RADIUS HEALTH, INC.

FORM 10-Q
(Quarterly Report)

Filed 05/02/17 for the Period Ending 03/31/17

Address	ATTN: CHIEF FINANCIAL OFFICER 950 WINTER STREET WALTHAM, MA 02451
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended March 31, 2017

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 001-35726

Radius Health, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**80-0145732**
(State or other jurisdiction of Incorporation or organization)	(IRS Employer Identification Number)

950 Winter Street
Waltham, Massachusetts 02451
(Address of Principal Executive Offices and Zip Code)

(617) 551-4000
(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 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.

Large accelerated filer ☒	Accelerated filer ☐
Non-accelerated filer ☐	Smaller reporting company ☐
Emerging growth company ☐	

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

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

Number of shares of the registrant’s Common Stock, $.0001 par value per share, outstanding as of April 27, 2017 : 43,377,381 shares

RADIUS HEALTH, INC.
FORM 10-Q
FOR THE QUARTER ENDED MARCH 31, 2017

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PART I FINANCIAL INFORMATION

Item 1. Condensed Consolidated Financial Statements

Radius Health, Inc.
Condensed Consolidated Balance Sheets
(In thousands, except share and per share amounts)

	March 31, 2017	December 31, 2016
	(unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 174,621	$ 258,567
Restricted cash	47	47
Marketable securities	107,486	73,880
Prepaid expenses and other current assets	6,548	2,315
Total current assets	288,702	334,809
Property and equipment, net	6,106	4,922
Other assets	551	551
Total assets	$ 295,359	$ 340,282
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 6,727	$ 6,128
Accrued expenses and other current liabilities	26,277	26,597
Total current liabilities	33,004	32,725
Other non-current liabilities	260	379
Total liabilities	$ 33,264	$ 33,104
Commitments and contingencies		
Stockholders' equity:		
Common stock, $.0001 par value; 200,000,000 shares authorized, 43,245,804 shares and 43,141,134 shares issued and outstanding at March 31, 2017 and December 31, 2016, respectively	4	4
Additional paid-in-capital	947,042	935,671
Accumulated other comprehensive income	34	71
Accumulated deficit	(684,985)	(628,568)
Total stockholders' equity	262,095	307,178
Total liabilities and stockholders' equity	$ 295,359	$ 340,282

See accompanying notes to unaudited condensed consolidated financial statements.

Radius Health, Inc.
Condensed Consolidated Statements of Comprehensive Loss
(Unaudited, in thousands, except share and per share amounts)

	Three Months Ended March 31,	
	2017	**2016**
OPERATING EXPENSES:		
Research and development	$ 19,527	$ 27,483
General and administrative	38,099	13,646
Loss from operations	(57,626)	(41,129)
OTHER (EXPENSE) INCOME:		
Other (expense) income, net	80	(1)
Interest income	607	667
NET LOSS	$ (56,939)	$ (40,463)
OTHER COMPREHENSIVE LOSS, NET OF TAX:		
Unrealized (loss) gain from available-for-sale securities	(37)	232
COMPREHENSIVE LOSS	$ (56,976)	$ (40,231)
LOSS ATTRIBUTABLE TO COMMON STOCKHOLDERS - BASIC AND DILUTED (Note 10)	$ (56,939)	$ (40,463)
LOSS PER SHARE:		
Basic and diluted	$ (1.32)	$ (0.94)
WEIGHTED AVERAGE SHARES:		
Basic and diluted	43,185,952	43,012,924

See accompanying notes to unaudited condensed consolidated financial statements.

Radius Health, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited, in thousands)

	Three Months Ended March 31,	
	2017	**2016**
CASH FLOWS USED IN OPERATING ACTIVITIES:		
Net loss	$ (56,939)	$ (40,463)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	252	96
Amortization of premium (discount) on marketable securities, net	(45)	566
Stock-based compensation	9,071	4,192
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(4,233)	4,214
Other long-term assets	—	(78)
Accounts payable	599	(2,420)
Accrued expenses and other current liabilities	(1,350)	155
Other non-current liabilities	(119)	—
Net cash used in operating activities	(52,764)	(33,738)
CASH FLOWS USED IN INVESTING ACTIVITIES:		
Purchases of property and equipment	(406)	(379)
Purchases of marketable securities	(72,045)	(157,922)
Sales and maturities of marketable securities	38,447	135,846
Net cash used in investing activities	(34,004)	(22,455)
CASH FLOWS PROVIDED BY FINANCING ACTIVITIES:		
Proceeds from exercise of stock options	1,792	929
Proceeds from issuance of shares under employee stock purchase plan	1,030	—
Net cash provided by financing activities	2,822	929
NET DECREASE IN CASH AND CASH EQUIVALENTS	(83,946)	(55,264)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	258,567	159,678
CASH AND CASH EQUIVALENTS AT END OF PERIOD	$ 174,621	$ 104,414
SUPPLEMENTAL DISCLOSURES:		
Cash paid for income taxes	$ 11	$ —
Property and equipment purchases in accrued expenses at period end	$ 1,030	$ —

See accompanying notes to unaudited condensed consolidated financial statements.

Radius Health, Inc.
Notes to Condensed Consolidated Financial Statements
(Unaudited)

1. Organization

Radius Health, Inc. (“Radius” or the “Company”) is a science-driven fully integrated biopharmaceutical company that is committed to developing innovative therapeutics in the areas of osteoporosis, oncology and endocrine diseases. On April 28, 2017, the Company's first commercial product, TYMLOS ™ (abaloparatide) injection, was approved by the U.S. Food and Drug Administration (“FDA”) for the treatment of postmenopausal women with osteoporosis at high risk for fracture defined as history of osteoporotic fracture, multiple risk factors for fracture, or patients who have failed or are intolerant to other available osteoporosis therapy. The Company's European Marketing Authorisation Application ("MAA") for abaloparatide for subcutaneous injection (“abaloparatide-SC”) is under review by the Committee for Medicinal Products for Human Use of the EMA ("CHMP"). The Company's clinical pipeline includes an investigational abaloparatide transdermal patch ("abaloparatide-TD") for potential use in the treatment of women with postmenopausal osteoporosis and the investigational drug elacestrant (RAD1901) for potential use in the treatment of hormone-driven and/or hormone-resistant breast cancer, as well as for potential use in the treatment of vasomotor symptoms in postmenopausal women. Radius is also developing RAD140, a non-steroidal, selective androgen receptor modulator under investigation for potential use in the treatment of hormone receptor positive breast cancer.

The Company is subject to the risks associated with biopharmaceutical companies with a limited operating history, including dependence on key individuals, a developing business model, the necessity of securing regulatory approvals to market its investigational product candidates, market acceptance and the successful commercialization of TYMLOS, or any of the Company’s investigational product candidates following receipt of regulatory approval, competition for TYMLOS or any of the Company's investigational product candidates following receipt of regulatory approval, and the continued ability to obtain adequate financing to fund the Company’s future operations. The Company has incurred losses and expects to continue to incur additional losses for the foreseeable future. As of March 31, 2017 , the Company had an accumulated deficit of $ 685.0 million, and total cash, cash equivalents and marketable securities of $ 282.1 million.

Based upon its cash, cash equivalents and marketable securities balance as of March 31, 2017 , the Company believes that, prior to the consideration of proceeds from partnering and/or collaboration activities, it has sufficient capital to fund its development plans, U.S. commercial activities and other operational activities for not less than twelve months from the date of this filing and into 2018. The Company expects to finance its commercial launch activities in the United States and development costs of its clinical product portfolio with its existing cash and cash equivalents and marketable securities, or through strategic financing opportunities that could include, but are not limited to partnering or other collaboration agreements, future offerings of its equity, royalty-based financing arrangements, or the incurrence of debt. However, there is no guarantee that any of these strategic or financing opportunities will be executed or executed on favorable terms, and some could be dilutive to existing stockholders. If the Company fails to obtain additional future capital, it may be unable to complete its planned preclinical studies and clinical trials and obtain approval of certain investigational product candidates from the FDA or foreign regulatory authorities.

2. Basis of Presentation and Significant Accounting Policies

Basis of Presentation —The accompanying unaudited condensed consolidated financial statements and the related disclosures of the Company have been prepared in accordance with accounting principles generally accepted in the United States (“GAAP”) for interim financial reporting and as required by Regulation S-X, Rule 10-01. Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements. In the opinion of management, all adjustments (including those which are normal and recurring) considered necessary for a fair presentation of the interim financial information have been included.

When preparing financial statements in conformity with GAAP, the Company must make estimates and assumptions that affect the reported amounts of assets, liabilities, expenses and related disclosures at the date of the financial statements. Actual results could differ from those estimates. Additionally, operating results for the three months ended March 31, 2017 are not necessarily indicative of the results that may be expected for any other interim period or for the fiscal year ending December 31, 2017 . Subsequent events have been evaluated up to the date of issuance of these financial statements. These interim condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes, which are contained in our Annual Report on Form 10-K for the year ended December 31, 2016 (“2016 Form 10-K”), filed with the Securities and Exchange Commission (“SEC”) on February 24, 2017.

Significant Accounting Policies — The significant accounting policies identified in the Company's 2016 Form 10-K that require the Company to make estimates and assumptions include: research and development costs, stock-based compensation and fair value measures. There were no changes to significant accounting policies during the three months ended March 31, 2017 , except for the adoption of two Accounting Standards Updates ("ASU") issued by the Financial Accounting Standards Board ("FASB").

In March 2016, the FASB issued Accounting Standards Update No. 2016-09, *Improvements to Employee Share-Based Payment Accounting* ("ASU 2016-09"). This revised standard affects the accounting for forfeitures, cash flow presentation and income taxes. Specifically, this standard provides an accounting policy election to account for forfeitures as they occur, requires all excess tax benefits and deficiencies on share-based payment awards to be recognized as income tax expense or benefit in the statement of operations, requires the tax effects of exercised or vested awards should be treated as discrete items in the reporting period in which they occur, and requires that excess tax benefits to be classified with other income tax cash flows as an operating activity. The standard permits early adoption in any annual or interim period and will be applied by means of a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year of adoption.

Historically, the Company recognized share-based compensation net of estimated forfeitures over the vesting period of the respective grant. Effective January 1, 2017, the Company elected to early adopt ASU 2016-09 and changed its accounting policy to recognize forfeitures as they occur. The new forfeiture policy election was adopted using a modified retrospective approach with a cumulative effect adjustment of approximately $0.5 million to retained earnings as of January 1, 2017. In addition, the Company recognized $6.1 million of accumulated excess tax benefits as deferred tax assets that under the previous guidance could not be recognized until the benefits were realized through a reduction in cash taxes paid. This part of the guidance was applied using a modified retrospective method with a cumulative-effect adjustment to the accumulated deficit for the excess tax benefits not previously recognized. However, given the full valuation allowance placed on the additional $6.1 million of deferred tax assets, the recognition upon adoption had no impact to our accumulated deficit as of January 1, 2016. The adoption of ASU 2016-09 effective January 1, 2017 had no other material impacts on the Company's results of operations, financial position or cash flows.

Accounting Standards Updates — In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* ("ASC 606"), which supersedes all existing revenue recognition requirements, including most industry-specific guidance. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. The standard is effective for public business entities for annual reporting periods beginning after December 15, 2017, with earlier adoption permitted as of annual reporting periods beginning after December 15, 2016. At this time, the Company does not have and has never had any contracts that are within the scope of ASC 606 or its predecessor guidance, ASC 605 *Revenue Recognition* . The Company will evaluate the timing of the adoption of ASC 606 and the related accounting considerations when it has a contract that is within its scope.

In January 2016, the FASB issued ASU No. 2016-01, *Financial Statements—Overall (Subtopics 825-10)* ("ASU 2016-01"). ASU 2016-01 provides updated guidance on the recognition and measurement of financial assets and financial liabilities that will supersede most current guidance. ASU 2016-01 primarily affects the accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. The amendments in ASU 2016-01 supersede the guidance to classify equity securities with readily determinable fair values into different categories and require equity securities to be measured at fair value with changes in the fair value recognized through net income. The amendments under ASU 2016-01 are effective, for public business entities, for periods beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. The Company does not expect the adoption of ASU 2016-01 to have a material impact on its results of operations, financial position or cash flows.

In February 2016, the FASB issued ASU No. 2016-02, *Leases* ("ASU 2016-02"). ASU 2016-02 supersedes the lease guidance under FASB Accounting Standards Codification ("ASC") Topic 840, *Leases* , resulting in the creation of FASB ASC Topic 842, *Leases* . ASU 2016-02 requires a lessee to recognize in the statement of financial position a liability to make lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term for both finance and operating leases. ASU 2016-02 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018. Early adoption is permitted. The Company is currently assessing the potential impact of adopting ASU 2016-02 on its financial statements and related disclosures.

In June 2016, the FASB issued ASU No. 2016-13, *Measurement of Credit Losses on Financial Statements* ("ASU 2016-13"). ASU 2016-13 affects entities holding financial assets and net investment in leases that are not accounted for at fair value through net income. ASU 2016-13 affects loans, debt securities, trade receivables, net investments in leases, off-balance sheet credit exposures, reinsurance receivables, and any other financial assets not excluded from the scope that have contractual right to receive cash. ASU 2016-13 requires that a financial asset (or a group of financial assets) measured at amortized cost basis be presented at the net amount expected to be collected using an allowance for credit losses valuation account. ASU 2016-13

requires that credit losses relating to available-for-sale debt securities should be limited by the amount which the fair value is below amortized cost. ASU 2016-13 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019. Early adoption is permitted as of the fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company is currently assessing the potential impact of adopting ASU 2016-13 on its financial statements and related disclosures.

In August 2016, the FASB issued ASU No. 2016-15, *Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"). ASU 2016-15 addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. ASU 2016-15 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption is permitted. The Company does not expect the adoption of ASU 2016-05 to have a material impact on its results of operations, financial position or cash flows.

3. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following (in thousands):

	March 31, 2017	December 31, 2016
Research costs - Nordic (1)	$ —	$ 1,228
Research costs - other	10,057	8,404
Payroll and employee benefits	5,643	9,338
Professional fees	10,482	7,532
Other current liabilities	$ 95	$ 95
Total accrued expenses and other current liabilities	$ 26,277	$ 26,597

(1) Includes amounts accrued ratably over the estimated per patient treatment period in connection with services provided by Nordic Bioscience Clinical Development VII A/S on the Company's 24 -month extension trial of TYMLOS. Amounts do not include pass-through costs which are expensed as incurred or upon delivery. See note 7 for additional information.

4. Marketable Securities

Available-for-sale marketable securities and cash and cash equivalents as of March 31, 2017 and December 31, 2016 consist of the following (in thousands):

	March 31, 2017			
	Amortized Cost Value	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Cash and cash equivalents:				
Cash	$ 96,823	$ —	$ —	$ 96,823
Money market funds	77,798	—	—	77,798
Total	$ 174,621	$ —	$ —	$ 174,621
Marketable securities:				
Domestic corporate debt securities	$ 37,444	$ —	$ (13)	$ 37,431
Domestic corporate commercial paper	51,859	48	—	51,907
Asset-backed securities	18,149	—	(1)	18,148
Total	$ 107,452	$ 48	$ (14)	$ 107,486

	December 31, 2016			
	Amortized Cost Value	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Cash and cash equivalents:				
Cash	$ 77,443	$ —	$ —	$ 77,443
Money market funds	173,631	—	—	173,631
Domestic corporate commercial paper	5,487	—	—	5,487
Domestic corporate debt securities	2,006	—	—	2,006
Total	$ 258,567	$ —	$ —	$ 258,567
Marketable securities:				
Domestic corporate debt securities	$ 19,317	$ —	$ (2)	$ 19,315
Domestic corporate commercial paper	31,852	78	—	31,930
Asset-backed securities	22,639	—	(4)	22,635
Total	$ 73,808	$ 78	$ (6)	$ 73,880

There were no debt securities that had been in an unrealized loss position for more than 12 months as of March 31, 2017 or December 31, 2016 . There were 15 debt securities in an unrealized loss position for less than 12 months at March 31, 2017 and there were 13 debt securities that had been in an unrealized loss position for less than 12 months at December 31, 2016 . The aggregate unrealized loss on these securities as of March 31, 2017 and December 31, 2016 was approximately $14 thousand and $6 thousand, respectively, and the fair value was $50.1 million and $35.7 million, respectively. The Company considered the increase in market value for these securities to be primarily attributable to current economic conditions. As it was not more likely than not that the Company would be required to sell these securities before the recovery of their amortized cost basis, which may be at maturity, the Company did not consider these investments to be other-than-temporarily impaired as of March 31, 2017 .

As of March 31, 2017 , marketable securities consisted of investments that mature within one year.

5. Fair Value Measurements

The Company determines the fair values of its financial instruments based upon the fair value hierarchy, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Below are the three levels of inputs that may be used to measure fair value:

- Level 1—Quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.
- Level 2—Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following table summarizes the financial instruments measured at fair value on a recurring basis in the accompanying condensed consolidated balance sheets as of March 31, 2017 and December 31, 2016 (in thousands):

	As of March 31, 2017			
	Level 1	Level 2	Level 3	Total
Assets				
Cash and cash equivalents:				
Cash	$ 96,823	$ —	$ —	$ 96,823
Money market funds (1)	77,798	—	—	77,798
Total	$ 174,621	$ —	$ —	$ 174,621
Marketable Securities				
Domestic corporate debt securities (2)	$ —	$ 37,431	$ —	37,431
Domestic corporate commercial paper (2)	—	51,907	—	51,907
Asset-backed securities (2)	—	18,148	—	18,148
Total	$ —	$ 107,486	$ —	$ 107,486

	As of December 31, 2016			
	Level 1	Level 2	Level 3	Total
Assets				
Cash and cash equivalents:				
Cash	$ 77,443	$ —	$ —	$ 77,443
Money market funds (1)	173,631	—	—	173,631
Domestic corporate commercial paper (2)	—	5,487	—	5,487
Domestic corporate debt securities (2)	—	2,006	—	2,006
Total	$ 251,074	$ 7,493	$ —	$ 258,567
Marketable Securities				
Domestic corporate debt securities (2)	$ —	$ 19,315	$ —	19,315
Domestic corporate commercial paper (2)	—	31,930	—	31,930
Asset-backed securities (2)	—	22,635	—	22,635
Total	$ —	$ 73,880	$ —	$ 73,880

(1) Fair value is based upon quoted market prices.

(2) Fair value is based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets. Inputs are obtained from various sources, including market participants, dealers and brokers.

6. License Agreements

Ipsen

In September 2005, the Company entered into a license agreement (the "License Agreement"), as amended, with an affiliate of Ipsen Pharma SAS ("Ipsen") under which the Company exclusively licensed certain Ipsen compound technology and related patents covering abaloparatide to research, develop, manufacture and commercialize certain compounds and related products in all countries, except Japan (where the Company does not hold abaloparatide development and commercialization rights) and France (where the Company's commercialization rights were subject to certain co-marketing and co-promotion rights exercisable by Ipsen, provided that certain conditions included in the License Agreement were met). The Company believes that Ipsen's co-marketing and co-promotion rights in France have permanently expired. Ipsen also granted the Company an exclusive right and license under the Ipsen compound technology and related patents to make and have made compounds or product in Japan. Ipsen further granted the Company an exclusive right and license under certain Ipsen formulation technology and related patents solely for purposes of enabling the Company to develop, manufacture and commercialize compounds and products covered by the compound technology license in all countries, except Japan and France (as discussed above).

In consideration for these rights, the Company made nonrefundable, non-creditable payments in the aggregate of $4.3 million to Ipsen, including payment in recognition of certain milestones having been achieved through 2016. The License Agreement provides for further payments upon the achievement of certain future regulatory and commercial milestones. Total additional milestone payments that could be payable under the agreement is €32.0 million (approximately $33.6 million). In connection

with the FDA's approval of TYMLOS in April 2017, the Company is obligated to pay Ipsen a milestone of €8.0 million (approximately $8.7 million) under the License Agreement, which the Company will record as an intangible asset and amortize over the remaining term of the License Agreement or the expected product life-cycle for TYMLOS, whichever is shorter. The agreement also provides that the Company will pay to Ipsen a fixed five percent royalty based on net sales of the product by the Company or its sublicensees on a country-by-country basis until the later of the last to expire of the licensed patents or for a period of 10 years after the first commercial sale in such country. The date of the last to expire of the abaloparatide patents licensed from or co-owned with Ipsen, barring any extension thereof, is expected to be March 26, 2028.

If the Company sublicenses abaloparatide to a third party, then the agreement provides that the Company would pay Ipsen a percentage of certain payments received from such sublicensee (in lieu of milestone payments not achieved at the time of such sublicense). The applicable percentage is in the low double digit range. In addition, if the Company or its sublicensees commercialize a product that includes a compound discovered by it based on or derived from confidential Ipsen know-how, then the agreement provides that the Company would pay to Ipsen a fixed low single digit royalty on net sales of such product on a country-by-country basis until the later of the last to expire of licensed patents that cover such product or for a period of 10 years after the first commercial sale of such product in such country.

The License Agreement expires on a country-by-country basis on the later of (1) the date the last remaining valid claim in the licensed patents expires in that country, or (2) a period of 10 years after the first commercial sale of the licensed products in such country, unless it is sooner terminated in accordance with its terms.

The Company is currently in arbitration proceedings with Ipsen in connection with the License Agreement. See "Legal Proceedings" for more information.

Eisai Co. Ltd.

In June 2006, the Company entered into a license agreement (the “Eisai Agreement”), with Eisai Co. Ltd. (“Eisai”). Under the Eisai Agreement, Eisai granted to the Company an exclusive right and license to research, develop, manufacture and commercialize elacestrant (RAD1901) and related products from Eisai in all countries, except Japan. In consideration for the rights to elacestrant, the Company paid Eisai an initial license fee of $0.5 million , which was expensed during 2006. In March 2015, the Company entered into an amendment to the Eisai Agreement (the “Eisai Amendment”) in which Eisai granted to the Company the exclusive right and license to research, develop, manufacture and commercialize elacestrant in Japan. In consideration for the rights to elacestrant in Japan, the Company paid Eisai an initial license fee of $0.4 million upon execution of the Eisai Amendment, which was recognized as research and development expense in 2015 . The Eisai Amendment, as amended, also provides for additional payments of up to $22.3 million , payable upon the achievement of certain clinical and regulatory milestones.

Under the Eisai Agreement, as amended, should a product covered by the licensed technology be commercialized, the Company will be obligated to pay to Eisai royalties in a variable mid-single digit range based on net sales of the product on a country-by-country basis. The royalty rate will be reduced, on a country-by-country basis, at such time as the last remaining valid claim in the licensed patents expires, lapses or is invalidated and the product is not covered by data protection clauses. In addition, the royalty rate will be reduced, on a country-by-country basis, if, in addition to the conditions specified in the previous sentence, sales of lawful generic versions of such product account for more than a specified minimum percentage of the total sales of all products that contain the licensed compound during a calendar quarter. The latest licensed patent is expected to expire, barring any extension thereof, on August 18, 2026.

The Eisai Agreement, as amended, also grants the Company the right to grant sublicenses with prior written approval from Eisai. If the Company sublicenses the licensed technology to a third party, the Company will be obligated to pay Eisai, in addition to the milestones referenced above, a fixed low double digit percentage of certain fees received from such sublicensee and royalties in the low single digit range based on net sales of the sublicensee. The Eisai Agreement expires on a country-by-country basis on the later of (1) the date the last remaining valid claim in the licensed patents expires, lapses or is invalidated in that country, the product is not covered by data protection clauses, and the sales of lawful generic versions of the product account for more than a specified percentage of the total sales of all pharmaceutical products containing the licensed compound in that country; or (2) a period of 10 years after the first commercial sale of the licensed products in such country, unless it is sooner terminated.

7. Research Agreements

Abaloparatide-SC Phase 3 Extension Study

The Company contracted with Nordic Bioscience Clinical Development VII A/S ("Nordic") to conduct a Phase 3 clinical trial of abaloparatide-SC (the "Phase 3 Clinical Trial"). The Company also contracted with Nordic to perform an extension study to

evaluate six months of standard-of-care osteoporosis management following the completion of the Phase 3 Clinical Trial (the "Extension Study"), and, upon completion of this initial six months, an additional period of 18 months of standard-of-care osteoporosis management (the “Second Extension”).

In April 2015, the Company contracted with Nordic to perform additional services, including additional monitoring of patients enrolled in the Second Extension. Payments in cash to be made to Nordic for these additional services were denominated in euros and totaled up to approximately € 4.1 million (approximately $ 4.3 million).

Payments in cash to be made to Nordic for the services related to the Extension Study and Second Extension were denominated in both euros and U.S. dollars and totaled up to € 11.9 million (approximately $ 12.5 million) and $ 1.1 million, respectively. As of December 31, 2016, the last patient's final visit in the Second Extension had occurred and all obligations due to Nordic in relation to the Extension Study had been paid.

8. Stock-Based Compensation

Stock Options

A summary of stock option activity during the three months ended March 31, 2017 is as follows (in thousands, except for per share amounts):

	Shares	Weighted-Average Exercise Price (in dollars per share)	Weighted-Average Contractual Life (In Years)	Aggregate Intrinsic Value
Options outstanding at December 31, 2016	6,374	$ 31.60		
Granted	1,365	45.36		
Exercised	(76)	23.59		
Cancelled	(45)	35.94		
Expired	—	—		
Options outstanding at March 31, 2017	7,618	$ 34.12	8.11	$ 77,755
Options exercisable at March 31, 2017	3,414	$ 24.33	7.02	$ 60,263
Options vested or expected to vest at March 31, 2017	7,618	$ 34.12	8.11	$ 77,755

The weighted-average grant-date fair value per share of options granted during the three months ended March 31, 2017 was $ 24.82 . As of March 31, 2017 , there was approximately $89.0 million of total unrecognized compensation expense related to unvested stock options, which is expected to be recognized over a weighted-average period of approximately 2.9 years.

Restricted Stock Units

The Company awards restricted stock units ("RSUs") to employees under its 2011 Equity Incentive Plan. Each RSU entitles the holder to receive one share of the Company's common stock if and when the RSU vests. The RSUs vest in four substantially equal installments on each of the first four anniversaries of the vesting commencement date, subject to the employee's continued employment with, or service to, the Company on such vesting date. Compensation expense is recognized on a straight line basis. In February 2017, the Company awarded 84,950 restricted stock units ("RSUs") to employees at an average grant date fair value of $ 45.65 per RSU.

A summary of RSU activity during the three months ended March 31, 2017 is as follows (in thousands, except for per share amounts):

	RSUs	Weighted-Average Grant Date Fair Value (in dollars per share)
RSUs Outstanding at December 31, 2016	57	$ 33.03
Granted	85	45.65
Vested	—	—
Forfeited	(1)	45.65
RSUs Outstanding at March 31, 2017	141	$ 41.95

As of March 31, 2017 , there was approximately $5.4 million of total unrecognized compensation expense related to unvested RSUs, which is expected to be recognized over a weighted-average period of approximately 3.5 years.

Employee Stock Purchase Plan

In September 2016, the Company initiated the first offering period under the Company's 2016 Employee Stock Purchase Plan (the “ESPP”), pursuant to which eligible employees may purchase shares of the Company’s common stock on the last day of each predetermined six -month offering period at 85% of the lower of the fair market value per share at the beginning or end of the applicable offering period. The offering periods run from March 1 through August 31 and from September 1 through February 28 (or February 29, in a leap year) of each year.

As of March 31, 2017 , the Company had recorded a liability of $0.3 million related to its ESPP obligations.

9. Income Taxes

The Company did not record a federal or state income tax provision or benefit for the three months ended March 31, 2017 and 2016 due to the expected loss before income taxes to be incurred for the years ended December 31, 2017 and 2016 , as well as the Company’s continued maintenance of a full valuation allowance against its net deferred tax assets.

10. Net Loss Per Share

Basic and diluted net loss per share is calculated as follows (in thousands, except share and per share amounts):

	Three Months Ended March 31,	
	2017	2016
Numerator:		
Net loss	$ (56,939)	$ (40,463)
Loss attributable to common stockholders - basic and diluted	$ (56,939)	$ (40,463)
Denominator:		
Weighted-average number of common shares used in loss per share - basic and diluted	43,185,952	43,012,924
Loss per share - basic and diluted	$ (1.32)	$ (0.94)

The following potentially dilutive securities, prior to the use of the treasury stock method, have been excluded from the computation of diluted weighted-average shares outstanding, as they would be anti-dilutive. For the three months ended March 31, 2017 and 2016 , all of the Company's options to purchase common stock, warrants, and restricted stock units outstanding were assumed to be anti-dilutive as earnings attributable to common stockholders was in a loss position.

	Three Months Ended March 31,	
	2017	2016
Options to purchase common stock	6,968,155	4,973,694
Warrants	605,415	631,588
Restricted stock units	76,215	—

11. Commitments and Contingencies

Litigation - The Company may be subject to legal proceedings and claims which arise in the ordinary course of its business. In the Company's opinion, the ultimate resolution of these matters is not expected to have a material effect on its consolidated financial statements. The Company records a liability in its consolidated financial statements for these matters when a loss is known or considered probable and the amount can be reasonably estimated. The Company reviews these estimates each accounting period as additional information is known and adjusts the loss provision when appropriate. If a matter is both probable to result in a liability and the amounts of loss can be reasonably estimated, the Company estimates and discloses the possible loss or range of loss to the extent necessary to make the consolidated financial statements not misleading. If the loss is not probable or cannot be reasonably estimated, a liability is not recorded in its consolidated financial statements.

In November 2016, the Company received notice that in October 2016, Ipsen had initiated arbitration proceedings against the Company in the International Chamber of Commerce's International Court of Arbitration. Ipsen's Request for Arbitration alleged that the Company breached various provisions of the License Agreement concerning abaloparatide, including with regard to Ipsen's right to co-promote abaloparatide in France and a license from the Company with respect to Japan. Ipsen is seeking declaratory relief, compliance with the License Agreement, damages, costs and fees as a result of the purported breaches, and has alleged that the monetary value of these claims is approximately €50 million .

In January 2017, the Company submitted an Answer denying Ipsen's claims and alleging counterclaims against Ipsen for breach of the License Agreement and other declaratory judgment. The Company asserted, among other things, that Ipsen's claimed rights to co-promote abaloparatide in France and to a license from the Company with respect to Japan have permanently expired, and that Ipsen has breached the License Agreement by, among other things, allowing certain patents to expire and by purporting to license to a third party certain manufacturing and other rights that the Company contends Ipsen exclusively licensed to the Company. The Company is seeking dismissal of Ipsen's claims, as well as declaratory relief, compliance with the License Agreement, and other damages, costs and fees to be determined by the Arbitral Tribunal.

In February 2017, Ipsen submitted a Reply denying the Company's counterclaims and alleging that the Company is precluded from asserting them. Given that this matter is at a preliminary stage, the Company cannot predict or assess the likely outcome of these proceedings.

Manufacturing Agreements - In June 2016, the Company entered into a supply agreement with Ypsomed AG ("Ypsomed"), pursuant to which Ypsomed agreed to supply commercial and clinical supplies of a disposable pen injection device (the "Device") customized for subcutaneous injection of TYMLOS. The Company agreed to purchase a minimum number of Devices at prices per Device that decrease with an increase in quantity supplied. In addition, the Company agreed to make milestone payments for Ypsomed's capital developments in connection with the initiation of the commercial supply of the Device and to pay a one-time capacity fee. All costs and payments under the agreement are delineated in Swiss Francs. The agreement has an initial term of three years from the earlier of the date of delivery of the first commercial Devices for regulatory approval and June 1, 2017, after which it automatically renews for two -year terms until terminated. The Company agreed to purchase the Device subject to certain minimum annual quantity requirements under the agreement. During the initial term of the agreement, the Company estimates that it will be obligated to make total minimum payments to Ypsomed of approximately CHF 3.9 million ($ 4.0 million) in the aggregate, including the milestone payments and one-time capacity fee.

In June 2016, the Company entered into a commercial supply agreement with Vetter Pharma International, GmbH ("Vetter"), pursuant to which Vetter agreed to formulate the finished TYMLOS drug product containing the active pharmaceutical ingredient ("API") of TYMLOS, to fill cartridges with the drug product, to assemble the pen delivery device, and to package and label the pen for commercial distribution. The Company agreed to purchase the cartridges and pens in specified batch sizes at a price per unit. For labeling and packaging services, the Company agreed to pay a per unit price dependent upon the number

of pens loaded with cartridges that are labeled and packaged. These prices are subject to an annual price adjustment. The agreement has an initial term of five years, which began on January 1, 2016, after which, it automatically renews for two -year terms unless either party provides notice of non-renewal two years before the end of the then current term.

In July 2016, the Company entered into a manufacturing services agreement with Polypeptide Laboratories Holding AB ("PPL"), as successor-in-interest to Lonza Group Ltd., pursuant to which PPL agreed to manufacture the commercial and clinical supplies of the API for TYMLOS. The Company agreed to purchase the API in batches at a price per gram in euros, subject to an annual increase by PPL. The Company also agreed to purchase a minimum number of batches annually. The agreement has an initial term of six years, after which, it automatically renews for three -year terms unless either party provides notice of non-renewal 24 months before the end of the then-current term.

12. Subsequent Events

On April 28, 2017 , the Company's first commercial product, TYMLOS (abaloparatide) injection was approved by the FDA for the treatment of postmenopausal women with osteoporosis at high risk for fracture defined as history of osteoporotic fracture, multiple risk factors for fracture, or patients who have failed or are intolerant to other available osteoporosis therapy. In connection with the FDA's approval on TYMLOS in April 2017, the Company is obligated to pay Ipsen a milestone of €8.0 million (approximately $8.7 million) under the License Agreement, which the Company will record as an intangible asset and amortize over the remaining term of the License Agreement or the expected product life-cycle for TYMLOS, whichever is shorter.

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

Cautionary Statement

This Quarterly Report on Form 10-Q, including the information incorporated by reference herein, contains, in addition to historical information, forward-looking statements. We may, in some cases, use words such as "project," "believe," "anticipate," "plan," "expect," "estimate," "intend," "continue," "should," "would," "could," "potentially," "will," "may" or similar words and expressions that convey uncertainty of future events or outcomes to identify these forward-looking statements. Forward-looking statements in this Quarterly Report on Form 10-Q may include, among other things, statements about:

- *our expectations regarding commercial launch of TYMLOS in the U.S. and our ability to successfully commercialize TYMLOS in the U.S.;*
- *the therapeutic benefits and effectiveness of TYMLOS and our investigational product candidates;*
- *our ability to obtain U.S. and foreign regulatory approval for our product candidates, and the timing thereof;*
- *our ability to compete with other companies that are or may be developing or selling products that are competitive with TYMLOS or our investigational product candidates;*
- *anticipated trends and challenges in the market in which TYMLOS will compete and in other potential markets in which we may compete;*
- *our plans with respect to collaborations and licenses related to the development, manufacture or sale of TYMLOS and our investigational product candidates;*
- *the progress of, timing of and amount of expenses associated with our research, development and commercialization activities;*
- *the safety profile and related adverse events of TYMLOS and our investigational product candidates;*
- *the ability of our investigational product candidates to meet existing or future regulatory standards;*
- *our expectations regarding federal, state and foreign regulatory requirements;*
- *the success of our clinical studies for our investigational product candidates;*
- *our expectations as to future financial performance, expense levels and liquidity sources;*
- *our ability to attract, motivate, and retain key personnel; and*
- *other factors discussed elsewhere in this report.*

The outcome of the events described in these forward-looking statements is subject to known and unknown risks, uncertainties and other important factors that could cause actual results to differ materially from the results anticipated by these forward-looking statements. These important factors include our financial performance, the uncertainties inherent in the launch of any new pharmaceutical product or the execution and completion of clinical trials, uncertainties surrounding the timing of availability of data from our clinical trials, ongoing discussions with and actions by regulatory authorities, our ability to attract and retain customers, our development activities and those other factors we discuss in our Annual Report on Form 10-K filed with the Securities and Exchange Commission, or the SEC, on February 24, 2017 under the caption "Risk Factors." You should read these factors, those set forth under the caption "Risk Factors" in Item 1A of this Quarterly Report on Form 10-Q, and the other cautionary statements made in this Quarterly Report on Form 10-Q as being applicable to all related forward-looking statements wherever they appear in this Quarterly Report on Form 10-Q. These important factors are not exhaustive and other sections of this Quarterly Report on Form 10-Q may include additional factors which could adversely impact our business and financial performance.

You should read the following discussion of our financial condition and results of operations in conjunction with our financial statements and related notes set forth in this report. Unless the context otherwise requires, "we," "our," "us" and similar expressions used in this Management's Discussion and Analysis of Financial Condition and Results of Operations section refer to Radius Health, Inc. and our consolidated entities.

Executive Overview

We are a science-driven fully integrated biopharmaceutical company that is committed to developing innovative therapeutics in the areas of osteoporosis, oncology and endocrine diseases. On April 28, 2017, our first commercial product, TYMLOS ™ (abaloparatide) injection, was approved by the U.S. Food and Drug Administration, or FDA, for the treatment of postmenopausal women with osteoporosis at high risk for fracture defined as history of osteoporotic fracture, multiple risk factors for fracture, or patients who have failed or are intolerant to other available osteoporosis therapy. We expect to commence U.S. commercial sales of TYMLOS in the second quarter of 2017. Our European Marketing Authorisation Application, or MAA, for abaloparatide for subcutaneous injection, or abaloparatide-SC, is under review by the Committee for Medicinal Products for Human Use, or CHMP, of the European Medicines Agency, or EMA.

Our clinical pipeline includes an abaloparatide transdermal patch, or abaloparatide-TD, for potential use in the treatment of women with postmenopausal osteoporosis. We are focused on completing the manufacturing scale-up, production, and other activities required for the initiation of a pivotal bioequivalence study for abaloparatide-TD. In addition, we are evaluating our investigational product candidate, elacestrant (RAD1901), a selective estrogen receptor down-regulator/degrader, for potential use in the treatment of hormone-driven and/or hormone-resistant breast cancer, as well as for potential use in the treatment of vasomotor symptoms in postmenopausal women. We recently completed enrollment in both of our ongoing Phase 1 studies of elacestrant in advanced metastatic breast cancer. In the first half of 2017, we plan to engage with regulatory agencies to gain alignment on defining the next steps for the elacestrant breast cancer program, which would include the design of a Phase 2 trial. We expect to complete and report results from our elacestrant Phase 2b vasomotor trial in mid-2017.

We are also developing our internally developed investigational product candidate, RAD140, a non-steroidal selective androgen receptor modulator, or SARM, for potential use in the treatment of breast cancer. In December 2016, we submitted an investigational new drug application, or IND, to the FDA and expect to initiate a first-in-human Phase 1 study of RAD140 in women with hormone receptor positive breast cancer in 2017.

TYMLOS (abaloparatide)

On April 28, 2017, the FDA approved TYMLOS for the treatment of postmenopausal women with osteoporosis at high risk for fracture defined as history of osteoporotic fracture, multiple risk factors for fracture, or patients who have failed or are intolerant to other available osteoporosis therapy. We are developing two formulations of abaloparatide.

Abaloparatide-SC —TYMLOS injection was approved in the United States in April 2017 for the treatment of postmenopausal women with osteoporosis at high risk for fracture. We anticipate the first commercial sales of TYMLOS in the United States will take place in the second quarter of 2017. We intend to commercialize TYMLOS in the United States ourselves and our experienced commercial leaders have recently expanded the breadth of our capabilities and sales organization with highly skilled and seasoned individuals. We hold worldwide commercialization rights to abaloparatide, except for Japan. In December 2014, we announced positive 18-month top-line data from our Phase 3 ACTIVE clinical trial. These results were published in the Journal of the American Medical Association, or JAMA, in August 2016. In June 2015, we announced the positive top-line data from the first six months of the ACTIVExtend clinical trial of TYMLOS and the 25-month combined fracture data from the ACTIVE and ACTIVExtend clinical trials. These data were published in the Mayo Clinic Proceedings in February 2017. We expect to report the top-line results from our recently completed 24-month ACTIVExtend trial in the second quarter of 2017. The combined 25-month fracture data from our Phase 3 clinical trial program for TYMLOS formed the basis of our regulatory submissions in the United States and Europe. In November 2015, we submitted an MAA for abaloparatide-SC to the European Medicines Agency, or EMA, which was validated and is currently undergoing active regulatory assessment by the Committee for Medicinal Products for Human Use of the EMA, or CHMP. We anticipate that the CHMP may adopt an opinion regarding the MAA in July 2017. We intend to enter into one or more collaborations for the potential commercialization of abaloparatide-SC outside of the United States prior to commercial launch in the European Union.

Abaloparatide-TD —We are also developing abaloparatide-transdermal, which we refer to as abaloparatide-TD, based on 3M's patented Microstructured Transdermal System technology for potential use as a short wear-time transdermal patch. We hold worldwide commercialization rights to the abaloparatide-TD technology. We are developing abaloparatide-TD toward future global regulatory submissions to build upon the potential success of TYMLOS. We commenced a human replicative clinical evaluation of the optimized abaloparatide-TD patch in December 2015, with the goal of achieving comparability to TYMLOS. In September 2016, we presented results from this evaluation, which showed that the pharmacokinetic profile of an optimized abaloparatide-TD patch with respect to Tmax, T1/2, and AUC was successfully modified so as to improve comparability to TYMLOS. The results of this clinical evaluation will inform the design of a pivotal bioequivalence study that will be initiated following completion of activities related to manufacturing scale-up, production, and other activities required for the initiation of that study.

Our Capabilities-Organization and Experience

As part of our transition to a fully integrated biopharmaceutical company, we recently completed the build out of our sales and medical organizations. We are also continuing to strengthen our compliance program as part of our commitment to a strong culture of compliance and good corporate governance.

Our accomplished senior commercial leadership established an experienced commercial organization, with capabilities and core teams organized across sales, marketing, reimbursement, and distribution, to support the commercialization of TYMLOS in the United States.

Our market access and sales teams are prepared to engage and support external customers of TYMLOS. Our market access organization has hired an account team comprised of individuals with significant account experience with the large third-party payers and trade accounts that represent a substantial majority of all potential target patients. We also assembled a marketing

team of seasoned professionals with substantial specialty pharmaceutical marketing, communications, professional education, patient education and advocacy expertise. Our sales organization has hired capable sales leaders with prior osteoporosis, managerial, specialty launch and injectable therapy experience. These sales leaders will manage a sales organization comprised of more than 200 clinical sales and integrated delivery network specialists. We completed the hiring of our U.S. sales force in the first quarter of 2017. Finally, we forged a comprehensive commercial operations team to support launch requirements. Our commercial operations leaders have substantial specialty launch experience in establishing hub and specialty pharmacy distribution networks, analytics and forecasting, market research, sales and market operations, and sales training.

We intend to distribute TYMLOS in the United States through a network of distributors and specialty pharmacies. Under this distribution model, both the distributors and specialty pharmacies would take physical delivery of product and the specialty pharmacies would dispense the product directly to patients.

Our experienced senior medical leadership has built our medical organization to provide cross-functional support to both internal partners and external stakeholders by providing expert scientific knowledge, educational material and scientific training programs. This dedicated and skilled organization is comprised of 40 professionals with extensive clinical and scientific experience within academic medical centers, clinical medical practice, research institutions, and other pharmaceutical organizations.

Our medical team is organized by key functions, including medical affairs, pharmacovigilance, medical information, publications, and health economics outcomes research. Our medical affairs team includes physicians with relevant clinical and pharmaceutical experience in endocrinology and women's health. The medical affairs team also includes scientists with extensive research experience in bone health who will provide clinical development support for current and future scientific research. Our team of medical sciences liaisons, or MSLs, will provide medical educational support to external stakeholders. The director and regional managers of our MSL team have comprehensive experience in the field of osteoporosis.

Under the leadership of our Chief Compliance Officer, we have continued to strengthen our compliance program as part of our commitment to a strong culture of compliance and good corporate governance. We recently revised our Code of Conduct and Business Ethics, or Code of Conduct, which applies to all of our directors, officers and employees and have incorporated elements of the updated Code of Conduct into formal compliance trainings which are required to be completed by all employees. In addition, our management and other personnel have devoted a substantial amount of time to compliance initiatives, including establishing and maintaining effective disclosure and financial controls and corporate governance practices, as required by the Sarbanes-Oxley Act of 2002, as amended, and rules subsequently implemented by the Securities and Exchange Commission, or the SEC, and NASDAQ.

Elacestrant (RAD1901)

Elacestrant (RAD1901) is a selective estrogen receptor down-regulator/degrader, or SERD, that at high doses has potential for use as a daily oral non-steroidal treatment for hormone-driven and/or hormone-resistant, breast cancer. We hold worldwide commercialization rights to elacestrant. Elacestrant is currently being investigated in postmenopausal women with advanced estrogen receptor positive, or ER-positive, HER2-negative breast cancer, the most common form of the disease. Studies completed to date indicate that the compound has the potential for use as a single agent or in combination with other therapies for the treatment of breast cancer. In April 2017, we presented new preclinical data on the impact of elacestrant in preclinical models of endocrine sensitive/resistant breast cancer.

Phase 1 - Dose-Escalation Study

In December 2014, we commenced a Phase 1, multicenter, open-label, multiple-part, dose-escalation study of elacestrant in postmenopausal women with ER-positive and HER2-negative advanced breast cancer in the United States to determine the recommended dose for a Phase 2 clinical trial and to make a preliminary evaluation of the potential anti-tumor effect of elacestrant. Part A of this Phase 1 study was designed to evaluate escalating doses of elacestrant. The Part B expansion cohort was initiated at 400-mg daily dosing in March 2016 to allow for an evaluation of additional safety, tolerability and preliminary efficacy. The patients enrolled in this study are heavily pretreated ER-positive, HER2-negative advanced breast cancer patients who have received a median of 3 prior lines of therapy including fulvestrant and CDK4/6 inhibitors, and more than 50% of the patients had ESR1 mutations. We recently completed patient enrollment in our Phase 1 dose-escalation and expansion study.

In December 2016, we reported positive results from this ongoing Phase 1 dose-escalation and expansion study. These results showed that elacestrant was well-tolerated with the most commonly reported adverse events being low grade nausea and dyspepsia. Enrollment in the Part C tablet dosage form cohort was completed in November 2016.

Phase 1 - FES-PET Study

In December 2015, we commenced a Phase 1 18-F fluoroestradiol positron emission tomography, or FES-PET, study in patients with metastatic breast cancer in the European Union which includes the use of FES-PET imaging to assess estrogen receptor occupancy in tumor lesions following elacestrant treatment. We recently completed patient enrollment in the European Phase I FES-PET study.

In December 2016, we reported positive results from the ongoing Phase 1 FES-PET study. The first three enrolled patients dosed at the 400-mg cohort had a tumor FES-PET signal intensity reduction ranging from 79% to 91% at day 14 compared to baseline. The most commonly reported adverse events reported to date in this study have been grade 1 and 2 nausea and dyspepsia. We enrolled 5 additional patients in the 400-mg daily oral cohort, followed by 8 patients in the 200-mg daily oral cohort.

Phase 1 - Recent Progress

To date, no dose limiting toxicities have been reported in the elacestrant program. We recently completed patient enrollment in both of our ongoing elacestrant Phase 1 breast cancer trials and plan to engage with regulatory agencies in the first half of 2017 to gain alignment on defining the next steps for the program, which would include the design of a Phase 2 trial.

Potential for use in Combination Therapy

In July 2015, we announced that early but promising preclinical data showed that our investigational drug elacestrant, in combination with Pfizer's palbociclib, a cyclin-dependent kinase, or CDK 4/6 inhibitor, or Novartis' everolimus, an mTOR inhibitor, was effective in shrinking tumors. In preclinical patient-derived xenograft breast cancer models with either wild type or mutant ESR1, treatment with elacestrant resulted in marked tumor growth inhibition, and the combination of elacestrant with either agent, palbociclib or everolimus, showed anti-tumor activity that was significantly greater than either agent alone. We believe that this preclinical data suggest that elacestrant has the potential to overcome endocrine resistance, is well-tolerated, and has a profile that is well suited for use in combination therapy.

Collaborations

In July 2016, we entered into a preclinical collaboration with Takeda Pharmaceutical Company Limited to evaluate the combination of our investigational drug elacestrant with Takeda's investigational drug TAK-228, an oral mTORC 1/2 inhibitor in Phase 2b development for the treatment of breast, endometrial and renal cancer, with the goal of potentially exploring such combination in a clinical study.

In January 2016, we entered into a worldwide clinical collaboration with Novartis Pharmaceuticals to evaluate the safety and efficacy of combining our investigational drug elacestrant, with Novartis' investigational agent LEE011 (ribociclib), a CDK 4/6 inhibitor, and BYL719 (alpelisib), an investigational phosphoinositide 3-kinase inhibitor.

Phase 2b - Vasomotor Symptoms Study

Elacestrant is also being evaluated at low doses as an estrogen receptor ligand for the potential relief of the frequency and severity of moderate to severe hot flashes in postmenopausal women with vasomotor symptoms. We expect to report results from our Phase 2b clinical study of elacestrant for the potential treatment of postmenopausal vasomotor symptoms in mid-2017.

RAD140

RAD140 is a nonsteroidal selective androgen receptor modulator, or SARM. The androgen receptor, or AR, is highly expressed in many ER-positive, ER-negative, and triple-negative receptor breast cancers. Due to its receptor and tissue selectivity, potent activity, oral bioavailability, and long half-life, we believe RAD140 could have clinical potential in the treatment of breast cancer. We hold worldwide commercialization rights to RAD140, which resulted from an internal discovery program.

In July 2016, we reported that RAD140 in preclinical xenograft models of breast cancer demonstrated potent tumor growth inhibition when administered alone or in combinations with CDK4/6 inhibitors. It is estimated that 77% of breast cancers show expression of the androgen receptor. Our data suggest that RAD140 activity at the androgen receptor leads to activation of AR signaling pathways including an AR-specific tumor suppressor. In April 2017, we presented these RAD140 preclinical results at a major scientific congress. We submitted an IND to the FDA for RAD140 in December 2016 and plan to initiate a first-in-human Phase 1 study of RAD140 in women with hormone receptor positive breast cancer in 2017.

Financial Overview

Research and Development Expenses

Research and development expenses consist primarily of clinical testing costs made to contract research organizations, or CROs, salaries and related personnel costs, fees paid to consultants and outside service providers for regulatory and quality assurance support, licensing of drug compounds and other expenses relating to the manufacture, development, testing and enhancement of our product candidates. We expense our research and development costs as they are incurred.

None of the research and development expenses, in relation to our investigational product candidates, are currently borne by third parties. TYMLOS (abaloparatide) historically has represented the largest portion of our research and development expenses for our development programs. We began tracking program expenses for TYMLOS (abaloparatide) in 2005, and program expenses from inception to March 31, 2017 were approximately $ 211.9 million . We began tracking program expenses for abaloparatide-TD in 2007, and program expenses from inception to March 31, 2017 were approximately $ 39.8 million . We began tracking program expenses for elacestrant (RAD1901) in 2006, and program expenses from inception to March 31, 2017 were approximately $ 58.4 million . We began tracking program expenses for RAD140 in 2008, and program expenses from inception to March 31, 2017 were approximately $ 10.3 million . These expenses relate primarily to external costs associated with manufacturing, preclinical studies and clinical trial costs.

Costs related to facilities, depreciation, stock-based compensation and research and development support services are not directly charged to programs as they benefit multiple research programs that share resources.

The following table sets forth our research and development expenses that are directly attributable to the programs listed below for the three months ended March 31, 2017 and 2016 (in thousands):

	Three Months Ended March 31,	
	2017	2016
Abaloparatide-SC*	$ (999)	$ 5,778
Abaloparatide-TD	705	2,145
Elacestrant (RAD1901)	2,878	8,117
RAD140	1,358	357

**2017 expenses were net of the FDA's refund of NDA fees of $2.4 million previously paid and expensed in the first quarter of 2016.*

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related expenses for pre-launch commercial operations, executive, finance and other administrative personnel, professional fees, business insurance, rent, general legal activities, including the cost of maintaining our intellectual property portfolio, and other corporate expenses.

Our results also include stock-based compensation expense as a result of the issuance of stock option grants to our employees, directors and consultants. The stock-based compensation expense is included in the respective categories of expense in the statement of operations (i.e., research and development or general and administrative expenses).

Interest Income and Other Income

Interest income reflects interest earned on our cash, cash equivalents and marketable securities. Other income for the first quarter of 2017 reflects a portion of the Massachusetts Life Science Center awards recognized as income for certain taxes paid.

Critical Accounting Policies and Estimates

Our management’s discussion and analysis of financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission, or the SEC, and generally accepted accounting principles in the United States, or GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses, as well as related disclosures. We evaluate our policies and estimates on an ongoing basis, including those related to accrued clinical expenses, research and development expenses, stock-based compensation and fair value measures, which we discussed in our Annual Report on Form 10-K for the year ended December 31, 2016 . We base our estimates on historical experience and other various assumptions that we believe are reasonable under the circumstances. Our actual results may differ from these estimates under different assumptions or conditions.

We have reviewed our policies and estimates to determine our critical accounting policies for the three months ended March 31, 2017 . We have made no material changes to the critical accounting policies described in our Annual Report on Form 10-K for

the year ended December 31, 2016 , except for the adoption of ASU No. 2016-09 *Improvements to Employee Share-Based Payment Accounting.* Adoption of the ASU effective January 1, 2017 did not have a material impact on the Company's results of operations, financial position or cash flows. See Note 2 - *Basis of Presentation and Significant Accounting Policies* in the accompanying unaudited condensed consolidated financial statements for more information regarding the adoption of new accounting standards during the first quarter of 2017.

Results of Operations

Three Months Ended March 31, 2017 and 2016 (in thousands, except percentages)

	Three Months Ended March 31,		Change	
	2017	2016	$	%
Operating expenses:				
Research and development	$ 19,527	$ 27,483	$ (7,956)	(29)%
General and administrative	38,099	13,646	24,453	179 %
Loss from operations	(57,626)	(41,129)	16,497	40 %
Other (expense) income:				
Other (expense) income, net	80	(1)	(81)	8,100 %
Interest income	607	667	(60)	9 %
Net loss	$ (56,939)	$ (40,463)	16,476	41 %

Research and development expenses — For the three months ended March 31, 2017 , research and development expense was $ 19.5 million compared to $ 27.5 million for the three months ended March 31, 2016 , a decrease of $ 8.0 million , or 29% . This decrease was primarily driven by a $4.8 million decrease in regulatory and professional fees associated with abaloparatide-SC regulatory applications and a $6.7 million decrease in clinical development costs associated with abaloparatide-TD and elacestrant programs. This decrease was partially offset by a $1.0 million increase in RAD140 program development costs and a $4.6 million increase in compensation expense, including stock-based compensation, due to an increase in headcount from 78 research and development employees as of March 31, 2016 to 111 research and development employees as of March 31, 2017 .

General and administrative expenses — For the three months ended March 31, 2017 , general and administrative expense was $ 38.1 million compared to $ 13.6 million for the three months ended March 31, 2016 , an increase of $ 24.5 million , or 179% . This increase was primarily the result of an increase of approximately $8.3 million in professional fees and support costs during the three months ended March 31, 2017 , including the costs associated with increasing headcount and preparing for the commercialization of TYMLOS in the United States. This increase was also driven by a $14.6 million increase in compensation expense, including stock-based compensation, due to an increase in headcount from 44 general and administrative employees as of March 31, 2016 to 116 general and administrative employees and 247 clinical sales specialists as of March 31, 2017 .

Interest income —For the three months ended March 31, 2017 , interest income was approximately $ 0.6 million for both the three months ended March 31, 2017 and 2016 , a decrease of $ 60.0 thousand , or 9% . This decrease was primarily due to the combined effects of a decrease in the balance of our investments coupled with an increase in the rate of return on investments in the three months ended March 31, 2017 as compared to those of the three months ended March 31, 2016 .

Liquidity and Capital Resources

From inception to March 31, 2017 , we have incurred an accumulated deficit of $ 685.0 million , primarily as a result of expenses incurred through a combination of research and development activities related to our various product candidates and expenses supporting those activities. Our total cash, cash equivalents and short-term marketable securities balance as of March 31, 2017 was $ 282.1 million . We have financed our operations since inception primarily through the public offerings of our common stock, private sales of preferred stock, and borrowings under credit facilities.

Based upon our cash, cash equivalents and marketable securities balance, we believe that, prior to the consideration of proceeds from partnering and/or collaboration activities, we have sufficient capital to fund our development plans, U.S. commercial and other operational activities for not less than twelve months from the date of this filing and into 2018. We expect to finance the future U.S. commercial activities and development costs of our clinical product portfolio with our existing cash, cash equivalents and marketable securities, or through strategic financing opportunities, that could include, but are not limited to partnering or other collaboration agreements, future offerings of equity, royalty-based financing arrangements, or the incurrence of debt or other alternative financing arrangements. However, there is no guarantee that any of these financing

opportunities will be available to us on favorable terms, and some could be dilutive to existing stockholders. Our future capital requirements will depend on many factors, including the scope and progress made in our research and development and commercialization activities, the results of our clinical trials, and the review and potential approval of our products by the FDA and the EMA. The successful development of our investigational product candidates is subject to numerous risks and uncertainties associated with developing drugs, which could have a significant impact on the cost and timing associated with the development of our product candidates. If we fail to obtain additional future capital, we may be unable to complete our planned preclinical and clinical trials and obtain approval of any investigational product candidates from the FDA and foreign regulatory authorities.

TYMLOS is our only approved product and our business currently depends heavily on its successful commercialization. Successful commercialization of an approved product is an expensive and uncertain process. See "Risk Factors — Risks Related to the Discovery, Development and Commercialization of Our Product Candidates" set forth under Item 1A. in our Annual Report on Form 10-K for the year ended December 31, 2016 , filed with the SEC on February 24, 2017, and those additional risk factors under Item 1A in this report.

The following table sets forth the major sources and uses of cash for each of the periods set forth below (in thousands):

	Three Months Ended March 31,		Change	
	2017	2016	$	%
Net cash (used in) provided by:				
Operating activities	$ (52,764)	$ (33,738)	$ 19,026	56 %
Investing activities	(34,004)	(22,455)	11,549	51 %
Financing activities	2,822	929	1,893	204 %
Net decrease in cash and cash equivalents	$ (83,946)	$ (55,264)	$ (28,682)	(52)%

Cash Flows from Operating Activities

Net cash used in operating activities during the three months ended March 31, 2017 was $ 52.8 million , which was primarily the result of a net loss of $ 56.9 million , partially offset by $ 9.3 million of net non-cash adjustments to reconcile net loss to net cash used in operations and net changes in working capital of $ 5.0 million . The $ 56.9 million net loss was primarily due to abaloparatide-SC and elacestrant program development expenses along with employee compensation and consulting costs incurred to support regulatory submissions and preparation for the commercial launch of TYMLOS in the United States. The $ 9.3 million net non-cash adjustments to reconcile net loss to net cash used in operations included stock-based compensation expense of $ 9.1 million and depreciation of $ 0.3 million .

Net cash used in operating activities during the three months ended March 31, 2016 was $ 33.7 million , which was primarily the result of a net loss of $ 40.5 million , partially offset by $ 4.9 million of net non-cash adjustments to reconcile net loss to net cash used in operations and net changes in working capital of $ 1.9 million . The $ 40.5 million net loss was primarily due to abaloparatide-SC program development expenses, including clinical and manufacturing costs, along with employee compensation and consulting costs incurred to support regulatory submissions and preparation for the commercial launch of TYMLOS in the United States. The $ 4.9 million net non-cash adjustments to reconcile net loss to net cash used in operations included stock-based compensation expense of $ 4.2 million , amortization of premiums on marketable securities of $ 0.6 million and depreciation of $ 0.1 million .

Cash Flows from Investing Activities

Net cash used in investing activities during the three months ended March 31, 2017 was $ 34.0 million , which was primarily the result of $ 72.0 million of purchases of marketable securities partially offset by $ 38.4 million of net proceeds received from the sale or maturity of marketable securities.

Net cash used in investing activities during the three months ended March 31, 2016 was $ 22.5 million , which was primarily the result of $ 157.9 million of purchases of marketable securities, partially offset by $ 135.8 million of net proceeds received from the sale or maturity of marketable securities.

Our investing cash flows will be impacted by the timing of purchases and sales of marketable securities. Because our marketable securities are primarily short-term in duration, we would not expect our operational results or cash flows to be significantly affected by a change in market interest rates.

Cash Flows from Financing Activities

Net cash provided by financing activities during the three months ended March 31, 2017 was $ 2.8 million , as compared to $ 0.9 million during the three months ended March 31, 2016 . Net cash provided by financing activities during the three months ended March 31, 2017 consisted of $ 1.8 million of proceeds received from exercises of stock options and $1.0 million received upon issuance of common stock under the Radius Health, Inc. 2016 Employee Stock Purchase Plan.

Net cash provided by financing activities during the three months ended March 31, 2016 consisted of $0.9 million of proceeds received from the exercise of stock options.

Contractual Obligations

Supply and Manufacturing Agreements

In June 2016, we entered into a supply agreement with Ypsomed AG, or Ypsomed, pursuant to which Ypsomed agreed to supply commercial and clinical supplies of a disposable pen injection device, or the "Device," customized for subcutaneous injection of TYMLOS. We agreed to purchase a minimum number of Devices at prices per Device that decrease with an increase in quantity supplied. In addition, we agreed to make milestone payments for Ypsomed’s capital developments in connection with the initiation of the commercial supply of the Device and to pay a one-time capacity fee. All costs and payments under the agreement are delineated in Swiss Francs. The agreement has an initial term of three years from the earlier of the date of delivery of the first commercial Devices for regulatory approval and June 1, 2017, after which, it automatically renews for two-year terms until terminated. During the initial term of the agreement, we estimate that we will be obligated to make total minimum payments to Ypsomed of approximately CHF 3.9 million ($ 4.0 million) in the aggregate, including the milestone payments and one-time capacity fee.

In June 2016, we entered into a commercial supply agreement with Vetter Pharma International, GmbH, or Vetter, pursuant to which Vetter agreed to formulate the finished TYMLOS drug product containing the active pharmaceutical ingredient, or API, of TYMLOS, to fill cartridges with the drug product, to assemble the pen delivery device, and to package and label the pen for commercial distribution. We agreed to purchase the cartridges and pens in specified batch sizes at a price per unit. For labeling and packaging services, we agreed to pay a per unit price dependent upon the number of pens loaded with cartridges that are labeled and packaged. These prices are subject to an annual price adjustment. The agreement has an initial term of five years, which began on January 1, 2016, after which, it automatically renews for two-year terms unless either party provides notice of non-renewal two years before the end of the then-current term.

In July 2016, we entered into a manufacturing services agreement with Polypeptide Laboratories Holding AB, or PPL, as successor-in-interest to Lonza Group Ltd., pursuant to which PPL agreed to manufacture the commercial and clinical supplies of the API for TYMLOS. We agreed to purchase the API in batches at a price per gram in euros, subject to an annual increase by PPL. We also agreed to purchase a minimum number of batches annually. The agreement has an initial term of a six years, after which, it automatically renews for three-year terms unless either party provides notice of non-renewal 24 months before the end of the then-current term.

Research and Development Agreements

Abaloparatide-SC Phase 3 Clinical Trial

In February 2013, we contracted with Nordic Bioscience Clinical Development VII A/S, or Nordic, to conduct our Phase 3 clinical trial of abaloparatide-SC, or the Phase 3 Clinical Trial. Nordic also agreed to perform an extension study to evaluate six months of standard-of-care osteoporosis management following the completion of the Phase 3 Clinical Trial, or the "Extension Study," and, upon completion of this initial six months, an additional period of 18 months of standard-of-care osteoporosis management, or the "Second Extension."

In April 2015, we contracted with Nordic to perform additional services, including monitoring of patients enrolled in the Second Extension. Payments in cash to be made to Nordic for these additional services are denominated in euro and total up to approximately € 4.1 million ($ 4.3 million).

Payments in cash to be made to Nordic for the services related to the Extension Study and the Second Extension are denominated in both euros and U.S. dollars and total up to € 11.9 million ($ 12.5 million) and $ 1.1 million , respectively. As of December 31, 2016 , the last patient's final visit in the Second Extension had occurred and all obligations due to Nordic in relation to the Extension Study have been paid.

License Agreement Obligations

TYMLOS (abaloparatide)

In September 2005, we entered into a license agreement with Ipsen, as amended, or the License Agreement, under which we exclusively licensed certain Ipsen compound technology and related patents covering abaloparatide to research, develop, manufacture and commercialize certain compounds and related products in all countries, except Japan (where we do not hold development and commercialization rights) and France (where our commercialization rights were subject to certain co-marketing and co-promotion rights exercisable by Ipsen, provided that certain conditions included in the License Agreement were met). We believe that Ipsen's co-marketing and co-promotion rights in France have permanently expired. Ipsen also granted us an exclusive right and license under the Ipsen compound technology and related patents to make and have made compounds or product in Japan. Ipsen further granted us an exclusive right and license under certain Ipsen formulation technology and related patents solely for purposes of enabling us to develop, manufacture and commercialize compounds and products covered by the compound technology license in all countries, except Japan and France (as discussed above).

In consideration for the rights to abaloparatide and in recognition of certain milestones having been met to date, we have paid to Ipsen an aggregate amount of $ 4.3 million . The License Agreement further requires us to make payments upon the achievement of certain future regulatory and commercial milestones. Total additional milestone payments that could be payable under the agreement are € 32.0 million (approximately $ 33.6 million). In connection with the FDA's approval of TYMLOS in April 2017, we are obligated to pay Ipsen a milestone of €8.0 million (approximately $8.7 million) under the License Agreement, which we will record as an intangible asset and amortize over the remaining term of the License Agreement or the expected product life-cycle of TYMLOS, whichever is shorter. The agreement also provides that we will pay to Ipsen a fixed five percent royalty based on net sales of the product by us or our sublicensees on a country-by-country basis until the later of the last to expire of the licensed patents or for a period of 10 years after the first commercial sale in such country. The date of the last to expire of the abaloparatide patents licensed from or co-owned with Ipsen, barring any extension thereof, is expected to be March 26, 2028.

If we sublicense abaloparatide to a third party, the agreement provides that we would pay a percentage of certain payments received from such sublicensee (in lieu of milestone payments not achieved at the time of such sublicense). The applicable percentage is in the low double digit range. In addition, if we or our sublicensees commercialize a product that includes a compound discovered by us based on or derived from confidential Ipsen know-how, the agreement provides that we would pay to Ipsen a fixed low single digit royalty on net sales of such product on a country-by-country basis until the later of the last to expire of our patents that cover such product or for a period of 10 years after the first commercial sale of such product in such country.

The License Agreement expires on a country-by-country basis on the later of (1) the date the last remaining valid claim in the licensed patents expires in that country, or (2) a period of 10 years after the first commercial sale of the licensed products in such country, unless it is sooner terminated in accordance with its terms.

Prior to executing the License Agreement for abaloparatide with us, Ipsen licensed the Japanese rights for abaloparatide to Teijin Limited, or Teijin, a Japanese pharmaceutical company. Teijin has completed a Phase 2 clinical study of abaloparatide in Japan for the treatment of postmenopausal osteoporosis.

We are currently in arbitration proceedings with Ipsen in connection with the License Agreement. See “Legal Proceedings” for more information.

Elacestrant (RAD1901)

In June 2006, we entered into a license agreement, or the "Eisai Agreement," with Eisai Co. Ltd., or "Eisai". Under the Eisai Agreement, Eisai granted to us an exclusive right and license to research, develop, manufacture and commercialize elacestrant (RAD1901) and related products from Eisai in all countries, except Japan. In consideration for the rights to elacestrant, we paid Eisai an initial license fee of $0.5 million, which was expensed during 2006. In March 2015, we entered into an amendment to the Eisai Agreement, or the "Eisai Amendment," in which Eisai granted to us the exclusive right and license to research, develop, manufacture and commercialize elacestrant in Japan. In consideration for the rights to elacestrant in Japan, we paid Eisai an initial license fee of $ 0.4 million upon execution of the Eisai Amendment, which was recognized as research and development expense in 2015. The Eisai Amendment, as amended, also provides for additional payments of up to $ 22.3 million , payable upon the achievement of certain future clinical and regulatory milestones.

Under the Eisai Agreement, as amended, should a product covered by the licensed technology be commercialized, we will be obligated to pay to Eisai royalties in a variable mid-single digit range based on net sales of the product on a country-by-country basis. The royalty rate will be reduced, on a country-by-country basis, at such time as the last remaining valid claim in the licensed patents expires, lapses or is invalidated and the product is not covered by data protection clauses. In addition, the royalty rate will be reduced, on a country-by-country basis, if, in addition to the conditions specified in the previous sentence, sales of lawful generic versions of such product account for more than a specified minimum percentage of the total sales of all

products that contain the licensed compound during a calendar quarter. The latest licensed patent is expected to expire, barring any extension thereof, on August 18, 2026.

The Eisai Agreement, as amended, also grants us the right to grant sublicenses with prior written approval from Eisai. If we sublicense the licensed technology to a third party, we will be obligated to pay Eisai, in addition to the milestones referenced above, a fixed low double digit percentage of certain fees received from such sublicensee and royalties in the low single digit range based on net sales of the sublicensee. The Eisai Agreement expires on a country-by-country basis on the later of (1) the date the last remaining valid claim in the licensed patents expires, lapses or is invalidated in that country, the product is not covered by data protection clauses, and the sales of lawful generic versions of the product account for more than a specified percentage of the total sales of all pharmaceutical products containing the licensed compound in that country; or (2) a period of 10 years after the first commercial sale of the licensed products in such country, unless it is sooner terminated.

Net Operating Loss Carryforwards

As of December 31, 2016 , we had federal and state net operating loss carryforwards of approximately $ 526.7 million and $ 385.3 million , respectively, subject to limitation, as described below. If not utilized, the net operating loss carryforwards will expire at various dates through 2036.

Under Section 382 of the Internal Revenue Code of 1986, or Section 382, substantial changes in our ownership may limit the amount of net operating loss carryforwards that could be used annually in the future to offset taxable income. We have completed studies through December 31, 2015, to determine whether any ownership change has occurred since our formation and have determined that transactions have resulted in two ownership changes, as defined under Section 382. There could be additional ownership changes in the future that could further limit the amount of net operating loss and tax credit carryforwards that we can utilize.

A full valuation allowance has been recorded against our net operating loss carryforwards and other deferred tax assets, as the realization of the deferred tax asset is uncertain. As a result, we have not recorded any federal or state income tax benefit in our statement of operations.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements or any relationships with unconsolidated entities of financial partnerships, such as entities often referred to as structured finance or special purpose entities.

New Accounting Standards

See Note 2 - *Basis of Presentation and Significant Accounting Policies - Accounting Standards Updates* in the accompanying unaudited condensed consolidated financial statements in this Quarterly Report for a discussion of new accounting standards.

Item 3. Quantitative and Qualitative Disclosure about Market Risk.

We are exposed to market risk related to changes in the dollar/euro exchange rate because a portion of our development costs are denominated in foreign currencies. We do not hedge our foreign currency exchange rate risk. However, an immediate 10% adverse change in the dollar/euro or dollar/Swiss Franc exchange rate would not have a material effect on our financial results.

We are exposed to market risk related to changes in interest rates. As of March 31, 2017 , we had cash, cash equivalents and short-term marketable securities of $ 282.1 million , consisting of cash, money market funds, domestic corporate debt securities, domestic corporate commercial paper, and asset-backed securities. This exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because our investments are in marketable securities. Because our marketable securities are short-term in duration, and have a low risk profile, an immediate 10% change in interest rates would not have a material effect on the fair market value of our portfolio. We generally have the ability to hold our investments until maturity, and therefore we would not expect our operating results or cash flows to be affected to any significant degree by a change in market interest rates on our investments. We carry our investments based on publicly available information. As of March 31, 2017 , we do not have any hard-to-value investment securities or securities for which a market is not readily available or active.

We are not subject to significant credit risk as this risk does not have the potential to materially impact the value of our assets and liabilities.

Item 4. Controls and Procedures.

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 defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of March 31, 2017 .

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting during the three months ended March 31, 2017 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.

In November 2016, we received notice that in October 2016, Ipsen had initiated arbitration proceedings against us in the International Chamber of Commerce's International Court of Arbitration. Ipsen's Request for Arbitration alleged that we breached various provisions of the License Agreement concerning abaloparatide, including with regard to Ipsen's right to co-promote abaloparatide in France and a license from us with respect to Japan. Ipsen is seeking declaratory relief, compliance with the License Agreement, damages, costs and fees as a result of the purported breaches, and has alleged the monetary value of these claims is approximately €50 million.

In January 2017, we submitted an Answer denying Ipsen's claims and alleging counterclaims against Ipsen for breach of the License Agreement and other declaratory judgment. We asserted, among other things, that Ipsen's claimed rights to co-promote abaloparatide in France and to a license from us with respect to Japan have permanently expired, and that Ipsen has breached the License Agreement by, among other things, allowing certain patents to expire and by purporting to license to a third party certain manufacturing and other rights that we contend Ipsen exclusively licensed to us. We are seeking dismissal of Ipsen's claims, as well as declaratory relief, compliance with the License Agreement, and other damages, costs and fees to be determined by the Arbitral Tribunal.

In February 2017, Ipsen submitted a Reply denying our counterclaims and alleging that we are precluded from asserting them. Given that this matter is at a preliminary stage, we cannot predict or assess the likely outcome of these proceedings.

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, 2016 , which could materially affect our business, financial condition or future results.

The risk factors set forth below represent new risk factors or those containing changes, including material changes, to the similarly titled risk factors included in Item 1A of our Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 24, 2017.

We are heavily dependent on the commercial success of TYMLOS, which was approved by the FDA in April 2017; we may not be able to meet expectations with respect to TYMLOS sales or attain profitability and positive cash-flow from operations.

Our ability to successfully commercialize TYMLOS, our first commercial product, is critical to the execution of our business strategy. TYMLOS may not achieve market acceptance in the United States, or in any international markets where it may subsequently be approved, among physicians, patients, and third-party payors, and may not be commercially successful. The degree of market acceptance and commercial success of TYMLOS will depend on a number of factors, including the following:

- the acceptance of TYMLOS by patients and the medical community and the availability, perceived advantages and relative cost, safety and efficacy of alternative and competing treatments;
- the cost-effectiveness of TYMLOS, adequate reimbursement by third parties, including government payers, managed care organizations and private health insurers and the willingness and ability of patients to pay for TYMLOS;
- the effectiveness of our marketing, sales, and distribution strategy and efforts and the degree to which the approved labeling supports promotional initiatives for commercial success;
- the occurrence of any side effects, adverse reactions or misuse, or any unfavorable publicity in these areas;
- the ability of our third-party manufacturer(s) to manufacture commercial supplies of TYMLOS at acceptable costs, to remain in good standing with regulatory agencies, and to develop, validate and maintain commercially viable manufacturing processes that are, to the extent required, compliant with current good manufacturing practice regulations;
- our ability to remain compliant with laws and regulations that apply to us and our commercial activities;
- our ability to obtain marketing approvals from foreign regulatory authorities, where and as applicable;
- FDA-mandated package insert requirements and successful completion of any related FDA post-marketing requirements;

- the actual market size for TYMLOS, which may be different than expected;
- the sufficiency of our drug supply to meet commercial and clinical demands which could be negatively impacted if our projections regarding the potential number of patients are inaccurate, we are subject to unanticipated regulatory requirements, our current drug supply is destroyed or negatively impacted at our manufacturing sites, storage sites or in transit, or any significant portion of our TYMLOS supply expires before we are able to sell it; and
- our ability to maintain, enforce and defend third party challenges to our intellectual property rights in and to TYMLOS.

We may experience significant fluctuations in sales of TYMLOS from period to period and, ultimately, we may never generate sufficient revenues from TYMLOS to reach or maintain profitability or sustain our anticipated levels of operations. Any inability on our part to successfully commercialize TYMLOS in the United States and any significant international markets where it may subsequently be approved, or any significant delay, could have a material adverse impact on our ability to execute upon our business strategy.

Most of our product candidates are at an early stage of development and may never receive regulatory approval.

Other than TYMLOS, which the FDA approved for use in the United States in April 2017, we have no drug products for sale and may never be able to develop additional approved and marketable drug products. The research, testing, manufacturing, labeling, approval, sale, marketing and distribution of drug products are subject to extensive regulation by the FDA and foreign regulatory authorities in the United States and other countries, which regulations differ from country to country. We are not permitted to market TYMLOS in any foreign countries unless and until we receive the requisite approval from regulatory authorities in those foreign countries. Obtaining approval of a product candidate is an extensive, lengthy, expensive and uncertain process, and may be delayed, limited or denied for many reasons, including:

- we may not be able to demonstrate that the product candidate is safe and effective to the satisfaction of the FDA or foreign regulatory authorities;
- the results of our clinical studies may not meet the level of statistical or clinical significance required for marketing approval;
- the FDA or foreign regulatory authorities may disagree with the number, design, size, conduct or implementation of our clinical studies;
- any clinical research organizations, or CROs, that we have retained or may in the future retain, to conduct clinical studies may take actions outside of our control that materially adversely impact our clinical studies;
- the FDA or foreign regulatory authorities may not accept data generated at our clinical study sites;
- the FDA or foreign regulatory authorities may not find the data from preclinical studies and clinical studies sufficient to demonstrate that the product candidate’s clinical and other benefits outweigh its safety risks;
- the FDA or foreign regulatory authorities may disagree with our interpretation of data from our preclinical studies and clinical studies or may require that we conduct additional studies;
- the FDA or foreign regulatory authorities may not agree with our proposed labeling and may require labeling that undermines or otherwise significantly impairs the commercial value of the product if it were to be approved with such labeling;
- the FDA may require development and implementation of a Risk Evaluation and Mitigation Strategy, or REMS, as a condition of approval;
- if our NDA is reviewed by an advisory committee, the FDA may have difficulties scheduling an advisory committee meeting in a timely manner or the advisory committee may recommend against approval of our application or may recommend that the FDA require, as a condition of approval, additional preclinical studies or clinical studies, limitations on approved labeling or distribution and use restrictions; and
- the FDA or foreign regulatory authorities may identify deficiencies in the manufacturing processes or facilities of our third-party manufacturers.

In addition, the FDA or foreign regulatory authorities may change its approval policies or adopt new regulations.

We cannot assure you that we will receive the approvals necessary to commercialize any additional product candidates, including any product candidates we are currently developing or may acquire or develop in the future. In order to obtain FDA

approval of any product candidate, we must submit to the FDA an NDA demonstrating that the product candidate is safe for humans and effective for its indicated use. This demonstration requires significant research and animal tests, which are referred to as preclinical studies, as well as human tests, which are referred to as clinical trials. Satisfaction of the FDA's regulatory requirements typically takes many years, depends upon the type, complexity and novelty of the product candidate and requires substantial resources for research, development and testing. We cannot predict whether our research and clinical approaches will result in drugs that the FDA considers safe for humans and effective for proposed uses.

In 2007, we entered into a global pharmacovigilance agreement with Teijin Limited, or Teijin, a Japanese pharmaceutical company, that provides for the exchange of information related to serious and non-serious adverse reactions to abaloparatide by patients enrolled in clinical studies. The purpose of the agreement is to enable safety reporting to global health agencies. Teijin has completed a Phase 2 clinical study of abaloparatide-SC in Japan for the treatment of postmenopausal osteoporosis. Should Teijin advise us in accordance with our agreement of a serious adverse event experienced by patients enrolled in their study, we would need to report the serious adverse event to the FDA and the European Medicines Agency, or EMA, which could adversely affect or delay our ability to obtain or sustain regulatory approvals in the United States and Europe.

In addition, the FDA or foreign regulatory authorities each has substantial discretion in the drug approval process and may require us to conduct additional preclinical and clinical testing or to perform post-marketing studies. The approval process may also be delayed by changes in government regulation, future legislation or administrative action or changes in FDA policy that occur prior to or during its regulatory review. Delays in obtaining regulatory approvals may:

- delay commercialization of, and our ability to derive product revenues from, our product candidates;
- impose costly procedures on us; and
- diminish any competitive advantages that we may otherwise enjoy.

In foreign jurisdictions, we also must receive approval from the appropriate regulatory authorities before we can commercialize any drugs. In November 2015, we submitted an MAA to the EMA for abaloparatide-SC which was validated and is currently undergoing active regulatory assessment by the CHMP. Foreign regulatory approval processes generally include all of the risks associated with the FDA approval procedures described above. We cannot assure you that we will receive the approvals necessary to commercialize abaloparatide-SC, or any of our product candidates for sale outside the United States.

If we are unable to successfully maintain and further develop internal commercialization capabilities, sales of TYMLOS may be negatively impacted.

We have not yet commercialized any drug products as a company. We have built a commercial team and established the organizational infrastructure we believe necessary for a successful commercial launch of TYMLOS in the United States. We will need to commit significant time, financial and managerial resources to maintain and further develop our marketing and sales force to ensure they have the technical expertise required to address any challenges we may face with the commercialization of TYMLOS. Factors that may inhibit our efforts to maintain and develop our commercialization capabilities include:

- our ability to retain an adequate number of qualified and effective commercial personnel;
- our ability to train sales personnel, who may have limited experience with our company or TYMLOS, to deliver a consistent and compliant message regarding TYMLOS that will be compelling to physicians who may prescribe TYMLOS;
- our ability to equip sales personnel with effective materials, including medical and sales literature to help them educate physicians and our healthcare providers regarding TYMLOS and its proper administration;
- our ability to successfully compete with established companies that currently have extensive, well-funded, and more experienced sales and marketing operations;
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with maintaining and further developing an independent sales and marketing organization.

If we are not successful in establishing and maintaining an effective commercial infrastructure, we will have difficulty generating product revenue, which would adversely affect our business and financial condition. If the cost of establishing and maintaining a sales and marketing organization exceeds the cost-effectiveness of doing so, we may not become profitable.

If we fail to maintain an effective distribution process utilizing cold chain logistics for TYMLOS, our business may be adversely affected.

We are in the process of completing the infrastructure necessary for distributing TYMLOS to patients. We contracted with a third-party logistics company to warehouse TYMLOS and distribute it to specialty pharmacies and wholesale distributors who will supply it to the market. TYMLOS is required to be maintained at a controlled refrigerated temperature throughout the distribution chain. This distribution chain requires significant coordination among our manufacturing, supply-chain and finance teams, as well as commercial departments, including market access, sales, and marketing. In addition, failure to secure and maintain contracts with appropriate pharmacy providers and/or wholesale distributors could negatively impact the distribution of TYMLOS, and failure to coordinate financial systems could negatively impact our ability to accurately report product revenue. If we are unable to effectively establish and manage the distribution process, the commercial launch and sales of TYMLOS will be delayed or severely compromised and our results of operations will be harmed.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

None.

Item 5. Other Information.

None.

Item 6. Exhibits.

A list of exhibits is set forth on the Exhibit Index immediately following the signature page of this Quarterly Report on Form 10-Q, and is incorporated herein by reference.

SIGNATURES

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

RADIUS HEALTH, INC.

By: /s/ Robert E. Ward

Robert E. Ward
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 1, 2017

By: /s/ B. Nicholas Harvey

B. Nicholas Harvey
Chief Financial Officer
(Principal Accounting and Financial Officer)

Date: May 1, 2017

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed/ Furnished Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Restated Certificate of Incorporation, filed on June 11, 2014	8-K	001-35726	3.1	6/13/2014	
3.2	Amended and Restated By-Laws	8-K	001-35726	3.2	6/13/2014	
10.1 †	First Amendment, dated July 1, 2015, to Executive Employment Agreement, dated December 12, 2013, between the Company and Robert Ward					*
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a)/15d-14(a)					*
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a)/15d-14(a)					*
32.1	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					**
101.INS	XBRL Instance Document					*
101.SCH	XBRL Taxonomy Extension Schema Document					*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					*

† Indicates management contract or compensatory plan or arrangement.
* Filed herewith.
** Furnished herewith.

Exhibit 10.1

FIRST AMENDMENT
TO
EXECUTIVE EMPLOYMENT AGREEMENT

This First Amendment (the " First Amendment ") to that certain Executive Employment Agreement between Radius Health, Inc., a Delaware corporation (together with any successor thereto, the " Company "), and Robert Ward (the " Executive ") dated as of December 12, 2013 (the " Employment Agreement ") is made as of this 1st day of July, 2015 (the " Amendment Date "), by and among the Company and the Executive. Except as set forth in this First Amendment, capitalized terms used but not defined herein shall have the meanings ascribed to them in the Employment Agreement.

WITNESSETH

WHEREAS, the Company and the Executive desire to amend the terms of the Employment Agreement as set forth herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Executive and the Company hereby agree to the following:

1. Amendment to the Employment Agreement . Effective as of the Amendment Date, Section 8(e) of the Employment Agreement is hereby amended and restated in its entirety to read as follows:

(e) TERMINATION WITHOUT CAUSE OR FOR GOOD REASON FOLLOWING A CHANGE OF CONTROL . If the Executive's employment by the Company is terminated by the Company other than for Cause (and not due to Disability or death), or by the Executive for Good Reason, in either case on or within twenty-four (24) months immediately following a Change of Control (as defined in the Plan, disregarding for this purpose clause (d) of such definition), then the Company shall pay or provide the Executive with the Accrued Amounts and all of the benefits described in Section 8(d) above, subject to compliance with Section 11; provided that : (i) the Salary Severance Period defined in Section 8(d)(1) shall be increased to a total of eighteen (18) months following the termination date; (ii) the COBRA Severance Period defined in Section 8(d)(2) shall be increased to a total of eighteen (18) months following the termination date; (iii) in lieu of the pro-rata bonus described in Section 8(d)(4), the Company shall pay the Executive one-hundred fifty percent (150%) of the Target Bonus for the performance year in which the Executive's termination occurs, payable as a lump sum payment on the Company's first ordinary payroll date occurring on or after the General Release effective date (namely, the date it can no longer be revoked); and (iv) in lieu of the vesting acceleration described in Section 8(d)(5), all of the outstanding unvested shares subject to the Executive's Company equity or equity-based awards shall become fully vested and the time period that the Executive may have to exercise such awards shall be extended for a period equal to the shorter of (i) nine (9) months, or (ii) the remaining term of the award.

2. Non-Compete Agreement . As a condition to the effectiveness of this First Amendment, Executive will execute and deliver to the Company the Confidentiality and Non-Competition Agreement attached as Exhibit A.

3. No Other Amendment . Except as expressly set forth in this First Amendment, the Employment Agreement shall remain unchanged and shall continue in full force and effect according to its terms.

4. Counterparts . This First Amendment may be executed in several counterparts, each of which shall be deemed an original and all of which together shall constitute one document.

IN WITNESS WHEREOF, the parties have executed this First Amendment as of the Amendment Date.

RADIUS HEALTH, INC.

By: /s/ Kurt C. Graves July 9, 2015
Name: Kurt C. Graves
Title: Chairman of the Board of Directors

EXECUTIVE

/s/ Robert Ward
Robert Ward

Exhibit A

Confidentiality and Non-Compete Agreement

[attached]

Confidentiality and Non-Competition Agreement

In consideration for the agreement of Radius Health, Inc., its subsidiaries, affiliates, successors or assigns (together the "Company") to employ me as an employee or consultant and my receipt of the compensation now and hereafter paid to me by the Company, I agree as follows:

1. Definition of Confidential Information . I acknowledge that I may be furnished or have access to confidential, proprietary or trade secret information relating to the Company's past, present or future (a) products, processes, formulas, patterns, compositions, compounds, projects, specifications, know how, research data, clinical data, personnel data, compilations, programs, devices, methods, techniques, inventions, software code, developments, documentation, original works of authorship, designs and technical data, and improvements thereto (collectively, "Technology"); (b) research and development activities, (c) marketing, business or business development activities, including without limitation prospective or actual bids or proposals, pricing information and financial information; (d) customers or suppliers; or (e) other administrative, management, planning, financial, marketing, purchasing or manufacturing activities. All of this type of information, whether it belongs to the Company or was provided to the Company by a third party with the understanding that it be kept confidential, and any documents, diskettes or other storage media, or other materials or items containing this type of information, are proprietary and confidential to the Company ("Confidential Information").

2. Obligations . I agree to preserve and protect the confidentiality of Confidential Information both during and after my employment with the Company. In addition, I agree not to, at any time during the term of this Confidentiality and Non-Competition Agreement (this "Agreement") or thereafter, (a) disclose or disseminate Confidential Information to any third party, including without limitation employees or consultants of the Company without a legitimate business need to know; (b) remove Confidential Information from the Company's premises or make copies of Confidential Information, except as required to perform my job; or (c) use Confidential Information for my own benefit or for the benefit of any third party. I also agree to take all actions necessary to avoid unauthorized disclosure and otherwise to maintain the confidential or proprietary nature of such Confidential Information. If I am not certain whether or not information is confidential, I will treat that information as Confidential Information until I have verification from the Company's Personnel Officer that the information is not Confidential Information.

3. Exceptions . The Company agrees that the obligations in Section 2 do not apply to any information that I can establish (a) has become publicly known without a breach of this Agreement by me or a third party's breach of an agreement to maintain the confidentiality of the information; or (b) was developed by me prior to the date this Agreement is signed, and prior to the date any earlier Confidentiality Agreement of the Company was signed, if the date of development can be established by documentary evidence. For the purposes of clause (a) of the preceding sentence, Confidential Information will be deemed to have become publicly known

only if I can establish that all material features comprising such information have become publicly known.

4. Former Employer Information . I agree that I will not, during my employment with the Company, improperly use or disclose any proprietary information or trade secrets of any former or current employer or any other person or entity and that I will not bring onto the premises of the Company any unpublished document or proprietary information belonging to any such employer, person or entity unless consented to in writing by such employer, person or entity.

5. Inventions and Works Retained and Licensed . I have attached hereto, as Exhibit A, a list describing all Technology which was created, made, conceived, developed or reduced to practice (collectively, "Developed") by me, solely or jointly, prior to my employment with the Company (collectively referred to as "Prior Works or Inventions"), which belong to me, which relate to the Company's business, products, or research and development, and which are not assigned to the Company hereunder, or, if no such list is attached, I represent that there are no such Prior Works or Inventions. If, in the course of my employment with the Company, I incorporate into a Company product, process or machine, or otherwise use for the benefit of the Company, a Prior Work or Invention, whether or not listed, owned by me or in which I have an interest, the Company is hereby granted and shall have a nonexclusive, royalty-free, assignable, irrevocable, perpetual, worldwide license to make, have made, modify, reproduce, distribute, prepare derivative works of, use, import, offer to sell, sell and otherwise exploit such Prior Work or Invention, including without limitation as part of or in connection with such product, process or machine or other use of the same.

6. Ownership of Work Product .

(a) I agree that the Company owns all right, title and interest in, including without limitation all trade secrets, patent rights, copyrights, trademarks, and other intellectual property rights (collectively, "Intellectual Property Rights") in the following works that I Develop, solely or jointly, during and for one (1) year after termination of my employment with the Company: (i) Technology that is created using the Company's facilities, supplies, information, trade secrets or time, (ii) Technology that relates directly or indirectly to or arises out of the actual or proposed business of the Company, including, without limitation the research and development activities of the Company, (iii) Technology that relates directly or indirectly to or arises out of any task assigned to me or work I perform for the Company or (iv) Technology that is based on Confidential Information (collectively "Work Product"). Because any Work Product will inevitably be based upon or somehow involve the Company's business, products, services or methodologies, I agree that any Work Product will belong to the Company even if I Develop it on my own time, using my own equipment, whether on the Company's premises or elsewhere. I will promptly provide full written disclosure to an officer of the Company of any Work Product I Develop, solely or jointly, during the term and for a period of one (1) year thereafter. I hereby irrevocably assign and agree to assign to the Company the ownership of, and all Intellectual Property Rights in, the Work Product. The Company will have the right to hold in its own name

all rights in the Work Product, including without limitation all Intellectual Property Rights therein. I also waive all claims to moral rights in any Work Product.

(b) I agree to cooperate fully with the Company, both during and after my employment with the Company, with respect to the procurement, maintenance and enforcement of copyrights, patents and other Intellectual Property Rights (both in the United States and foreign countries) relating to Work Product. I agree to execute and deliver all papers, including, without limitation, copyright applications, patent applications, declarations, oaths, formal assignments, assignments of priority rights, and powers of attorney, which the Company may deem necessary or desirable to protect its rights and interests in any Work Product. I further agree that if the Company is unable, after reasonable effort, to secure my signature on any such papers, any executive officer of the Company shall be entitled to execute any such papers as my agent and attorney-in-fact, and I hereby irrevocably designate and appoint each executive officer of the Company as my agent and attorney-in-fact to execute any such papers on my behalf, and to take any and all actions as the Company may deem necessary or desirable to protect its rights and interests in any Work Product, under the conditions described in this sentence.

7. Maintenance of Records . I agree to keep and maintain adequate and current written records of all Work Product made by me (solely or jointly with others) during the term of my employment with the Company. The records will be in the form of notes, sketches, drawings, and any other format that may be specified by the Company. The records will be available to and remain the sole property of the Company at all times.

8. Return of Confidential Information . I agree to return to the Company all Confidential Information in my possession, custody or control immediately upon my termination, or earlier, from the Company for any reason, if the Company requests.

9. Notification of New Employer . In the event I leave the employ of the Company for any reason, I hereby grant consent to notification by the Company to my new employer about my rights and obligations under this Agreement.

10. Noncompetition; Nonsolicitation of Employees . In order to protect the value of any Confidential Information, I agree to the following provisions against unfair competition, which I acknowledge represent a fair balance of the Company's rights to protect its business and my right to pursue employment:

(a) While I am employed (whether as an employee or consultant) at the Company and for a period (the "Restricted Period") immediately following termination of such employment (for any reason whatsoever, whether voluntary or involuntarily) of (i) one year or (ii) if later, until the end of the Salary Severance Period (as defined in the Employment Agreement, dated December 12, 2013, between me and the Company, as may be amended from time to time (the "Employment Agreement"), I agree that I will not, whether alone or as a partner, officer, director, consultant, agent, representative, employee or security holder of any company or their commercial enterprise, directly or indirectly engage in, have an equity interest in, interview for a potential employment or consulting relationship with or manage, provide services to or operate any person, firm, corporation, partnership, association, other entity or business or other activity

anywhere in the world that engages in business that is competitive with or renders services to any firm or business organization which competes with the business of the Company, which business includes, without limitation, the research, discovery and/or development of therapeutics to treat osteoporosis or hot flashes, or any other therapeutics that the Company is actively engaged in at the time of termination of your employment (the "Company's Business"); provided, that the Company's Business shall not include any business that the Company has not taken more than de minimis steps to engage in at the time of your termination of employment. The foregoing prohibition shall not prevent my employment or engagement after termination if such employment or engagement, in any capacity, does not involve work or matters related to the Company's Business. I shall be permitted to own securities of a public company not in excess of five (5%) of any class of such securities and to own stock partnership interests or other securities of any entity not in excess of five (5%) of any class of such securities and such ownership shall not be considered to be competition with the Company.

(b) While I am employed (whether as an employee or consultant) at the Company and for the Restricted Period, I agree that I will not (i) directly or indirectly solicit, recruit or induce any employee, customer, subscriber, supplier, vendor or business affiliate of the Company to terminate its employment or other arrangement with the Company or otherwise alter its relationship with the Company or (ii) directly or indirectly, for myself or any other person or entity, solicit or recruit any employee of the Company to work for a third party other than the Company or hire any such employee during the employee's employment with the Company and for a period of twelve months following the employee's employment with the Company or engage in any activity that would cause or encourage any employee to violate any agreement with the Company.

(c) In the event the terms of this Section 10 shall be determined by any court of competent jurisdiction to be unenforceable by reason of its extending for too great a period of time or over too great a geographical area or by reason of its being too extensive in any other respect, it will be interpreted to extend only over the maximum period of time for which it may be enforceable, over the maximum geographical area as to which it may be enforceable, or to the maximum extent in all other respects as to which it may be enforceable, all as determined by such court in such action.

11. Representations and Warranties . I represent and warrant that (a) I am able to perform the duties of my position and that my ability to work for the Company is not limited or restricted by any agreements or understandings between me and other persons or companies; (b) I will not disclose to the Company, its employees, consultants, clients, teaming partners or suppliers, or induce any of them to use or disclose, any confidential information or material belonging to others, except with the written permission of the owner of the information or material; and (c) any information, material or product I create or develop for, or any advice I provide to, the Company, its employees, consultants, clients, teaming partners or suppliers, will not rely or be based on confidential information or trade secrets I obtained or derived from a source other than the Company. I agree to indemnify and hold the Company harmless from damages, claims, costs and expenses based on or arising from the breach of any agreement or

understanding between me and another person or company or from my use or disclosure of any confidential information or trade secrets I obtained from sources other than the Company.

12. Damages and Injunctive Relief . I acknowledge and agree that:

(a) My obligations under this Agreement have a unique and substantial value to the Company and I remain obligated even if I voluntarily or involuntarily leave the Company's employment. I understand that if I violate this Agreement during or after my employment, the Company may be able to recover monetary damages from me and/or the other relief described below.

(b) I agree that a violation or even a threatened violation of this Agreement is likely to result in irreparable harm to the Company and its goodwill, the exact amount of which will be difficult or impossible to ascertain, and monetary damages alone will not completely compensate the Company for the harm. Accordingly, the Company may obtain an injunction prohibiting me from violating this Agreement, an order requiring me to render specific performance of the Agreement, and/or any other remedy which may be available at law or in equity.

(c) If a court determines that I have breached or attempted or threatened to breach this Agreement, I consent to the granting of an injunction restraining me from further breaches or attempted or threatened breaches of this Agreement, compelling me to comply with this Agreement, and/or prescribing other equitable remedies.

13. Miscellaneous Provisions .

(a) No failure or delay to act by the Company will waive any right, remedy or power contained in this Agreement. Any waiver by the Company must be in writing and signed by an officer of the Company to be effective.

(b) The provisions of this Agreement are applicable to Confidential Information and Work Product disclosed, developed or proprietary before or after I sign this Agreement.

(c) This Agreement is to be construed according to its fair meaning and not strictly for or against either party.

(d) This Agreement will be governed by the law of the Commonwealth of Massachusetts without regard to its conflicts of laws provisions that would result in the application of the laws of any other jurisdiction. Suit to enforce any provision of this Agreement or to obtain any remedy with respect hereto may be brought in a courts of the Commonwealth of Massachusetts and for this purpose I expressly consent to the jurisdiction of said courts.

(e) If any provision of this Agreement conflicts with the law of the Commonwealth of Massachusetts or if any provision is held invalid by a court with jurisdiction over the parties to this Agreement, the provision will be deemed to be restated to reflect as nearly as possible the parties' original intentions in accordance with applicable law, and the remainder of the Agreement will remain in full force and effect. If it is not possible to restate the provision in a

legal and valid manner, then the provision will be deemed not to be a part of the Agreement and the remaining provisions will remain in full force and effect.

(f) This document constitutes the entire agreement between the Company and me concerning the matters addressed in this Agreement and with respect to all periods after the date hereof it supersedes any prior agreement concerning those matters. This Agreement shall constitute the Confidentiality Agreement for purposes of the Employment Agreement. This Agreement may not be changed in any respect except by a written agreement signed by both parties. Any subsequent change or changes in my duties, salary or compensation will not affect the validity or scope of this Agreement.

(g) All remedies provided in this Agreement are cumulative and in addition to all other remedies which may be available at law or in equity.

Signature: _____

Print Name: Robert Ward

Date: _____

THE COMPANY: RADIUS HEALTH, INC.

By: _____

Title: _____

Exhibit A

None.

Exhibit 31.1

CERTIFICATIONS

I, Robert E. Ward, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: May 1, 2017

/s/ Robert E. Ward

Robert E. Ward

President and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, B. Nicholas Harvey, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: May 1, 2017

/s/ B. Nicholas Harvey

B. Nicholas Harvey

Chief Financial Officer

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Each of Robert E. Ward and B. Nicholas Harvey hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, in his capacity as President and Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer), respectively, of Radius Health, Inc. (the "Company"), that, to his knowledge, the Quarterly Report of the Company on Form 10-Q for the period ended March 31, 2017 as filed with the Securities and Exchange Commission (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 1, 2017

By: /s/ Robert E. Ward
Robert E. Ward
President and Chief Executive Officer

Date: May 1, 2017

By: /s/ B. Nicholas Harvey
B. Nicholas Harvey
Chief Financial Officer

This written statement is being furnished to the Securities and Exchange Commission as an exhibit to the Report, and "accompanies" such Report to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Report to which it relates), notwithstanding any general incorporation language contained in such filing. A signed original of this statement has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.