company to notify Hospital and provide copies of assignment documentation shall, if not cured as permitted by Section 10.4, be grounds for termination of this Agreement for default.

12.6 Force Majeure. Neither Party shall be responsible for delays resulting from causes beyond the reasonable control of such Party, including without limitation fire, explosion, flood, war, sabotage, strike or riot, provided that the nonperforming Party uses commercially reasonable efforts to avoid or remove such causes of nonperformance and continues performance under this Agreement with reasonable dispatch whenever such causes are removed.

12.7 Use of Name. Neither Party shall use the name of the other Party or of any trustee, director, officer, staff member, employee, student or agent of the other Party or any adaptation thereof in any advertising, promotional or sales literature, publicity or in any document employed to obtain funds or financing without the prior written approval of the Party or individual whose name is to be used. For Hospital, such approval shall be obtained from Hospital's VP of Public Affairs. Notwithstanding the forgoing, this shall not prohibit Company from stating the factual existence of this Agreement and its Terms.

12.8 Governing Law. This Agreement shall be governed by and construed and interpreted in accordance with the laws of the Commonwealth of Massachusetts, excluding with respect to conflict of laws, except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent shall have been granted. Each Party agrees to submit to the exclusive jurisdiction of the Superior Court for Suffolk County, Massachusetts, and the United States District Court for the District of Massachusetts with respect to any claim, suit or action in law or equity arising in any way out of this Agreement or the subject matter hereof.

12.9 Board Observer. Hospital shall be entitled to have one representative of Hospital (the "Hospital Observer") attend all regularly held and special meetings of the Board of Directors of Company (the "Board") in a nonvoting observer capacity and to receive notice of all meetings of the Board, and Company shall give such Hospital Observer copies of all notices, minutes, consents and other material that it provides to its directors at or about the same time as delivered to such directors; provided, however, that: (a) Company reserves the right to exclude the Hospital Observer from any meeting or portion thereof of the Board or from access to any material or portion thereof if Company reasonably believes that such exclusion or withholding of information with respect thereto is reasonably necessary (i) to preserve attorney-client privilege, (ii) in the event the Board intends to discuss or vote upon any circumstances or matters where there is a material actual or material potential conflict of interest between Company and Hospital, including without limitation any discussion of the Parties' rights and obligations under this Agreement, or (iii) to comply with the terms and conditions of confidentiality agreements with third parties; (b) the Hospital Observer shall be an Executive Director, Director, or Sr. Business Strategy & Licensing Manager from Hospital's Office of Research Ventures & Licensing; the identity of the Hospital Observer shall be subject to the approval of Company's Board, which approval shall not to be unreasonably withheld or delayed; and (c) the Hospital, on behalf of Hospital Observer, shall enter into a confidentiality agreement with Company in form and substance reasonably satisfactory to Company requiring the Hospital and Hospital Observer to maintain the confidentiality of Company information disclosed to the Hospital Observer. Hospital's right under this Section 12.9 shall expire upon the earlier of (A) the closing of the initial public offering of Company's capital stock, (B) a Change of Control or (C) if the investors in a Series B preferred stock sale (or a subsequent round) by the Company object to the continuation of the Hospital Observer, the initial closing of such Series B preferred stock sale, provided the Parties shall agree on alternative arrangements to keep Hospital informed of the activities of the Company above the current reporting requirements.

12.10 Hospital Policies. Company acknowledges that Hospital's employees and medical and professional staff members and the employees and staff members of Hospital's Affiliates are subject to the applicable policies of Hospital and such Affiliates, including, without limitation, policies regarding conflicts of interest, intellectual property and other matters. Company shall provide Hospital with any agreement it proposes to enter into with any employee or staff member of Hospital or any of Hospital's Affiliates relating to the subject matter of this Agreement for Hospital's prior review and shall not enter into any oral or written agreement with such employee or staff member which conflicts with any such policy. Hospital shall provide Company, at Company's request, with copies of any such policies applicable to any such employee or staff member.

12.11 Severability. If any provision(s) of this Agreement are or become invalid, are ruled illegal by any court of competent jurisdiction or are deemed unenforceable under then current applicable law from time to time in effect during the term hereof, it is the intention of the Parties that the remainder of this Agreement shall not be affected thereby. It is further the intention of the Parties that in lieu of each such provision which is invalid, illegal or unenforceable, there be substituted or added as part of this Agreement a provision which shall be as similar as possible in economic and business objectives as intended by the Parties to such invalid, illegal or enforceable provision, but shall be valid, legal and enforceable.

12.12 Survival. In addition to any specific survival references in this Agreement, Sections 1, 2.4, 4.2, 4.7, 4.8, 5.3, 5.4, 5.5, 6.4, 8.1, 8.2, 9.2, 9.3, 10.7, 10.8, 10.9, 12.1, 12.2, 12.3, 12.4, 12.7, 12.8, 12.10, 12.11, 12.12, 12.13, and 12.14 shall survive termination or expiration of this Agreement. Any other rights, responsibilities, obligations, covenants and warranties which by their nature should survive this Agreement shall similarly survive and remain in effect.

12.13 Interpretation. The Parties hereto are sophisticated, have had the opportunity to consult legal counsel with respect to this transaction and hereby waive any presumptions of any statutory or common law rule relating to the interpretation of contracts against the drafter.

12.14 Headings. All headings are for convenience only and shall not affect the meaning of any provision of this Agreement.

[*Remainder of page intentionally left blank*]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives as of the Effective Date first written above.

OVASCIENCE, INC.

BY: /s/ Michelle Dipp
Name: Michelle Dipp

TITLE: CEO OvaScience

DATE: June 27, 2011

THE GENERAL HOSPITAL CORPORATION, D/B/A MASSACHUSETTS GENERAL HOSPITAL

BY: /s/ Rebecca Menapace
Name: Rebecca Menapace

TITLE: Director, Research & Licensing Research Ventures & Licensing

DATE: 6/27/11

Appendix A

DESCRIPTION OF PATENT RIGHTS

ID	Title	Assignee	Status	Type	CTRY	Serial #	Filing Date
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]

Appendix B
SALES REPORTS

AGREEMENT INCOME REPORT Royalty Income

[MGH][BWH] Agreement #- __
Licensee - __
Sub-Licensee - __

Separate reports must be filed for:

1. ***Each Product sold.***
2. ***Each country of sale, if different deductions or royalty rates apply.***

Product Name: __
Report Time Period:
From *mm/dd/yyyy* __
To *mm/dd/yyyy* __

Country of Sale __ __ __

Quantity Sold __ __ __

Gross Sales (USD) $__ $__ $__

Exchange Rate __ __ __

Deductions (Itemize)
Please list each deduction separately. Use same definition as appears in Agreement and include the contract paragraph as a reference (Std Section 1.17(a)(ii) line item deductions listed below).

A1. __ __ __
A2. __ __ __
A3. __ __ __
A4. __ __ __
B. __ __ __

Total Deductions (__) (__) (__)

Net Sales __ __ __

Royalty Percentage __ __ __

Credits (itemize) (__) (__) (__)

Royalties Due $__ $__ $__

PLEASE ATTACH DETAIL SALES REPORTS AS REQUIRED

Appendix D

AGREEMENT INCOME REPORT Sublicense Income

[MGH][BWH] Agreement #- __
Licensee - __
Sub-Licensee - __

Separate reports must be filed for Payments associated with each Product:

Product Name: __

Report Time Period:

From *mm/dd/yyyy* __

To *mm/dd/yyyy* __

Detailed Explanation of Payment Required for "Other Payment"

Annual Fees/Minimum Royalties $__ __

Milestone Payments $__ __

Sublicense Fees and Royalties $__ __

Other Payment $__ __

Other Payment $__ __

Other Payment $__ __

TOTAL $__

PLEASE ATTACH DETAIL AS REQUIRED

Appendix D

DESCRIPTION OF TECHNOLOGICAL INFORMATION

Appendix E

CONFIDENTIALITY TERMS AND CONDITIONS

1. Definition of Confidential Information. "Confidential Information" shall mean any information, including but not limited to data, techniques, protocols or results, or business, financial, commercial or technical information, disclosed by one Party (each a "Discloser" as applicable) to the other Party (each a "Recipient" as applicable) in connection with the terms of that certain Exclusive License Agreement dated _____ (the "License Agreement") and identified as confidential at the time of disclosure (the "Purpose"). Hospital's Confidential Information shall also include all information disclosed by Hospital to Company in connection with the Patent Rights. Capitalized terms used in this Appendix that are not otherwise defined herein have the meanings ascribed in the License Agreement to which this Appendix is attached and made a part thereof.

2. Exclusions. "Confidential Information" under this Agreement shall not include any information that (i) is or becomes publicly available through no wrongful act of Recipient; was known by Recipient prior to disclosure by Discloser, as evidenced by tangible records; (iii) becomes known to Recipient after disclosure from a third party having an apparent bona fide right to disclose it; (iv) is independently developed or discovered by Recipient without use of Discloser's Confidential Information, as evidenced by tangible records; or (v) is disclosed to another party by Discloser without restriction on further disclosure. The obligations of confidentiality and non-use set forth in this Agreement shall not apply with respect to any information that Recipient is required to disclose or produce pursuant to applicable law, court order or other valid legal process provided that Recipient promptly notifies Discloser prior to such required disclosure, discloses such information only to the extent so required and cooperates reasonably with Discloser's efforts to contest or limit the scope of such disclosure.

3. Permitted Purpose. Recipient shall have the right to, and agrees that it will, use Discloser's Confidential Information solely for the Purpose (as defined above), except as may be otherwise specified in a separate definitive written agreement negotiated and executed between the Parties.

4. Restrictions. For the term of the License Agreement and a period of [***] years thereafter (and indefinitely with respect to any individually identifiable health information disclosed by Hospital to Company, if any), each Recipient agrees that: (i) it will not use such Confidential Information for any purpose other than as specified herein, including without limitation for its own benefit or the benefit of any other person or entity; and (ii) it will use reasonable efforts (but no less than the efforts used to protect its own confidential and/or proprietary information of a similar nature) not to disclose such Confidential Information to any other person or entity except as expressly permitted hereunder. Recipient may, however, disclose Discloser's Confidential Information only on a need-to-know basis to its and its Affiliates employees, staff members and agents ("Receiving Individuals") who are directly participating in the Purpose and who are informed of the confidential nature of such information, provided Recipient shall be responsible for compliance by Receiving Individuals with the terms of this Agreement and any breach thereof. In addition, (a) Company may use and disclose Confidential Information of Hospital in accordance with the License Agreement as reasonably required for development, regulatory, manufacturing and commercialization activities with respect to Products and Processes, (b) Company may further make such disclosures as Company reasonably determines are required under applicable law or regulation, including without limitation applicable securities laws and regulations and the rules or regulations of any applicable securities exchange or Nasdaq, and (c) Company may make such disclosures of Confidential Information to Company's and its Affiliates' actual or potential directors, investors, funding sources, acquirers and licensees, provided that such recipient is bound to keep such information confidential substantially as provided herein. Each Party further agrees not to use the name of the other Party or any of its Affiliates or any of their respective trustees, directors, officers, staff members, employees, students or agents in any advertising, promotional or sales literature, publicity or in any document employed to obtain funds or financing without the prior written approval of the Party or individual whose name is to be used, in the case of Hospital such approval to be given by the Public Affairs Department. This Section 4 shall survive termination or expiration of this Agreement.

5. Right to Disclose. Discloser represents that to the best of its knowledge it has the right to disclose to each Recipient all of Discloser's Confidential Information that will be disclosed hereunder.

6. Ownership. All Confidential Information disclosed pursuant to this Agreement, including without limitation all written and tangible forms thereof, shall be and remain the property of the Discloser. Upon termination of this Agreement, if requested by Discloser, Recipient shall return or destroy at Discloser's discretion all of Discloser's Confidential Information, provided that Recipient shall be entitled to keep one copy of such Confidential Information in a secure location solely for the purpose of determining Recipient's legal obligations hereunder or of excercising any rights of Recipient which survive such termination.

7. No License. Nothing in this Agreement shall be construed as granting or conferring, expressly or impliedly, any rights by license or otherwise, under any patent, copyright, or other intellectual property rights owned or controlled by Discloser relating to Confidential Information, except as specifically set forth in the License Agreement.

8. Remedies. Each Party acknowledges that any breach of this Agreement by it may cause irreparable harm to the other party and that each party is entitled to seek injunctive relief and any other remedy available at law or in equity.

9. General. These Confidentiality Terms and Conditions, along with the License Agreement, contain the entire understanding of the parties with respect to the subject matter hereof, and supersede any prior oral or written understandings between the parties relating to confidential treatment of information. Sections 1, 2, 4, 6, 8 and 9 of these Confidentiality Terms and Conditions shall survive any expiration or termination of the License Agreement.

Appendix F
HOSPITAL AND AFFILIATES

MASSACHUSETTS GENERAL HOSPITAL
BRIGHAM AND WOMEN'S HOSPITAL
NEWTON-WELLESLEY HOSPITAL

amended.

Exhibit 10.3

CONFIDENTIAL TREATMENT REQUESTED

Amendment No. 1
To The
Exclusive License Agreement

This Amendment No. 1 (this "Amendment") to the Exclusive License Agreement between OvaScience, Inc. ("Company") and The General Hospital Corporation, ("Hospital") dated June 27, 2011 (the "Agreement"), is effective as of September 7, 2011. Capitalized terms used but not defined in this Amendment shall, unless the context otherwise requires, have the meanings specified in the Agreement.

WITNESSETH

WHEREAS, pursuant to Section 12.3 of the Agreement, the Agreement may be so amended with the written consent of Company and Hospital; and

WHEREAS, Hospital has entered into a Joint Invention Administration agreement ("JIA") with the President and Fellows of Harvard College ("Harvard") wherein Hospital is the exclusive agent to grant licenses to the certain patent rights in the field of *ex-vivo* human fertility.

WHEREAS, Company and Hospital desire to amend the Agreement.

NOW, THEREFORE, the Agreement is hereby amended as follows:

1.Section 1.4 of the Agreement shall be deleted in its entirety and replaced by the following:

1.4 "Clinical Proof of Concept" shall mean the completion of a clinical study conducted by or on behalf of Company or any of its Affiliates or Sublicensees of a Product or Process using the Hospital Patent Rights, consisting of a minimum of [***] women patients, in which the average pregnancy rate (as measured by fetal heart beat) of all women in such study is at least [***] percent ([***]%) above the average pregnancy rate via fresh embryo transfer in the most recent National SART Clinic Summary Report for the age group adjusted average, as a result of the use of such Product or Process.

2. Section 1.10 of the Agreement shall be deleted in its entirety and replaced by the following:

1.10 "Patent Rights" shall mean:

(a) "Hospital Patent Rights" shall mean, inclusively, the U.S. Patent Applications listed in **Appendix A** and/or the equivalent of such application, including any divisional, continuation (including claims of continuations-in-part only to the extent entirely supported by the specification of the application on which such continuations-in-part are based), foreign counterpart patent application, Letters Patent and/or the equivalent thereof issuing thereon, and/or reissue, reexamination or extension thereof, or supplementary protection certificate or patents of addition relating thereto; and

(b) "Media Patent Rights" shall mean, inclusively, the U.S. Patent Applications listed in **Appendix A-1** and/or the equivalent of such application, including any divisional, continuation (including claims of continuations-in-part only to the extent entirely supported by the specification of the application on which such continuations-in-part are based), foreign counterpart patent application, Letters Patent and/or the equivalent thereof issuing thereon, and/or reissue, reexamination or extension thereof, or supplementary protection certificate or patents of addition relating thereto.

3. A following new section 1.18 is hereby inserted immediately after Section 1.17 of the License.

1.18 "Limited Field" shall mean *ex-vivo* human female fertility treatments and shall specifically exclude (a) treatments of menopause associated symptoms or diseases other than treatments of infertility; (b) treatments to delay menopause or menopause associated symptoms or diseases other than treatments of infertility; (c) diagnostics; (d) research tools, or any other field not specifically set forth herein. For purposes of this definition, *ex vivo* human female fertility treatments shall be deemed to include the treatment of sperm in relation to *in vitro* fertilization treatments.

4. The introductory clause of Section 2.1 (a) of the License is hereby deleted in its entirety and replaced by the following:

(a) Subject to the terms of this Agreement and Hospital's and Harvard's respective rights in Patent Rights, Hospital hereby grants to Company in the License Field with respect to Hospital Patent Rights, and the Limited Field with respect to Media Patent Rights, in the License Territory:

5. Section 2.1(a)(i) of the License is hereby deleted in its entirety and replaced by the following:

(i) an exclusive, royalty-bearing license under Hospital's and Harvard's respective rights in Patent Rights to make, have made, use, have used, Sell and have Sold Products and Processes;

6. Section 2.1(b)(i) of the License is hereby deleted in its entirety and replaced by the following:

(i) the right to grant to Clinical End Users and to final purchasers, users or consumers of Products or Processes the right to use such purchased Products or Processes in a method coming within the scope of Hospital Patent Rights within the License Field and within the scope of Media Patent Rights within the Limited Field, in each case in the License Territory; and

7. Section 2.2 of the License is hereby deleted in its entirety and replaced by the following:

2.2 Sublicenses. Each sublicense granted hereunder shall be consistent with and comply with all terms of this Agreement and shall incorporate terms and conditions sufficient to enable Company to comply with this Agreement and shall provide that Hospital and Harvard are third party beneficiaries of the terms thereof directed to enabling Company's compliance with this Agreement. Company shall notify Hospital, in confidence, of its (or any of its Sublicensees') intent to enter into a sublicense agreement, and shall provide Hospital with the name of prospective Sublicensee at least [***] days prior to the execution of a sublicense. Company shall provide to Hospital a fully signed non-redacted copy of all sublicense agreements (including further sublicenses entered into by Sublicensees) and amendments thereto, including all exhibits, attachments and related documents, within [***] days of executing the same; provided that Hospital shall not disclose any such sublicense agreement to any third party other than Harvard, shall not use such sublicense agreements for any purpose other than monitoring Company's compliance with this Agreement and shall limit access to such sublicense agreements to Hospital personnel with a need for such access for the foregoing monitoring purpose. Upon termination of this Agreement or any license granted hereunder for any reason, any sublicenses shall be addressed in accordance with Section 10.7. Any sublicense which is not in accordance with the forgoing provisions shall be null and void.

8. A following new Section 2.3(d) is hereby inserted immediately after Section 2.3(c)(ii) of the License.

(d) The right of Harvard, Hospital and Hospital's Affiliates and academic, government and not-for-profit institutions to make and to use the subject matter described and/or claimed in the Media Patent Rights for research and educational purposes and not for the purpose of commercial manufacture, commercial marketing, commercial sale, commercial distribution or provision of services for a fee. For the avoidance of doubt, nothing herein shall be construed as permitting any such institution or not-for-profit research organization to grant rights to any for-profit sponsor to Patent Rights within the scope of the license granted above.

9. Section 2.4 of the License is hereby deleted in its entirety and replaced by the following:

2.4 No Additional Rights. It is understood that nothing in this Agreement shall be construed to grant Company or any of its Affiliates a license, express or implied, under any patent owned solely or jointly by Hospital or Harvard other than the Patent Rights expressly licensed hereunder. Hospital shall have the right to license any Hospital Patent Rights to any other party for any purpose outside of the License Field or the License Territory. Hospital and/or Harvard shall have the right to license any Media Patent Rights to any other party for any purpose outside of the Limited Field or the License Territory.

10. Section 3.1 of the Agreement shall be deleted in its entirety and replaced by the following:

3 . 1 Diligence Requirements. Company shall use, and shall cause its Affiliates and Sublicensees, as applicable, to use, commercially reasonable efforts to develop and make available to the public Products and Processes throughout the License Territory in the License Field. Such efforts shall include achieving the following objectives within the time periods designated below following the Effective Date:

(a) Pre-Sales Requirements for Product and/or Processes using Hospital Patent Rights and/or Technological Information:

(i) Company shall use commercially reasonable efforts to carry out development of Products and/or Processes in accordance with development plans mutually agreed by the Parties through their Steering Committee representatives.

(ii) Company shall secure venture capital or other equity financing of at least $[***] within [***] months following the Effective Date.

(iii) Company shall identify one or more study site(s) for a Clinical Proof of Concept study with [***] months following the Effective Date.

(iv) Provide written report to Hospital detailing regulatory strategy for developing a Product or Process within [***] months following the Effective Date.

(v) Enroll the first patient in a Clinical Proof of Concept study within [***] months following the Effective Date.

(vi) Complete a Clinical Proof of Concept study within [***] months following the Effective Date; provided that this milestone shall be deemed achieved by the completion of a study prospectively intended to demonstrate Clinical Proof of Concept whether or not Clinical Proof of Concept is achieved with such study.

(vii) Achieve a First Commercial Sale as it relates to Hospital Patent Rights or Technological Information within [***] months following the Effective Date.

(b) Pre-Sales Requirements for Product and/or Processes using Media Patent Rights:

(i) Initiate animal studies of a Product or Process using the Media Patent Rights within [***] months following the Effective Date.

(ii) Initiate human studies of a Product or Process using the Media Patent Rights within [***] months following the Effective Date.

(iii) Achieve First Commercial Sale of a Product or Process using the Media Patent Rights within [***] months of the Effective Date.

(c) Post Sales Requirements.

(i) Following the First Commercial Sale of a Product or Process in any country in the License Territory, Company shall directly or through its Affiliates and/or Sublicensees make continuing Sales of such Product or Process or a similar Product or Process in such country without any elapsed time period of [***] or more in which such Sales do not occur.

(ii) Company shall directly or through an Affiliate or Sublicensee make such First Commercial Sale within the following countries and regions in the License Territory within [***] years after the Effective Date of this Agreement: (a) Canada, Mexico, Argentina, Brazil, Australia, New Zealand and Japan and (b) at least [***] of the following countries: the U.K., France, Germany, Italy and Spain.

Achievement of the foregoing objectives shall be deemed to satisfy Company's obligations to use commercially reasonable efforts under this Section 3.1. Sections 3.1(a) and (b) above may be updated or modified from time to time by the Steering Committee, and any such update or modification shall be documented in the minutes of the applicable Steering Committee meeting and may be updated hereto through a written amendment.

11. Section 3.2 of the Agreement shall be deleted in its entirety and replaced by the following:

3 . 2 Diligence Failures. If Company fails to fulfill any of its obligations under Section 3.1(c) with respect to any of the countries listed in Section 3.1(c)(ii)(a) or with respect to at least three of the countries listed in Section 3.1(c)(ii)(b) in any material respect, then, subject to the notice and cure provisions of Section 10.4, Hospital may treat such failure as a default and, at Hospital's option, may, solely with respect to the country(-ies) to which such failure relates, either convert the License under 2(a)(i) to non-exclusive or terminate this Agreement and/or any license granted hereunder in accordance with Section 10.4. For the avoidance of doubt, Hospital shall not, based on Company's failure to fulfill it obligations under Section 3.1(c), have the right to terminate this Agreement or Company's licenses hereunder, or convert Company's licenses hereunder to non-exclusive, with respect to countries in which Company satisfies its obligations under Section 3.1(c). In addition, if Company, together

with its Affiliates, Sublicensees and Clinical End Users, ceases all development and commercialization activities with respect to all Products and Processes for more than [***], Hospital may treat such failure as a default and, at Hospital's option, may either convert the License under 2(a)(i) to non-exclusive or terminate this Agreement and/or any license granted hereunder in accordance with Section 10.4. If Company fails to fulfill any of its obligations under Section 3.1 (a) or 3.1(b), then, subject to the notice and cure provisions of Section 10.4, Hospital may treat such failure as a default and, at Hospital's option, may, in the case of such failure with respect to Section 3.1 (a), solely with respect to the Hospital Patent Rights, or in the case of such failure with respect to Section 3.1(b), solely with respect to the Media Patent Rights, either convert the License under 2(a)(i) to non-exclusive with respect to the Hospital Patent Rights or Media Patent Rights, as applicable, or terminate any license granted hereunder with respect to the Hospital Patent Rights or Media Patent Rights, as applicable, in accordance with Section 10.4. For the avoidance of doubt, Hospital shall not, based on Company's failure to fulfill it obligations under Section 3.1 (a) or 3.1(b), have the right to terminate this Agreement or Company's licenses hereunder, or convert Company's licenses hereunder to non-exclusive, other than with respect to the Hospital Patent Rights or Media Patent Rights, as applicable.

12. A following new section 4.1 (a) is hereby inserted immediately after Section 4.1 of the License.

(a) Media Patent Rights License Issue Fee. Company shall pay Hospital an additional non-refundable license issue fee in the amount of [***] dollars ($[***]) upon the effective date of Amendment No. 1 to this Agreement for the grant of rights under the Media Patent Rights.

13. Section 4.2 of the Agreement shall be deleted in its entirety and replaced by the following:

4 . 2 Patent Cost Reimbursement. Company shall reimburse Hospital for all costs associated with the preparation, filing, prosecution and maintenance of all Patent Rights ("Patent Costs"). As of the Effective Date, Hospital has incurred approximately [***] Dollars ($[***]) in Patent Costs with respect to Hospital Patent Rights. As of the effective date of Amendment No. 1 to this Agreement, Hospital and Harvard have incurred approximately [***] Dollars ($[***]) in Patent Costs with respect to Media Patent Rights. Company shall pay such amounts to Hospital based upon the following schedule:

- $[***] within [***] days of the Effective Date
- [***] within [***] days after the effective date of Amendment No. 1 to this Agreement
- $[***] on the [***] anniversary of the Effective Date
- [***] on the [***] anniversary of the Effective Date

Company shall pay to Hospital, or at Hospital's request directly to patent counsel, all other Patent Costs within [***] days of Company's receipt of an invoice for such Patent Costs either from Hospital or Hospital's patent counsel. Hospital shall instruct patent counsel to provide copies to Hospital for Hospital's administrative files of all invoices detailing Patent Costs which are sent directly to Company.

14. A following new section 4.3(c) is hereby inserted immediately after Section 4.3(b) of the License.

(c) Media Patent Rights Annual License Fee. Company shall pay to Hospital the non-refundable amount of [***] Dollars ($[***]) as an annual license fee for the grant of rights under the Media Patent Rights within [***] days after each anniversary of the Effective Date.

Each Media Patent Rights Annual License Fee shall be creditable against royalties subsequently due on Net Sales amounts from Products or Processes relying on the Media Patent Rights made in the same year as such fee is due, and against milestones subsequently due in the same year as such fee is due, but shall not be credited against royalties due on Net Sales made or milestones payable in any other subsequent year. However, the first [***] Dollars ($[***]) of Media Patent Rights Annual License Fees shall be creditable against royalties subsequently due on Net Sales amounts made and milestones payable during the [***] and [***] calendar years following the Effective Date, if any, but shall not be credited against royalties due on Net Sales made or milestones payable in any other prior or subsequent year.

15. Section 4.4 of the Agreement shall be deleted in its entirety and replaced by the following:

4.4 Milestone Payments. In addition to the payments set forth in Sections 4.1 through 4.3 above, Company shall pay Hospital milestone payments as follows:

(a) [***] Dollars ($[***]) within [***] days of achieving Clinical Proof of Concept; and

(b) [***] Dollars ($[***]) within [***] days of [***]; and

(c) [***] Dollars ($[***]) within [***] days of [***]; and

(d) [***] Dollars ($[***]) within [***] days following the earlier of (i) [***] or (ii) [***] months after [***]; and

(e) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(f) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(g) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(h) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(i) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(j) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]); and

(k) [***] Dollars ($[***]) for the first calendar year in which Net Sales amounts equal or exceed [***] Dollars ($[***]).

For the avoidance of doubt, should the milestone described in clause (b) above be achieved before the milestone in clause (a) above is achieved, the milestone payments described in clause (a) will be due and payable concurrently with the milestone payment described in clause (b), and should the milestone described in clause (d) above be achieved before the milestone in clause (c) above is achieved, the milestone payments described in clause (c) will be due and payable concurrently with the milestone payment described in clause (d), and should Net Sales amounts be equal to or greater than more than one of the above as yet to be achieved milestones in any given calendar year, all such milestones first achieved in such calendar year shall be due for that calendar year.

All payments due to Hospital under this Section 4.4 shall be due and payable by Company within [***] days after the end of each Reporting Period, and shall be accompanied by a report as set forth in Sections 5.2 and 5.3.

The milestone payments set forth in this Section 4.4 shall each be payable no more than once.

16. Section 4.5(a) of the License is hereby deleted in its entirety and replaced by the following:

(a) Beginning with the First Commercial Sale in any country in the License Territory, Company shall pay Hospital during the term of any license granted under Section 2.1(a)(i), a royalty of [***] percent ([***]%) of the Net Sales amounts of all Products and Processes. In the event that Company reasonably determines that royalty payments to one or more third parties are required in order to avoid potential infringement of third party patent rights as a result of Sales of Products and/or Processes, Company shall notify Hospital via Hospital's Executive Director, Research Ventures and Licensing promptly following Company's decision to pursue a license from the applicable third party and, if such payments are in excess of One Percent (1.0%) of Net Sales, Company may offset a total of [***] Percent ([***]%) of such third-party payments that are in excess of One Percent (1.0%) of Net Sales against any royalty payments that are due under this Section 4.5(a) to Hospital in the same Reporting Period, provided that in no event shall the royalty payments under this Section 4.5(a), when aggregated with any other offsets and credits allowed under this Agreement, be reduced by more than [***] Percent ([***]%) in any Reporting Period. Without limiting the foregoing, in connection with providing notification to Hospital of Company's intent to pursue a third party license, Company shall provide an explanation of its rationale for pursuing the license. In the event that Hospital notifies Company that Hospital has concerns regarding Company's determination to seek such license, the Steering Committee shall be convened to review the determination. Failing satisfactory resolution from the Steering Committee the matter shall be discussed between Company CEO or Chairman and the Hospital's Executive Director, Research Ventures and Licensing; provided that, Company's CEO shall have final decision-making authority with respect to such matter and Company shall not be required to delay obtaining the proposed third party license for more than [***] days in total as a result of the foregoing Steering Committee and executive consultation process.

17. The following new language shall be inserted after the final paragraph of Section 5.3 of the Agreement:

In addition to the above, in each such report, Company shall separately account (i) for royalties owed for Net Sales of Products and/or Processes covered solely by Media Patent Rights and solely by Hospital Patent Rights and (ii) for royalties owed for Net Sales of Products and/or Processes covered by both Media Patent Rights and Hospital Patent Rights. Such reporting shall be of sufficient detail as to how the separate royalties were calculated in relation to (ii) above. Absent the Company's ability to accurately determine the royalties for each of the Hospital Patent Rights and Media Patent Rights as they relate to Products and/or Processes covered by both Media Patent Rights and Hospital Patent Rights, Company shall specify in its independent, good faith discretion the amount of such royalties attributable to the Media Patent Rights.

18. Section 5.4 of the Agreement shall be deleted in its entirety and replaced by the following:

5.4 Sublicense Income Reports. Company shall, along with delivering payment as set forth in Section 4.7, report to Hospital within [***] days after the end of each Reporting Period the amount of all Sublicense Income received by Company during such Reporting Period, and Company's calculation of the amount due and paid to Hospital from such income, including an itemized listing of the source of income comprising such consideration, and the name and address of each entity making such payments in substantially the format outlined in **Appendix C**. Additionally, Company shall separately account for Sublicense Income owed with respect to the Hospital Patent Rights and the Media Patent Rights. Absent Company's ability to accurately determine the Sublicense Income with respect to the each of the Hospital Patent Rights and Media Patent Rights, Company shall specify in its independent, good faith discretion the amount of such Sublicense income attributable to the Media Patent Rights.

19. Section 7.1 of the Agreement shall be deleted in its entirety and replaced by the following:

7.1 Hospital Right to Prosecute. Hospital will protect the Patent Rights from infringement and prosecute infringers when, in its sole judgment, such action may be reasonably necessary, proper and justified. If Company shall have supplied Hospital with written evidence demonstrating to Hospital's reasonable satisfaction prima facie infringement of a claim of a Hospital Patent Right in the License Field, or of a Media Patent Right in the Limited Field, in the License Territory by a third party which poses a material threat to Company's rights under this Agreement, Company may by notice request Hospital to take steps to protect such Patent Right. Hospital shall notify Company within [***] days of the receipt of such notice whether Hospital intends to prosecute the alleged infringement. If Hospital notifies Company that it intends to so prosecute, Hospital shall, within [***] months of its notice to Company either (a) cause such infringement to terminate, or (b) initiate legal proceedings against the infringer.

20. Section 7.2 of the Agreement shall be deleted in its entirety and replaced by the following:

7.2 Company Right to Prosecute. In the event Hospital notifies Company that Hospital does not intend to prosecute infringement identified under Section 7.1, Company may, upon notice to Hospital, initiate legal proceedings against the infringer at Company's expense with respect to a claim of a Hospital Patent Right in the License Field, or of a Media Patent Right in the Limited Field, in the License Territory. Before commencing such action, Company and, as applicable, any Affiliate, shall consult with Hospital, concerning, among other things, Company's standing to bring suit, the advisability of bringing suit, the selection of counsel and the jurisdiction for such action and shall consider the views of Hospital regarding the proposed action, including without limitation with respect to potential effects on the public interest. Company shall be responsible for all costs, expenses and liabilities in connection with any such action and shall indemnify and hold Hospital and Harvard harmless therefrom, regardless of whether Hospital or Harvard is a party-plaintiff, except for the expense of any independent counsel retained by Hospital in accordance with Section 7.5 below.

21. Section 7.3 of the Agreement shall be deleted in its entirety and replaced by the following:

7.3 Hospital and/or Harvard Joined as Party-Plaintiff. If Company elects to commence an action as described in Section 7.2 above, Hospital and/or Harvard shall have, in its sole discretion, the option to join such action as a party-plaintiff. If joinder of Hospital and/or Harvard as a party-plaintiff is necessary or desirable in order for Company to bring or maintain such action or to prove damages in such action, and Company requests that Hospital and/or Harvard be joined, Hospital and/or Harvard may either, in its sole discretion, permit itself to be joined as a party-plaintiff at the sole expense of Company, or assign to Company all of Hospital's and/or Harvard's right, title and interest in and to the Patent Right which is the subject of such action (subject to all of Hospital's and/or Harvard's obligations to the government under law and any other rights that others may have in such Patent Right). If Hospital and/or Harvard makes such an assignment, such action by Company shall thereafter be brought or continued without Hospital and/or Harvard as a party; provided, however, that Hospital and/or Harvard shall continue to have all rights of prosecution and maintenance with respect to Patent Rights and Company shall continue to meet all of its obligations under this Agreement as if the assigned Patent Right were still licensed to Company hereunder.

22. Section 7.4 of the Agreement shall be deleted in its entirety and replaced by the following:

7.4 Notice of Actions; Settlement. Company shall promptly inform Hospital of any action or suit relating to Patent Rights and shall not enter into any settlement, consent judgment or other voluntary final disposition of any action relating to Patent Rights, including but not limited to appeals, without the prior written consent of Hospital and/or Harvard, as applicable.

23. Section 8.1 of the Agreement shall be deleted in its entirety and replaced by the following:

8.1 Indemnification.

(a) Company shall indemnify, defend and hold harmless Hospital and Harvard and their Affiliates and their respective current or former trustees, directors, officers, medical and professional staff, governing board members, faculty, students, employees, and agents and their respective successors, heirs and assigns (the "Indemnitees"), against any liability, damage, loss or expense (including reasonable attorney's fees and expenses of litigation) incurred by or imposed upon the Indemnitees or any one of them in connection with any claims, suits, actions, demands or judgments arising out of any theory of product liability (including, but not limited to, actions in the form of contract, tort, warranty, or strict liability) concerning any product, process or service made, used, or sold or performed pursuant to any right or license granted under this Agreement.

(b) With respect to Patent Cost Reimbursement under Section 4.2, Company agrees to indemnify, defend and hold Hospital harmless from and against any and all Patent Costs and costs of collection arising from the failure of Company to timely pay such Patent Costs.

(c) Company agrees, at its own expense, to provide attorneys reasonably acceptable to the Hospital and/or Harvard to defend against any actions brought or filed against any party indemnified hereunder with respect to the subject of indemnity contained herein, whether or not such actions are rightfully brought; provided, however, that any Indemnitee shall have the right to retain its own counsel, at the expense of Company, if representation of such Indemnitee by counsel retained by Company would be inappropriate because of conflict of interests of such Indemnitee and any other party represented by such counsel. Company agrees to keep Hospital and/or Harvard informed of the progress in the defense and disposition of such claim and to consult with Hospital and/or Harvard prior to any proposed settlement.

(d) This section 8.1 shall survive expiration or termination of this Agreement.

24. Section 9.2 of the Agreement shall be deleted in its entirety and replaced by the following:

9 . 2 No Warranties. NEITHER HOSPITAL NOR HARVARD MAKES ANY REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING THE PATENT RIGHTS AND THE RIGHTS GRANTED HEREUNDER, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, VALIDITY OF PATENT RIGHTS CLAIMS, WHETHER ISSUED OR PENDING, AND THE ABSENCE OF LATENT OR OTHER DEFECTS, WHETHER OR NOT DISCOVERABLE, AND HEREBY DISCLAIMS THE SAME. SPECIFICALLY, AND NOT TO LIMIT THE FOREGOING, NEITHER HOSPITAL NOR HARVARD MAKES ANY WARRANTY OR REPRESENTATION (a) REGARDING THE VALIDITY OR SCOPE OF ANY OF THE CLAIM(S), WHETHER ISSUED OR PENDING, OF ANY OF THE PATENT RIGHTS, AND (b) THAT THE EXPLOITATION OF THE PATENT RIGHTS OR ANY PRODUCT OR PROCESS WILL NOT INFRINGE ANY PATENTS OR OTHER INTELLECTUAL PROPERTY RIGHTS OF HOSPITAL, HARVARD OR OF ANY THIRD PARTY.

25. Section 9.3 of the Agreement shall be deleted in its entirety and replaced by the following:

9 . 3 Limitation of Liability. IN NO EVENT SHALL EITHER PARTY OR HARVARD OR ANY OF THEIR RESPECTIVE AFFILIATES OR ANY OF THEIR RESPECTIVE TRUSTEES, DIRECTORS, OFFICERS, MEDICAL AND PROFESSIONAL STAFF, EMPLOYEES AND AGENTS BE LIABLE TO THE ANOTHER OR ANY OF ITS AFFILIATES FOR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING IN ANY WAY OUT OF THIS AGREEMENT OR THE LICENSE RIGHTS GRANTED HEREUNDER, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, INCLUDING WITHOUT LIMITATION SUCH DAMAGES THAT ARE ECONOMIC DAMAGES OR INJURY TO PROPERTY OR LOST PROFITS, REGARDLESS OF WHETHER SUCH ENTITY SHALL BE ADVISED, SHALL HAVE OTHER REASON TO KNOW, OR IN FACT SHALL KNOW OF THE POSSIBILITY OF THE FOREGOING; PROVIDED, HOWEVER, NOTHING IN THIS SECTION 9.3 SHALL BE CONSTRUED TO LIMIT COMPANY'S OBLIGATION TO INDEMNIFY HOSPITAL AND

HARVARD UNDER SECTION 8 OF THIS AGREEMENT.

26. Section 10.5 of the Agreement shall be deleted in its entirety and replaced by the following:

10.5 Challenging Validity. During the term of this Agreement, Company shall not challenge, and shall restrict its Affiliates and Sublicensees from challenging the validity of the Patent Rights and, in the event of any breach of this provision by Company, Hospital shall have the right to terminate this Agreement and any license granted hereunder immediately. In addition, if the Patent Rights are upheld, Company shall reimburse Hospital and Harvard for their legal costs and expenses incurred in defending any such challenge by Company or its Affiliates or Sublicensees in any country in which Company and its Affiliates and Sublicensees retain a license to such Patent Rights under this Agreement.

27. Section 10.6 of the Agreement shall be deleted in its entirety and replaced by the following:

10.6 Termination by Company. Company shall have the right to terminate this Agreement in its entirety by giving ninety (90) days advance written notice to Hospital and upon such termination shall immediately cease all use and Sales of Products and Processes, subject to Section 10.9. Company shall also have the right to terminate its license hereunder with respect to either the Hospital Patent Rights or the Media Patent Rights, but not both, by giving ninety (90) days advance written notice to Hospital and upon such termination shall immediately cease all use and Sales of Products and Processes using the Hospital Patent Rights or Media Patent Rights, as applicable, subject to Section 10.9. Following such a termination with respect to the Hospital Patent Rights only, Sections 3.1 (a), and to the extent not already achieved or paid, Sections 4.3(a), 4.3(b), 4.4(a) and 4.4(b) shall no longer have any force or effect, but this Agreement shall otherwise remain in full force and effect. Following such a termination with respect to the Media Patent Rights only, Sections 3.1 (b), and to the extent not already achieved or paid, Sections 4.3(c), 4.4(c) and 4.4(d) shall no longer have any force or effect, but this Agreement shall otherwise remain in full force and effect.

28. The last sentence of Section 11.1 of the Agreement shall be deleted in its entirety and replaced by the following:

Company shall indemnify and hold harmless Hospital and Harvard for any breach of Company's obligations under this Section 11.1.

29. The following language shall be added to Section 12.2:

Unless changed in writing in accordance with this Section, the notice address for Harvard shall be as follows:

Chief Technology Development Officer
Harvard Office of Technology Development
1350 Massachusetts Avenue
Holyoke Center, Suite 727E
Cambridge, MA 02138

Fax No. (617)495-9568

30. Section 12.7 of the Agreement shall be deleted in its entirety and replaced by the following:

12.7 Use of Name. Neither Party shall use the name of the other Party or Harvard or of any its Affiliates and their respective current or former trustees, directors, officers, medical and professional staff, governing board members, faculty, students, employees, and agents of the other Party or any adaptation thereof in any advertising, promotional or sales literature, publicity or in any document employed to obtain funds or financing without the prior written approval of the Party or individual whose name is to be used. For Hospital, such approval shall be obtained from Hospital's VP of Public Affairs. Notwithstanding the forgoing, this shall not prohibit Company from stating the factual existence of this Agreement and its Terms.

31. Appendix A-1 attached to this Amendment is hereby inserted into the Agreement immediately following Appendix A of the Agreement.

32. Except as expressly modified by this amendment, all terms and conditions of the Agreement shall remain in full force and effect.

33. This Amendment may be executed by the parties hereto on separate counterparts each of which shall constitute an original but all of which together shall constitute one and the same instrument.

34. This Amendment shall be governed by the laws of The Commonwealth of Massachusetts.

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed by their duly authorized representatives as of the effective date first written above.

Ovascience, Inc.

By: /s/ Michelle Dipp
Name:

TITLE: CEO, OvaScience

DATE: 9/7/11

The General Hospital Corporation, d/b/a Massachusetts General Hospital

By: /s/ Rebecca Menapace
Name:

TITLE: /s/ Rebecca Menapace
Director, Research & Licensing
Research Ventures & Licensing

DATE: 9/7/11

Appendix A

DESCRIPTION OF HOSPITAL PATENT RIGHTS

ID	Title	Assignee	Status	Type	CTRY	Serial #	Filing Date
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
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[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]

Appendix A-1

DESCRIPTION OF MEDIA PATENT RIGHTS

[***]	[***]	[***]	[***]	[***]			

Portions of this Exhibit, indicated by the mark "[***]," were omitted and have been filed separately with the Secretary of the Commission pursuant to the Registrant's application requesting confidential treatment pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

Exhibit 10.4

HIGHLY CONFIDENTIAL
April 30, 2018

Michelle Dipp, M.D.
c/o OvaScience, Inc.
9 Fourth Avenue
Waltham, Massachusetts 02451

RE: **Termination of Advisory Agreement**

Dear Michelle:

You and OvaScience, Inc. (the "Company") are parties to that certain Advisory Agreement governing your advisory services to the Company dated June 21, 2017 (as amended August 3, 2017) (the "Advisory Agreement"). We have agreed to terminate the Advisory Agreement in accordance with the terms set forth herein.

As further described herein, we agree to the following terms, which have been approved by our Board of Directors:

1. **Termination of the Advisory Agreement and Waiver of Retainer.**

The Advisory Agreement and your advisory services to the Company will be terminated as of the date hereof. You acknowledge you have been fully paid for your services through December 31, 2017 in accordance with Section 1(c)(i) of the Advisory Agreement and that you agree to forego the $250,000 retainer due to you for the period beginning January 1, 2018 and ending December 31, 2018 under Section 1(c)(ii) of the Advisory Agreement.

2. **Waiver of Bonus Payment Under the Advisory Agreement.**

You agree to waive the discretionary cash bonus for Fiscal 2017 based on your 2017 performance in the amount of up to $300,000 that you were entitled to under your employment agreement with the Company dated January 5, 2016 (the "Employment Agreement") and that you continued to be eligible to receive under Section 1(c)(iv) of the Advisory Agreement.

3. **Option Vesting and Exercisability.**

Notwithstanding anything set forth in the Advisory Agreement, all outstanding options granted to you prior to the date hereof set forth on Exhibit A hereto (the "Outstanding Options"), shall become 100% fully vested and shall remain exercisable until each Outstanding Option's Expiration Date set forth on Exhibit A, and otherwise in accordance with their terms.

If this letter correctly sets forth your understanding regarding the termination of your Advisory Agreement with the Company, please sign the enclosed duplicate of this letter in the space provided below and return it to me.

Sincerely,

/s/ Chris Kroeger
Name: Chris Kroeger
Title: CEO

The foregoing correctly sets forth the terms regarding the termination of my Advisory Agreement with OvaScience, Inc. I am not relying on any representation other than those set forth above.

/s/ Michelle Dipp April 30, 2018
Michelle Dipp, M.D. Date

Exhibit A

Outstanding Options

Grant Date	Number of Shares	Exercise Price	Expiration Date
December 5, 2012	339,313	$7.80	December 4, 2022
June 13, 2014	23,724	$8.43	June 12, 2024
June 13, 2014	476,276	$8.43	June 12, 2024
December 9, 2014	200,000	$32.36	December 8, 2024
March 2, 2017	150,000	$1.49	March 2, 2027
June 21, 2017	133,505	$1.46	June 21, 2027
June 21, 2017	41,495	$1.46	June 21, 2027

EXHIBIT 31.1

Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 by Principal Executive Officer

I, Christopher Kroeger, M.D., M.B.A., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of OvaScience, 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 3, 2018

/s/ Christopher Kroeger

Christopher Kroeger, M.D., M.B.A.
Chief Executive Officer
(Principal executive officer)

EXHIBIT 31.2

Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 by Principal Financial Officer

I, Jonathan Gillis, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of OvaScience, 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 3, 2018

/s/ Jonathan Gillis

Jonathan Gillis

SVP, Finance (Principal accounting and 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, by Chief Executive Officer

In connection with the Quarterly Report on Form 10-Q of OvaScience, Inc. (the "Company") for the period ended March 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Christopher Kroeger, M.D., M.B.A., as Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

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

Date: May 3, 2018

/s/ Christopher Kroeger

Christopher Kroeger, M.D., M.B.A.
Chief Executive Officer
(Principal 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, by Principal Financial Officer

In connection with the Quarterly Report on Form 10-Q of OvaScience, Inc. (the "Company") for the period ended March 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Jonathan Gillis, as principal financial officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

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

Date: May 3, 2018

/s/ Jonathan Gillis

Jonathan Gillis

SVP, Finance (Principal accounting and financial officer)