UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-Q

Quarterly report pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

For the Quarter Ended March 31, 2019

Commission File No. 000-21429

ArQule, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**04-3221586**
(State of Incorporation)	(I.R.S. Employer Identification Number)

One Wall Street, Burlington, Massachusetts 01803
(Address of Principal Executive Offices)

(781) 994-0300
(Registrant's Telephone Number, including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Common Stock, $0.01 par value	ARQL	The NASDAQ Stock Market LLC (NASDAQ Global Market)

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 Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 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 outstanding of the registrant's Common Stock as of April 17, 2019:

Common Stock, par value $.01 109,309,877 shares outstanding

ARQULE, INC.

QUARTER ENDED MARCH 31, 2019

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ARQULE, INC.

CONDENSED BALANCE SHEETS (Unaudited)

	March 31, 2019	December 31, 2018
	(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 17,824	$ 19,236
Marketable securities-short term	74,399	80,322
Contract receivables	3,300	5,984
Prepaid expenses	1,367	861
Total current assets	96,890	106,403
Property and equipment, net	339	69
Operating lease assets	996	—
Other assets	248	204
Total assets	$ 98,473	$ 106,676
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	$ 11,541	$ 12,948
Notes payable – current portion	2,917	1,667
Operating lease liability – current portion	562	—
Total current liabilities	15,020	14,615
Long-term liabilities:		
Notes payable – long term	11,923	13,093
Operating lease liability – long term	444	—
Total liabilities	27,387	27,708
Commitments and contingencies		
Stockholders' equity:		
Common stock, $0.01 par value; 200,000,000 shares authorized; 109,095,759 and 109,003,637 shares issued and outstanding at March 31, 2019 and December 31, 2018, respectively	1,091	1,090
Additional paid-in capital	628,260	625,993
Accumulated other comprehensive loss	22	(95)
Accumulated deficit	(558,287)	(548,020)
Total stockholders' equity	71,086	78,968
Total liabilities and stockholders' equity	$ 98,473	$ 106,676

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

ARQULE, INC.

CONDENSED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS (Unaudited)

	THREE MONTHS ENDED MARCH 31,	
	2019	2018
	(IN THOUSANDS, EXCEPT PER SHARE DATA)	
Revenue:		
Research and development revenue	$ 1,345	$ 4,138
Costs and expenses:		
Research and development	7,448	5,812
General and administrative	4,300	2,351
Total costs and expenses	11,748	8,163
Loss from operations	(10,403)	(4,025)
Interest income	566	159
Interest expense	(430)	(396)
Other expense	—	(2,270)
Net loss	(10,267)	(6,532)
Unrealized gain (loss) on marketable securities	117	(25)
Comprehensive loss	$ (10,150)	$ (6,557)
Basic and diluted net loss per share:		
Net loss per share	$ (0.09)	$ (0.07)
Weighted average basic and diluted common shares outstanding	109,020	87,112

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

ARQULE, INC.

CONDENSED STATEMENTS OF STOCKHOLDERS' EQUITY (Unaudited)

(IN THOUSANDS, EXCEPT SHARE DATA)

	PREFERRED STOCK		COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED OTHER COMPREHENSIVE INCOME/(LOSS)	ACCUMULATED DEFICIT	TOTAL STOCK-HOLDERS' EQUITY
	SHARES	AMOUNT	SHARES	PAR VALUE				
Balance at December 31, 2018	—	$ —	109,003,637	$ 1,090	$ 625,993	$ (95)	$ (548,020)	$ 78,968
Stock option exercises and issuance of common stock	—	—	92,122	1	143	—	—	144
Stock based compensation expense	—	—	—	—	2,124	—	—	2,124
Change in unrealized loss on marketable securities	—	—	—	—	—	117	—	117
Net loss							(10,267)	(10,267)
Balance at March 31, 2019	—	—	109,095,759	$ 1,091	$ 628,260	$ 22	$ (558,287)	$ 71,086

	PREFERRED STOCK		COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED OTHER COMPREHENSIVE INCOME/(LOSS)	ACCUMULATED DEFICIT	TOTAL STOCK-HOLDERS' EQUITY
	SHARES	AMOUNT	SHARES	PAR VALUE				
Balance at December 31, 2017	8,370	$ 8,843	87,110,202	$ 871	$ 547,364	$ (16)	$ (534,038)	$ 14,181
Stock option exercises and issuance of common stock	—	—	15,125	—	25	—	—	25
Stock based compensation expense	—	—	—	—	423	—	—	423
Warrants issued upon debt extension	—	—	—	—	120	—	—	120
Change in unrealized loss on marketable securities	—	—	—	—	—	(25)	—	(25)
Increase to opening accumulated deficit upon adoption of new accounting standard	—	—	—	—	—	—	1,500	1,500
Net loss							(6,532)	(6,532)
Balance at March 31, 2018	8,370	$ 8,843	87,125,327	$ 871	$ 547,932	$ (41)	$ (539,070)	$ 9,692

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

ARQULE, INC.

CONDENSED STATEMENTS OF CASH FLOWS (Unaudited)

	THREE MONTHS ENDED MARCH 31,	
	2019	2018
	(IN THOUSANDS)	
Cash flows from operating activities:		
Net loss	$ (10,267)	$ (6,532)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	11	13
Amortization of premium (discount) on marketable securities	267	56
Amortization of debt discount	80	78
Change in fair value of warrant liability	—	2,270
Non-cash stock compensation	2,124	423
Changes in operating assets and liabilities:		
Contract receivables	2,640	—
Prepaid expenses and others, net	(496)	(1,366)
Accounts payable and accrued expenses	(1,407)	10
Net cash used in operating activities	(7,048)	(5,048)
Cash flows from investing activities:		
Purchases of marketable securities	(18,623)	(13,832)
Proceeds from sale or maturity of marketable securities	24,396	9,211
Purchases of property and equipment	(281)	—
Net cash provided by (used in) investing activities	5,492	(4,621)
Cash flows from financing activities:		
Payments for notes payable amendment costs	—	(48)
Proceeds from stock option exercises and employee stock plan purchases	144	25
Net cash provided by (used in) financing activities	144	(23)
Net decrease in cash and cash equivalents	(1,412)	(9,692)
Cash and cash equivalents, beginning of period	19,236	20,229
Cash and cash equivalents, end of period	$ 17,824	$ 10,537

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

1. NATURE OF OPERATIONS AND BASIS OF PRESENTATION

We are a biopharmaceutical company engaged in the research and development of innovative therapeutics to treat cancers and rare diseases. Our mission is to discover, develop and commercialize novel small molecule drugs in areas of high unmet need that will dramatically extend and improve the lives of our patients. These product candidates target biological pathways implicated in a wide range of cancers and certain non-oncology indications. Our discovery and development efforts are guided, when possible, by an understanding of the role of biomarkers, which are indicators of a particular biological condition or process and may predict the clinical benefit of our compounds in defined patient populations. Our clinical-stage pipeline consists of four product candidates, all of which are in targeted patient populations, making ArQule a leader among companies our size in precision medicine.

ArQule has a long history of kinase drug discovery and development, having discovered and introduced ten kinase inhibitors into clinical trials. Our drug discovery efforts have been informed by our historical expertise in chemistry, our work in rational drug design and by our insight into kinase binding and regulation. We have applied this knowledge to produce significant chemical matter for a number of kinase targets and to build an extensive library of proprietary compounds with the potential to target multiple kinases in oncology and other therapeutic areas, such as rare diseases. We may bring further preclinical programs forward and interrogate our library against new targets beyond kinases either directly or with collaborators.

Our proprietary pipeline of orally bioavailable product candidates is directed toward molecular targets and biological processes with demonstrated roles in the development of both human cancers and rare, non-oncology diseases. All of these programs are being developed in targeted, biomarker-defined patient populations. By seeking out subgroups of patients that are most likely to respond to our product candidates, we seek to identify small, often orphan, indications that allow for focused and efficient development. At the same time, in addition to pursuing these potentially fast-to-market strategies, we also pursue development in other indications that could allow us to expand the utility of the product candidates if approved. Our clinical pipeline includes the following product candidates:

- ARQ 531 is a potent and reversible dual inhibitor of both wild type and C481S-mutant Bruton's tyrosine kinase (BTK) that is in Phase 1 clinical development for B-cell malignancies refractory to other therapeutic options;

- Miransertib (ARQ 092) is a potent and selective inhibitor of protein kinase B (AKT), a serine/threonine kinase. We expect to commence a registrational clinical trial of miransertib for the treatment of Proteus syndrome and PIK3CA-Related Overgrowth Syndromes (PROS) in the first half of 2019. Miransertib is also in Phase 1b clinical development in oncology in combination with the hormonal therapy, anastrozole;

- ARQ 751 is a next-generation, highly potent and selective inhibitor of AKT that is in Phase 1 clinical development for solid tumors harboring AKT, phosphoinositide 3-kinase (PI3K) or phosphatase and tensin homolog (PTEN) loss mutations; and

- Derazantinib (ARQ 087) is a multi-kinase inhibitor designed to preferentially inhibit the fibroblast growth factor receptor (FGFR) family of kinases that is in a registrational clinical trial in intrahepatic cholangiocarcinoma (iCCA) in patients with FGFR2 fusions. Derazantinib was exclusively licensed to Basilea Pharmaceutica Limited (Basilea) in April 2018 in the United States, European Union, Japan and the rest of the world, excluding the People's Republic of China, Hong Kong, Macau, and Taiwan (collectively, Greater China) where derazantinib was exclusively licensed to Sinovant Sciences Ltd., a subsidiary of Roivant Sciences Ltd. (Sinovant) in February 2018.

Our uses of cash for operating activities have primarily consisted of salaries and wages for our employees, facility and facility-related costs for our offices and laboratories, fees paid in connection with preclinical and clinical studies, laboratory supplies and materials, and professional fees. The sources of our cash flow from operating activities have historically consisted primarily of upfront and other payments received from our collaborators in connection with license agreements. In the three months ended March 31, 2019 and 2018, our net use of cash was primarily driven by payments for operating expenses which resulted in net cash outflows of $7.0 million and $5.0 million, respectively.

Our cash requirements may vary materially from those now planned depending on the results of our drug discovery and development strategies, our ability to enter into additional corporate collaborations and the terms of such collaborations, results of research and development, unanticipated required capital expenditures, competitive and technological advances, acquisitions and other factors. We cannot guarantee that we will be able to develop any of our product candidates into a commercial product.

In January 2017, we entered into a loan and security agreement with Oxford Finance, LLC (the "Loan Agreement") with a principal balance of $15 million (see Note 8). The terms of the Loan Agreement, which was amended in February 2018, require payments of interest on a monthly basis through August 2019 and payments of principal and interest from September 2019 to August 2022. The maturity date of the loan is August 1, 2022.

In November 2017, we entered into definitive securities purchase agreements with certain institutional investors. In conjunction with this stock offering we raised net proceeds of $9.5 million through the sale of 8,370 shares of series A convertible preferred stock (Series A Preferred) and warrants to purchase 2,259 shares of Series A Preferred (Warrants). Each share of Series A Preferred converted into 1,000 shares of common stock and each associated Warrant converted into 1,000 common stock warrants upon the effectiveness on May 8, 2018 of an amendment to our restated certificate of incorporation to increase the number of authorized shares of common stock thereunder. The Warrants have a post-conversion exercise price of $1.75 per share, are exercisable immediately and expire in May 2022.

In February 2018, we entered into a License Agreement with Sinovant pursuant to which ArQule granted Sinovant an exclusive license to develop and commercialize derazantinib in Greater China. The agreement provided for an upfront payment to ArQule of $3 million and a $2.5 million development milestone that was paid in the first quarter of 2019. We are also eligible for up to an additional $82 million in regulatory and sales milestones. Upon commercialization, we are entitled to receive double digit royalties in the low teens from Sinovant on net sales of derazantinib in Greater China. Sinovant will be responsible for all costs and expenses of development, manufacture and commercialization in Greater China. In the three months ended March 31, 2019, we recognized revenue of $1.1 million for providing certain research and development services to Sinovant. During the three months ended March 31, 2018, we recognized revenue of $3.0 million for completing our performance obligation under this licensing agreement.

In April 2018, we entered into a License Agreement with Basilea pursuant to which ArQule granted Basilea an exclusive license to develop and commercialize derazantinib in the United States, European Union, Japan and the rest of the world, excluding Greater China. Under the terms of the agreement, we received an upfront payment of $10 million and are eligible for up to $326 million in regulatory and commercial milestones. Upon commercialization, we are entitled to receive staggered royalties on future net sales of derazantinib ranging from the high-single digits to the mid-teens on direct sales and mid-single digits to low-double digits on indirect sales. Basilea will be responsible for all costs and expenses of development, manufacture and commercialization in its territory. Under certain circumstances, we may have the opportunity to promote derazantinib in the United States directly. In the three months ended March 31, 2019, we recognized revenue of $0.2 million for providing certain research and development services to Basilea, recognized as revenue on a cost-to-cost method.

In July 2018, we sold 12,650,000 shares of common stock at $5.50 per share for aggregate net proceeds of approximately $64.6 million after commissions and other offering expenses.

We anticipate that our cash, cash equivalents and marketable securities on hand at March 31, 2019 and the financial support from our licensing agreements will be sufficient to finance our operations for at least 12 months from the issuance date of these financial statements. We expect that we will need to raise additional capital or incur indebtedness to continue to fund our operations in the future. Our ability to raise additional funds will depend on financial, economic and market conditions, and due to global capital and credit market conditions or for other reasons, we may be unable to raise capital when needed, or on terms favorable to us. If necessary funds are not available, we may have to delay, reduce the scope of, or eliminate some of our development programs, potentially delaying the time to market for any of our product candidates.

2. COLLABORATIONS AND ALLIANCES

Basilea Licensing Agreement

In April 2018, we entered into a License Agreement with Basilea pursuant to which ArQule granted Basilea an exclusive license to develop and commercialize derazantinib in the United States, European Union, Japan and the rest of the world, excluding Greater China. Under the terms of the agreement, we received an upfront payment of $10 million and are eligible for up to $326 million in regulatory and commercial milestones. Upon commercialization, we are entitled to receive staggered royalties on future net sales of derazantinib ranging from the high-single digits to the mid-teens on direct sales and mid-single digits to low-double digits on indirect sales. Basilea will be responsible for all costs and expenses of development, manufacture and commercialization in its territory. Under certain circumstances, we may have the opportunity to promote derazantinib in the United States directly.

Revenue in the three months ended March 31, 2019 totaled $0.2 million for research and development services to Basilea, recognized as revenue on a cost-to-cost method.

Sinovant Licensing Agreement

In February 2018, we entered into a License Agreement with Sinovant pursuant to which ArQule granted Sinovant an exclusive license to develop and commercialize derazantinib in Greater China. The agreement provided for an upfront payment to ArQule of $3 million and a $2.5 million development milestone that was paid in the first quarter of 2019. We are also eligible for up to an additional $82 million in regulatory and sales milestones. Upon commercialization, we are entitled to receive double digit royalties in the low teens from Sinovant on net sales of derazantinib in Greater China. Sinovant will be responsible for all costs and expenses of development, manufacture and commercialization in Greater China. For the three months ended March 31, 2019, we recognized revenue of $1.1 million for certain research and development services that we provided. For the three months ended March 31, 2018, we recognized revenue of $3.0 million related to completing our performance obligation under this licensing agreement.

Other Licensing Agreements

In October 2017, we entered into a non-exclusive license agreement for certain library compounds. The licensed compounds were delivered and were subject to quality and acceptance testing. For the three months ended March 30, 2019 and March 31, 2018, we recorded revenue of zero and $1.1 million, respectively, based upon the achievement of the quality and acceptance testing for the period under this completed agreement.

3. MARKETABLE SECURITIES AND FAIR VALUE MEASUREMENTS

We generally classify our marketable securities as available-for-sale at the time of purchase and re-evaluate such designation as of each balance sheet date. Since we generally intend to convert them into cash as necessary to meet our liquidity requirements our marketable securities are classified as cash equivalents if the original maturity, from the date of purchase, is ninety days or less and as short-term investments if the original maturity, from the date of purchase, is in excess of ninety days but less than one year. Our marketable securities are classified as long-term investments if the maturity date is in excess of one year of the balance sheet date.

We report available-for-sale investments at fair value as of each balance sheet date and include any unrealized gains and, to the extent deemed temporary, unrealized losses in stockholders' equity. Realized gains and losses are determined using the specific identification method and are included in other income (expense) in the statement of operations and comprehensive loss.

We conduct quarterly reviews to determine the fair value of our investment portfolio and to identify and evaluate each investment that has an unrealized loss, in accordance with the meaning of other-than-temporary impairment and its application to certain investments. An unrealized loss exists when the current fair value of an individual security is less than its amortized cost basis. In the event that the cost basis of a security exceeds its fair value, we evaluate, among other factors, the duration of the period that, and extent to which, the fair value is less than cost basis, the financial health of and business outlook for the issuer, including industry and sector performance, and operational and financing cash flow factors, overall market conditions and trends, our intent to sell the investment and if it is more likely than not that we would be required to sell the investment before its anticipated recovery. Unrealized losses on available-for-sale securities that are determined to be temporary, and not related to credit loss, are recorded in accumulated other comprehensive income (loss).

For available-for-sale debt securities with unrealized losses, we perform an analysis to assess whether we intend to sell or whether we would more likely than not be required to sell the security before the expected recovery of the amortized cost basis. Where we intend to sell an available-for-sale debt security, or may be required to do so, the security's decline in fair value is deemed to be other-than-temporary and the full amount of the unrealized loss is reflected in the statement of operations and comprehensive loss as an impairment loss.

Regardless of our intent to sell a security, we perform additional analysis on all securities with unrealized losses to evaluate losses associated with the creditworthiness of the security. Credit losses are identified where we do not expect to receive cash flows sufficient to recover the amortized cost basis of a security.

We invest our available cash primarily in commercial paper, money market funds, and U.S. Treasury bill funds that have investment grade ratings.

The following is a summary of the fair value of available-for-sale marketable securities we held at March 31, 2019 and December 31, 2018 (in thousands):

March 31, 2019	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Security type				
Corporate debt securities-short term	$ 74,377	$ 25	$ (3)	$ 74,399
Total available-for-sale marketable securities	$ 74,377	$ 25	$ (3)	$ 74,399

December 31, 2018	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Security type				
Corporate debt securities-short term	$ 80,417	$ 2	$ (97)	$ 80,322
Total available-for-sale marketable securities	$ 80,417	$ 2	$ (97)	$ 80,322

None of our available-for-sale marketable securities were in a continuous unrealized loss position for more than 12 months at March 31, 2019 or December 31, 2018.

The following tables present information about our assets and liabilities that are measured at fair value on a recurring basis for the periods presented and indicates the fair value hierarchy of the valuation techniques we utilized to determine such fair value. There were no transfers in or out of Level 1 or Level 2 measurements for the periods presented (in thousands):

	March 31, 2019	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash equivalents	$ 15,051	$ 15,051	$ —	$ —
Corporate debt securities-short term	74,399	—	74,399	—
Total	$ 89,450	$ 15,051	$ 74,399	$ —

	December 31, 2018	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash equivalents	$ 14,444	$ 14,444	$ —	$ —
Corporate debt securities-short term	80,322	—	80,322	—
Total	$ 94,766	$ 14,444	$ 80,322	$ —

4. ACCOUNTS PAYABLE AND ACCRUED EXPENSES

Accounts payable and accrued expenses include the following at March 31, 2019 and December 31, 2018 (in thousands):

	March 31, 2019	December 31, 2018
Accounts payable	$ 981	$ 1,329
Accrued payroll	1,221	1,971
Accrued outsourced preclinical and clinical fees	8,269	8,497
Accrued professional fees	773	666
Other accrued expenses	297	485
	$ 11,541	$ 12,948

5. NET LOSS PER SHARE

Net loss per share is computed using the weighted average number of common shares outstanding. Basic and diluted net loss per share amounts are equivalent for the periods presented as the inclusion of potential common shares in the number of shares used for the diluted computation would be anti-dilutive to loss per share. Potential common shares, for the three months ended March 31, 2019, include 12,839,695 shares that would be issued upon the exercise of outstanding employee and Board of Director stock options, 93,168 shares that would be issued upon the exercise of the warrants from our February 2018 amendment to our loan agreement, 3,123,674 shares that would be issued upon the exercise of the warrants from our October 2017 common stock offering and 2,259,000 common shares that would be issued upon the exercise of the warrants from our November 2017 preferred stock offering. Potential common shares, for the three months ended March 31, 2018, include 10,921,388 shares that would be issued upon the exercise of outstanding employee and Board of Director stock options, 354,330 shares that would be issued upon the exercise of the warrants from our January 2017 loan agreement, 93,168 shares that would be issued upon the exercise of the warrants from our February 2018 amendment to our loan agreement, 3,123,674 shares that would be issued upon the exercise of the warrants from our October 2017 common stock offering, 8,370,000 common shares that would have been issued upon the conversion of the shares from our November 2017 preferred stock offering and 2,259,000 common shares that would be issued upon the exercise of the warrants from our November 2017 preferred stock offering. The preferred shares and warrants from our November 2017 preferred stock offering were converted to common stock and common stock warrants in May 2018.

6. STOCK-BASED COMPENSATION AND STOCK PLANS

Our stock-based compensation cost is measured at the grant date, based on the calculated fair value of the award, and is recognized as an expense over the employees' requisite service period (generally the vesting period of the equity grant). We estimate the fair value of stock options using the Black-Scholes valuation model. Key input assumptions used to estimate the fair value of stock options include the exercise price of the award, expected option term, expected volatility of our stock over the option's expected term, risk-free interest rate over the option's expected term, and the expected annual dividend yield. We believe that the valuation technique and approach utilized to develop the underlying assumptions are appropriate in calculating the fair values of our stock options granted in the three months ended March 31, 2019 and 2018.

The following table presents stock-based compensation expense included in our condensed statement of operations and comprehensive loss (in thousands):

	Three Months Ended March 31,	
	2019	2018
Research and development	$ 302	$ 106
General and administrative	1,822	317
Total stock-based compensation expense	$ 2,124	$ 423

In the three months ended March 31, 2019, we recorded stock-based compensation expense of $1.0 million related to the modification of awards to our former Chief Financial Officer in connection with his retirement in March 2019. In the three months ended March 31, 2019 and 2018, no stock-based compensation expense was capitalized and there were no recognized tax benefits associated with the stock-based compensation expense.

Option activity under our stock plans for the three months ended March 31, 2019 was as follows:

Stock Options	Number of Shares	Weighted Average Exercise Price
Outstanding as of December 31, 2018	10,748,157	$ 2.90
Granted	2,277,010	3.68
Exercised	(92,122)	1.56
Cancelled	(93,350)	1.47
Outstanding as of March 31, 2019	12,839,695	$ 3.06
Exercisable as of March 31, 2019	7,567,168	$ 3.25

The aggregate intrinsic value of options outstanding at March 31, 2019 was $26,673 including $15,856 related to exercisable options. The weighted average fair value of options granted in the three months ended March 31, 2019 and 2018 was $2.16 and $1.07 per share, respectively. The intrinsic value of options exercised in the three months ended March 31, 2019 was $293.

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Vested and unvested expected to vest at March 31, 2019	12,687,305	$ 3.06	6.3	$ 26,402
Exercisable at March 31, 2019	7,567,168	$ 3.25	4.3	$ 15,856

The total compensation cost not yet recognized as of March 31, 2019 related to non-vested option awards was $7.3 million, which will be recognized over a weighted-average period of 3.0 years. During the three months ended March 31, 2019, 13,350 shares expired and 80,000 shares were forfeited. The weighted average remaining contractual life for options exercisable at March 31, 2019 was 4.3 years.

7. COMMON STOCK OFFERINGS

In July 2018, we sold 12,650,000 shares of common stock at $5.50 per share for aggregate net proceeds of approximately $64.6 million after commissions and other offering expenses.

8. LOAN AGREEMENT

In January 2017, we entered into a loan and security agreement (the "Loan Agreement") with Oxford Finance LLC, as collateral agent and a lender (the "Lender"), and any additional lenders that may become parties thereto.

Pursuant to the terms of the Loan Agreement, the Lender issued us a loan in the principal amount of $15.0 million. The loan bears interest at the rate equal to (a) the greater of (i) the 30 day U.S. LIBOR rate reported in the Wall Street Journal on the date occurring on the last business day of the month that immediately precedes the month in which the interest will accrue or (ii) 0.65% (b) plus 6.85%. The applicable interest rate on the loan at March 31, 2019 was 9.34%. The Loan Agreement required interest-only payments for 18 months, followed by an amortization period of 36 months. The original maturity date of the loan was August 1, 2021 and in February 2018 we signed an amendment with the Lender which extended the maturity date by one year to August 1, 2022 with principal payments commencing on September 1, 2019.

The expected remaining repayment of the $15 million loan principal at March 31, 2019 is as follows (in thousands):

2019	$ 1,667
2020	5,000
2021	5,000
2022	3,333
	$ 15,000

Upon prepayment of the loan or on the maturity date, we will pay to the Lender a final payment of 6% of the full principal amount of the loan. We may elect to prepay all amounts owed prior to the maturity date, provided that a prepayment fee also is paid equal to 1% of the outstanding principal balance.

Pursuant to the terms of the Loan Agreement, we are bound by certain affirmative covenants setting forth actions that are required during the term of the Loan Agreement, including, without limitation, certain information delivery requirements, obligations to maintain certain insurance, and certain notice requirements. Additionally, we are bound by certain negative covenants setting forth actions that are not permitted to be taken during the term of the Loan Agreement without consent, including, without limitation, incurring certain additional indebtedness, entering into certain mergers, acquisitions or other business combination transactions, or incurring any non-permitted lien or other encumbrance on our assets. We were in compliance with the loan covenants at March 31, 2019.

Upon the occurrence of an event of default under the Loan Agreement (subject to cure periods for certain events of default), all amounts owed by us thereunder will begin to bear interest at a rate that is 5% higher than the rate that is otherwise applicable and may be declared immediately due and payable by the Lender. Events of default under the Loan Agreement include, among other things, the following: the occurrence of certain bankruptcy events; the failure to make payments under the Loan Agreement when due; the occurrence of a material adverse change in our business, operations or financial condition; the rendering of certain types of fines or judgments against us; any breach by us of any covenant (subject to cure for certain covenants only) made in the Loan Agreement; and the failure of any representation or warranty made by us in connection with the Loan Agreement to be correct in all material respects when made.

We have granted the Lender, a security interest in substantially all of our personal property, rights and assets, other than intellectual property, to secure the payment of all amounts owed to the Lender under the Loan Agreement. We have also agreed not to encumber any of our intellectual property without the Lender's prior written consent.

In February 2018, the Loan Agreement was amended requiring payments of interest on a monthly basis through August 2019 and payments of interest and principal from September 2019 to August 2022. In connection with entering into the amendment we issued to the Lender warrants to purchase an aggregate of 93,168 shares of our common stock. The warrants are exercisable immediately, have a per-share exercise price of $1.61 and have a term of ten years. The amendment was determined to be a modification of debt in accordance with ASC 470 Debt. We have recorded the relative fair value of the additional warrants as a discount to the carrying value of the notes payable with a corresponding increase to additional paid in capital.

9. PREFERRED STOCK AND WARRANT LIABILITY

Our amended Certificate of Incorporation authorizes the issuance of up to 1 million shares of $0.01 par value preferred stock.

In November 2017, we entered into definitive securities purchase agreements with certain institutional investors. In conjunction with this stock offering we raised net proceeds of $9.5 million through the sale of 8,370 shares of series A convertible preferred stock (Series A Preferred) and warrants covering 2,259 shares of Series A Preferred (Warrants). Each share of Series A Preferred converted into 1,000 shares of common stock and each associated Warrant converted into 1,000 common stock warrants upon the effectiveness on May 8, 2018, of an amendment to our restated certificate of incorporation to increase the number of authorized shares of common stock thereunder.

The terms of the Series A Preferred for which the warrants were exercisable required that the fair value allocated to the warrants at the date of issuance be recorded as a liability on our balance sheet. The warrant liability was marked to market value through the statement of operations and comprehensive loss as a non-cash gain or loss at each reporting period until the conversion of the Series A Preferred to common stock on May 8, 2018. Upon conversion, the warrant liability of $3,064 was extinguished with an offsetting amount included as additional paid-in capital in stockholders' equity. Accordingly, at each of December 31, 2018 and March 31, 2019, the warrant liability was zero. In the three months ended March 31, 2018, we recognized a non-cash expense of $2.3 million recorded in other expense on the statement of operations and comprehensive loss related to a net increase in the fair value of the warrant liability.

10. RECENT ACCOUNTING PRONOUNCEMENTS

Recently Adopted Accounting Pronouncements

In February 2016 the Financial Accounting Standards Board ("FASB") issued Accounting Standard Update ("ASU") No. 2016-02, Leases (Topic 842). This standard established a right-of-use model that requires all lessees to recognize right-of-use assets and liabilities on their balance sheet that arise from leases with terms longer than 12 months as well as provide disclosures with respect to certain qualitative and quantitative information related to their leasing arrangements. This standard became effective for us on January 1, 2019 ("the Effective Date").

The FASB has subsequently issued the following amendments to ASU 2016-02, which also became effective on January 1, 2019, and which we collectively refer to as the new leasing standards:

- ASU No. 2018-01, Leases (Topic 842): Land Easement Practical Expedient for Transition to Topic 842, which permits an entity to elect an optional transition practical expedient to not evaluate under Topic 842 land easements that exist or expired prior to adoption of Topic 842 and that were not previously accounted for as leases under the prior standard, ASC 840, Leases.

- ASU No. 2018-10, Codification Improvements to Topic 842, Leases, which amends certain narrow aspects of the guidance issued in ASU 2016-02.

- ASU No. 2018-11, Leases (Topic 842): Targeted Improvements, which allows for a transition approach to initially apply ASU 2016-02 at the adoption date and recognize a cumulative-effect adjustment to the opening balance of accumulated deficit in the period of adoption as well as an additional practical expedient for lessors to not separate non-lease components from the associated lease component.

- ASU No. 2018-20, Narrow-Scope Improvements for Lessors, which contains certain narrow scope improvements to the guidance issued in ASU 2016-02.

We adopted the new lease accounting standard on January 1, 2019, using a modified retrospective transition approach of applying the new standard to all leases existing as of, or entered into after, the Effective Date and with remaining terms of 12 months or more. Our assessment included the lease of our headquarters in Burlington, MA which commenced in May 2015 and expires in July 2020 and our laboratory space in Woburn, MA which commenced in March 2019 and expires in April 2024.

The adoption of the new standard on January 1, 2019 resulted in the recording of a right-of-use asset and lease liability of $0.7 million related to the lease of our headquarters in Burlington, MA that existed on the Effective Date. The lease liability is based on the present value of the remaining minimum lease payments, discounted using our secured incremental borrowing rate at the Effective Date. As permitted under ASC 842, we elected several practical expedients and therefore did not reassess at the Effective Date (1) whether any existing contract is or contains a lease, (2) the classification of existing leases, and (3) whether previously capitalized costs continue to qualify as initial indirect costs. We also elected the practical expedient to not separate lease and non-lease components. The application of the practical expedients did not have a significant impact on the measurement of the operating lease liability. In addition, we implemented internal controls to enable the preparation of financial information on adoption. The adoption did not have a material impact on our condensed financial statements related to the existing lease of our headquarters in Burlington, MA for the three months ended March 31, 2019. As a result, there was no cumulative-effect adjustment.

For contracts entered into on or after the Effective Date, at the inception of a contract we assess whether the contract is, or contains, a lease. Our assessment is based on: (1) whether the contract involves the use of a distinct identified asset, (2) whether we obtain the right to substantially all the economic benefit from the use of the asset throughout the period, and (3) whether we have the right to direct the use of the asset. At inception of a lease, we allocate the consideration in the contract to each lease component based on its relative stand-alone price to determine the lease payments.

Leases are classified as either finance leases or operating leases. A lease is classified as a finance lease if any one of the following criteria are met: (1) the lease transfers ownership of the asset by the end of the lease term, (2) the lease contains an option to purchase the asset that is reasonably certain to be exercised, (3) the lease term is for a major part of the remaining useful life of the asset or (4) the present value of the lease payments equals or exceeds substantially all of the fair value of the asset. A lease is classified as an operating lease if it does not meet any one of these criteria. Our leases are comprised of operating leases related to our headquarters in Burlington, MA and laboratory space in Woburn, MA.

For all leases at the lease commencement date, a right-of-use asset and a lease liability are recognized. The right-of-use asset represents the right to use the leased asset for the lease term. The lease liability represents the present value of the lease payments under the lease.

The right-of-use asset is initially measured at cost, which primarily comprises the initial amount of the lease liability, plus any initial direct costs incurred, consisting mainly of brokerage commissions, less any lease incentives received. All right-of-use assets are reviewed for impairment. The lease liability is initially measured at the present value of the lease payments, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, our secured incremental borrowing rate. For our operating leases, we use our secured incremental borrowing rate if the implicit lease rate cannot be determined.

Lease payments included in the measurement of the lease liability comprise the following: the fixed noncancelable lease payments, payments for optional renewal periods where it is reasonably certain the renewal period will be exercised, and payments for early termination options unless it is reasonably certain the lease will not be terminated early.

Lease expense for operating leases consists of the lease payments plus any initial direct costs and is recognized on a straight-line basis over the lease term. Certain leases contain rent escalation clauses and variable lease payments that require additional rental payments in later years of the term, including payments based on an index or inflation rate. Payments based on the change in an index or inflation rate, or payments based on a change in our portion of the operating expenses, including real estate taxes and insurance, were not included in the initial lease liability and are recorded as a period expense when incurred. Our operating leases may include an option to renew the lease term for various renewal periods and/or to terminate the leases early. As an option to exercise the renewal or early termination of our operating leases were either non-existent or not reasonably certain as of the ASC 842 Effective Date for our headquarters in Burlington, MA and the lease commencement date our laboratory space in Woburn, MA, we have not included such options in our initial lease liability.

As of March 31, 2019, we recognized right-of-use assets related to our headquarters in Burlington, MA and laboratory space in Woburn, MA of $1.0 million and the related net lease liabilities of $1.0 million, which represents the net present value of the remaining lease payments of approximately $1.2 million, discounted using the Company's incremental borrowing rate of 9.34%. We have included the right-of-use assets and lease liabilities in the condensed balance sheet as of March 31, 2019.

The following table summarizes future minimum lease payments for our non-cancelable operating leases as of March 31, 2019 (in thousands):

Year Ending December 31,		
2019 (nine months ending December 31, 2019)	$	452
2020		395
2021		98
2022		98
2023		98
Thereafter		26
Total minimum lease payments	$	1,167

As previously disclosed in our 2018 Annual Report on Form 10-K and under the previous lease accounting standard, ASC 840, *Leases*, the total commitment for our non-cancelable operating lease was $0.8 million as of December 31, 2018 (in thousands):

Year Ending December 31,		
2019	$	523
2020		296
Thereafter		—
Total minimum lease payments	$	819

Recently Issued Accounting Pronouncements

In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement, ("ASU 2018-13"). The new standard removes certain disclosures, modifies certain disclosures and adds additional disclosures related to fair value measurement. The new standard will be effective beginning January 1, 2020 and early adoption is permitted. We are currently evaluating the impact that the adoption of ASU 2018-13 will have on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-15, Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract, ("ASU 2018-15"). The amendments in this update align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by the amendments in this update. The new standard will be effective beginning January 1, 2020 and early adoption is permitted. The amendments in this update should be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. We are currently evaluating the impact that the adoption of ASU 2018-15 will have on our consolidated financial statements.

11. INCOME TAXES

As of December 31, 2018, we had federal net operating losses ("NOL"), state NOL, and research and development credit carryforwards of approximately $422,045, $240,916 and $28,378 respectively, which expire at various dates through 2037.

As of March 31, 2019, and December 31, 2018 we had no unrecognized tax benefits. We do not expect that the total amount of unrecognized tax benefits will significantly increase in the next twelve months. Our policy is to recognize interest and penalties related to uncertain tax positions in income tax expense. As of March 31, 2019, and December 31, 2018, we had no accrued interest or penalties related to uncertain tax positions. Our U.S. federal tax returns for the tax years 2015 through 2018 and our state tax returns for the tax years 2015 through 2018 remain open to examination. Prior tax years remain open to the extent of NOL and tax credit carryforwards.

Utilization of NOL and research and development credit carryforwards may be subject to a substantial annual limitation in the event of an ownership change that has occurred previously or could occur in the future pursuant to Section 382 and 383 of the Internal Revenue Code of 1986, as amended, as well as similar state provisions. An ownership change may limit the amount of NOL and research and development credit carryforwards that can be utilized annually to offset future taxable income, and may, in turn, result in the expiration of a portion of those carryforwards before utilization. In general, an ownership change, as defined by Section 382, results from transactions that increase the ownership of certain stockholders or public groups in the stock of a corporation by more than 50 percentage points over a three-year period. We undertook a detailed study of our NOL and research and development credit carryforwards through January 31, 2019, to determine whether such amounts are likely to be limited by Sections 382 or 383. As a result of this analysis, we currently do not believe any Sections 382 or 383 limitations will significantly impact our ability to offset income with available NOL and research and development credit carryforwards. However, future ownership changes under Section 382 may limit our ability to fully utilize these tax benefits.

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

The following discussion should be read in conjunction with our condensed financial statements and accompanying notes contained in this quarterly report on Form 10-Q and our audited financial statements and related notes included in our Annual Report on Form 10-K for the year ended December 31, 2018.

We are a biopharmaceutical company engaged in the research and development of innovative therapeutics to treat cancers and rare diseases. Our mission is to discover, develop and commercialize novel small molecule drugs in areas of high unmet need that will dramatically extend and improve the lives of our patients. These product candidates target biological pathways implicated in a wide range of cancers and certain non-oncology indications. Our discovery and development efforts are guided, when possible, by an understanding of the role of biomarkers, which are indicators of a particular biological condition or process and may predict the clinical benefit of our compounds in defined patient populations. Our clinical-stage pipeline consists of four product candidates, all of which are in targeted patient populations, making ArQule a leader among companies our size in precision medicine.

ArQule has a long history of kinase drug discovery and development, having discovered and introduced ten kinase inhibitors into clinical trials. Our drug discovery efforts have been informed by our historical expertise in chemistry, our work in rational drug design and by our insight into kinase binding and regulation. We have applied this knowledge to produce significant chemical matter for a number of kinase targets and to build an extensive library of proprietary compounds with the potential to target multiple kinases in oncology and other therapeutic areas, such as rare diseases. We may bring further preclinical programs forward and interrogate our library against new targets beyond kinases either directly or with collaborators.

Our pipeline of orally bioavailable product candidates is directed toward molecular targets and biological processes with demonstrated roles in the development of both human cancers and rare, non-oncology diseases. All of these programs are being developed in targeted, biomarker-defined patient populations. By seeking out subgroups of patients that are most likely to respond to our product candidates, we seek to identify small, often orphan, indications that allow for focused and efficient development. At the same time, in addition to pursuing these potentially fast-to-market strategies, we also pursue development in other indications that could allow us to expand the utility of the product candidates if approved. Our clinical pipeline includes the following product candidates:

- ARQ 531 is a potent and reversible dual inhibitor of both wild type and C481S-mutant Bruton's tyrosine kinase (BTK) that is in Phase 1 clinical development for B-cell malignancies refractory to other therapeutic options
- Miransertib (ARQ 092) is a potent and selective inhibitor of protein kinase B (AKT), a serine/threonine kinase. We expect to commence a registrational clinical trial of miransertib for the treatment of Proteus syndrome and PIK3CA-Related Overgrowth Syndromes (PROS) in the first half of 2019. Miransertib is also in Phase 1b clinical development in oncology in combination with the hormonal therapy, anastrozole, in endometrial cancer
- ARQ 751 is a next-generation, highly potent and selective inhibitor of AKT that is in Phase 1 clinical development for solid tumors harboring AKT, phosphoinositide 3-kinase (PI3K) or phosphatase and tensin homolog (PTEN) loss mutations
- Derazantinib (ARQ 087) is a multi-kinase inhibitor designed to preferentially inhibit the fibroblast growth factor receptor (FGFR) family of kinases that is in a registrational clinical trial in intrahepatic cholangiocarcinoma (iCCA) in patients with FGFR2 fusions. Derazantinib was exclusively licensed to Basilea Pharmaceutica Limited (Basilea) in April 2018 in the United States, European Union, Japan and the rest of the world, excluding the People's Republic of China, Hong Kong, Macau, and Taiwan (collectively, Greater China) where derazantinib was exclusively licensed to Sinovant Sciences Ltd., a subsidiary of Roivant Sciences Ltd. (Sinovant) in February 2018

We have incurred a cumulative deficit of approximately $558 million from inception through March 31, 2019. We recorded a net loss for 2018 and expect a net loss for 2019.

LIQUIDITY AND CAPITAL RESOURCES

	March 31, 2019	December 31, 2018	Increase (decrease) $	Increase (decrease) %
	(in millions)			
Cash, cash equivalents and marketable securities-short term	$ 92.2	$ 99.6	$ (7.4)	(7)%
Working capital	81.9	91.8	(9.9)	(11)%

	Three Months Ended		
	March 31, 2019	March 31, 2018	Increase (decrease)
	(in millions)		
Cash flow from:			
Operating activities	$ (7.0)	$ (5.0)	$ (2.0)
Investing activities	5.5	(4.6)	10.1
Financing activities	0.1	-	0.1

Cash flow from operating activities. Our uses of cash for operating activities have primarily consisted of salaries and wages for our employees, facility and facility-related costs for our offices and laboratories, fees paid in connection with preclinical and clinical studies, laboratory supplies and materials and professional fees. The sources of our cash flow from operating activities have consisted primarily of upfront and other payments received from our collaborators in connection with license agreements. In the three months ended March 31, 2019, our net use of cash was primarily driven by the difference between cash received from our collaborations and payments for operating expenses which resulted in net cash outflows of $7.0 million. In the three months ended March 31, 2018, our net use of cash was primarily driven by the difference between cash received from our collaborator and payments for operating expenses which resulted in net cash outflows of $5.0 million.

Cash flow from investing activities. Our net cash provided by investing activities of $5.5 million for the three months ended March 31, 2019 was comprised of net maturities of marketable securities. Our net cash used by investing activities of $4.6 million for the three months ended March 31, 2018 was comprised of net maturity of marketable securities. The composition and mix of cash, cash equivalents and marketable securities may change frequently as a result of our constant evaluation of conditions in financial markets, the maturity of specific investments, and our near term liquidity needs.

Our cash equivalents and marketable securities typically include commercial paper, money market funds, and U.S. Treasury bill funds, which have investment grade ratings. Our cash equivalents and our portfolio of marketable securities are subject to market risk due to changes in interest rates. Fixed rate interest securities may have their market value adversely impacted due to a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fall short of expectation due to changes in interest rates or we may suffer losses in principal if we are forced to sell securities that decline in market value due to changes in interest rates.

Cash flow from financing activities. Our net cash provided by financing activities of $0.1 million for the three months ended March 31, 2019 was comprised of proceeds from stock option exercises. Our net cash provided by financing activities was zero for the three months ended March 31, 2018.

Our cash requirements may vary materially from those now planned depending upon the results of our drug discovery and development strategies, our ability to enter into additional corporate collaborations and the terms of such collaborations, results of research and development, unanticipated required capital expenditures, competitive and technological advances, acquisitions and other factors. We cannot guarantee that we will be able to develop any of our drug candidates into a commercial product. In January 2017, we entered into Loan Agreement with a principal balance of $15 million (see Note 8). The terms of the Loan Agreement require payments of interest on a monthly basis through August 2019 and payments of interest and principal from September 2019 to August 2022.

In November 2017, we entered into definitive securities purchase agreements with certain institutional investors. In conjunction with this stock offering, we raised net proceeds of $9.5 million through the sale of 8,370 shares of series A convertible preferred stock (Series A Preferred) and warrants to purchase 2,259 shares of Series A Preferred (Warrants). Each share of Series A Preferred converted into 1,000 shares of common stock and each associated Warrant converted into 1,000 common stock warrants upon the effectiveness on May 8, 2018 of an amendment to our restated certificate of incorporation to increase the number of authorized shares of common stock thereunder. The Warrants have a post-conversion exercise price of $1.75 per share, are exercisable immediately and expire in May 2022.

In February 2018, we entered into a License Agreement with Sinovant pursuant to which ArQule granted Sinovant an exclusive license to develop and commercialize derazantinib in Greater China. The agreement provided for an upfront payment to ArQule of $3 million and a $2.5 million development milestone that was paid in the first quarter of 2019. We are also eligible for up to an additional $82 million in regulatory and sales milestones. Upon commercialization, we are entitled to receive double digit royalties in the low teens from Sinovant on net sales of derazantinib in Greater China. Sinovant will be responsible for all costs and expenses of development, manufacture and commercialization in Greater China. For the three months ended March 31, 2019, we recognized revenue of $1.1 million for providing certain research and development services to Sinovant. For the three months ended March 31, 2018, we recognized revenue of $3.0 million for completing our performance obligation under this licensing agreement.

In April 2018, we entered into a License Agreement with Basilea pursuant to which ArQule granted Basilea an exclusive license to develop and commercialize derazantinib in the United States, European Union, Japan and the rest of the world, excluding Greater China. Under the terms of the agreement, we received an upfront payment of $10 million and are eligible for up to $326 million in regulatory and commercial milestones. Upon commercialization, we are entitled to receive staggered royalties on future net sales of derazantinib ranging from the high-single digits to the mid-teens on direct sales and mid-single digits to low-double digits on indirect sales. Basilea will be responsible for all costs and expenses of development, manufacture and commercialization in its territory. Under certain circumstances, we may have the opportunity to promote derazantinib in the United States directly. For the three months ended March 31, 2019, we recognized revenue of $0.2 million for providing certain research and development services to Basilea, recognized as revenue on a cost-to-cost method.

In July 2018, we sold 12,650,000 shares of common stock at $5.50 per share for aggregate net proceeds of approximately $64.6 million after commissions and other offering expenses.

We anticipate that our cash, cash equivalents and marketable securities on hand at March 31, 2019 and the financial support from our licensing agreements will be sufficient to finance our operations into 2021 which is in excess of at least 12 months from the issuance date of these financial statements.

We expect that we will need to raise additional capital or incur indebtedness to continue to fund our operations in the future. Our ability to raise additional funds will depend on financial, economic and market conditions, and due to global capital and credit market conditions or for other reasons, we may be unable to raise capital when needed, or on terms favorable to us. If necessary funds are not available, we may have to delay, reduce the scope of, or eliminate some of our development programs, potentially delaying the time to market for any of our product candidates.

Our contractual obligations were comprised of the following as of March 31, 2019 (in thousands):

	Payment due by period				
Contractual Obligations	**Total**	**Less than 1 year**	**1 - 3 years**	**3 - 5 years**	**More than 5 years**
Notes payable	$ 15,900	$ 2,917	$ 10,000	$ 2,983	$ —
Interest on notes payable	3,176	1,106	1,129	941	—
Operating lease obligations	1,167	603	464	100	—
Purchase obligations	8,269	8,269	—	—	—
Total	$ 28,512	$ 12,895	$ 11,593	$ 4,024	$ —

In January 2015, we entered into a lease agreement for our headquarters facility in Burlington, MA. The lease commenced on May 1, 2015 for a term of five years and three months with an average annual rental rate of $455 thousand. In January 2019, we entered into a lease agreement for our laboratory space in Woburn, MA. The lease commenced on March 6, 2019 for a term of five years and one month. The lease agreement for the laboratory space includes a rent escalation clause, and accordingly, rent expense is being recognized on a straight-line basis over the lease term. The obligations for our operating leases are included in the table above.

Purchase obligations are comprised primarily of outsourced preclinical and clinical trial expenses and payments to license certain intellectual property to support our research efforts.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

A “critical accounting policy” is one which is both important to the portrayal of our financial condition and results and requires management’s most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. For additional information, please see the discussion of our significant accounting policies in Note 2 to the Financial Statements included in our Annual Report for the fiscal year ended December 31, 2018 on Form 10-K filed with the Securities and Exchange Commission (“SEC”) on March 7, 2019.

RESULTS OF OPERATIONS

The following are the results of operations for the three months ended March 31, 2019 and 2018:

Revenue

	2019	2018	Increase (decrease) $	Increase (decrease) %
	(in millions)			
For the three months ended March 31:				
Research and development revenue	$ 1.3	$ 4.1	$ (2.8)	(68)%

Research and development revenue in the three months ended March 31, 2019 consisted of $1.1 million from our February 2018 Sinovant licensing agreement and $0.2 million from our April 2018 Basilea licensing agreement.

Research and development revenue in the three months ended March 31, 2018 consisted of $3.0 million from our February 2018 Sinovant licensing agreement and $1.1 million from a non-exclusive license agreement for certain of our library compounds.

Research and development

	2019	2018	Increase (decrease) $	Increase (decrease) %
	(in millions)			
For the three months ended March 31:				
Research and development	$ 7.4	$ 5.8	$ 1.6	28%

Research and development expense in the three months ended March 31, 2019 increased by $1.6 million primarily due to higher outsourced preclinical, clinical and product development costs and higher labor related costs. At March 31, 2019 we had 22 employees dedicated to our research and development program compared to 18 employees at March 31, 2018.

Overview

Our research and development expense consists primarily of salaries and related expenses for personnel, costs of contract manufacturing services, costs of facilities and equipment, fees paid to professional service providers in conjunction with our clinical trials, fees paid to research organizations in conjunction with preclinical animal studies, costs of materials used in research and development, consulting, license, and sponsored research fees paid to third parties and depreciation of associated laboratory equipment. We expect our research and development expense to remain significant, yet consistent, as we continue to develop our portfolio of oncology and rare disease programs.

We have not accumulated and tracked our internal historical research and development costs or our personnel and personnel-related costs on a program-by-program basis. Our employee and infrastructure resources are allocated across several projects, and many of our costs are directed to broadly applicable research endeavors. As a result, we cannot state the costs incurred for each of our programs on a program-by-program basis.

Our future research and development expenses in support of our current and future oncology programs will be subject to numerous uncertainties in timing and cost to completion. We test potential products in numerous preclinical studies for safety, toxicology, and efficacy. We may conduct multiple clinical trials for each product. As we obtain results from trials, we may elect to discontinue or delay clinical trials for certain products in order to focus our resources on more promising products. Completion of clinical trials may take several years or more, and the length of time and cost of development generally varies substantially according to the type, complexity, novelty, and intended use of a product.

We estimate that clinical trials of the type generally needed to secure new drug approval are typically completed over the following timelines:

Clinical Phase	Estimated Completion Period
Phase 1	1–2 years
Phase 2	2–3 years
Phase 3	2–4 years

The duration and the cost of clinical trials may vary significantly over the life of a project as a result of differences arising during clinical development, including, among others, the following:

- the number of clinical sites included in the trials;
- the length of time required to enroll suitable patients;
- the number of patients that ultimately participate in the trials;
- the duration of patient follow-up to ensure the absence of long-term product-related adverse events; and
- the efficacy and safety profile of the product.

An element of our business strategy is to pursue the research and development of a broad pipeline of products. This is intended to allow us to diversify the risks associated with our research and development expenditures. As a result, we believe our future capital requirements and future financial success do not substantially depend on any one product. To the extent we are unable to build and maintain a broad pipeline of products, our dependence on the success of one or a few products increases.

Our strategy includes entering into alliance arrangements with third parties to participate in the development and commercialization of our products, such as our collaboration agreements with Sinovant and Basilea. In the event that third parties have control over the clinical trial process for a product, the estimated completion date would be under control of that third party rather than under our control. We cannot forecast with any degree of certainty whether our products will be subject to future collaborative arrangements or how such arrangements would affect our development plans or capital requirements.

As a result of the uncertainties discussed above, we make significant estimates in determining the duration and completion costs of our programs or when and to what extent we will receive cash inflows from the commercialization and sale of a product. Our inability to complete our programs in a timely manner or our failure to enter into appropriate collaborative agreements could significantly increase our capital requirements and could adversely impact our liquidity. These uncertainties could force us to seek additional, external sources of financing from time-to-time in order to continue with our product development strategy. Our inability to raise additional capital, or to do so on terms reasonably acceptable to us, would jeopardize the future success of our business.

General and administrative

			Increase (decrease)	
	2019	2018	$	%
	(in millions)			
For the three months ended March 31:				
General and administrative	$ 4.3	$ 2.4	$ 1.9	83%

General and administrative expense increased by $1.9 in the three months ended March 31, 2019 principally due to labor and related costs, including $1.3 million of non-recurring executive retirement costs and $0.5 million of stock-based compensation expense. At March 31, 2019 we had 14 general and administrative employees compared to 13 employees at March 31, 2018.

Interest income, interest expense and other expense

			Increase (decrease)	
	2019	2018	$	%
	(in thousands)			
For the three months ended March 31:				
Interest income	$ 566	$ 159	$ 407	256%
Interest expense	(430)	(396)	(34)	9%
Other expense	—	(2,270)	(2,270)	(100)%

Interest income is derived from our portfolio of cash, cash equivalents and investments and increased in the three months ended March 31, 2019 primarily due to an increase in our portfolio balance resulting from (i) net proceeds from our July 2018 stock offering, (ii) up-front and other payments from our 2018 licensing agreements and (iii) increased interest rates.

Interest expense is related to our loan agreement with Oxford.

Other expense was zero in the three months ended March 31, 2019 due to the elimination of our preferred stock warrant liability upon the conversion of the preferred shares into common shares in May 2018. Other expense in the three months ended March 31, 2018 reflected a non-cash expense resulting from a net increase in the fair value of our preferred stock warrant liability of $2.3 million.

RECENT ACCOUNTING PRONOUNCEMENTS

For a discussion of new accounting pronouncements please read Note 10, *Recent Accounting Pronouncements* to our financial statements included in this report.

FORWARD LOOKING STATEMENTS

In addition to historical information, this report contains forward-looking statements. You can identify these forward-looking statements by their use of words such as “anticipate,” “assume,” “believe,” “estimate,” “expect,” “forecast,” “intend,” “may,” “plan,” “project,” “target,” “will”, “potential” , “goal”, and other words and terms of similar meaning. You also can identify them by the fact that they do not relate strictly to historical or current facts. All statements which address operating performance, events or developments that we expect or anticipate will occur in the future, such as projections about our future results of operations, our financial condition, research, development and commercialization of our products and anticipated trends in our business are forward-looking statements.

In this report we make forward-looking statements regarding our drug development pipeline and our existing and planned clinical trials as well as future milestones and royalty payments, projected financial results and our ability to fund operations with current cash, cash equivalents and marketable securities.

Drug development involves a high degree of risk. Only a small number of research and development programs result in the commercialization of a product. For example, preclinical efforts associated with our product pipeline may fail or prove disappointing because our technology platform did not produce candidates with the desired characteristics. Animal preclinical studies may be unpredictive of human response. Positive information about early stage clinical trial results will not ensure that later stage or larger scale clinical trials will be successful or will satisfy applicable regulatory standards. Furthermore, our drugs may not demonstrate appropriate safety profiles in ongoing or later stage or larger scale clinical trials as a result of known or as yet unidentified side effects. Problems or delays may arise during clinical trials or in the course of developing, testing or manufacturing our drugs that could lead us or our collaborators to discontinue development.

The planned timing of initiation of clinical trials and the duration and conclusion of such trials for our drugs are subject to the ability of the company to enroll patients, enter into agreements with clinical trial sites and investigators, and other technical hurdles and issues that may not be resolved.

We also make forward-looking statements regarding the adequacy of our financial resources. Our capital resources may not be adequate because our cash requirements may vary materially from those now planned depending upon the results of our drug discovery and development strategies, the outcomes of our clinical trials, our ability to enter into additional corporate collaborations in the future and the terms of such collaborations, results of research and development, the need for currently unanticipated capital expenditures, competitive and technological advances, acquisitions, financial market conditions and other factors. Additionally, our collaborators may terminate their agreements with us, thereby eliminating that source of funding.

We cannot guarantee that we will be able to develop any of our drug candidates into a commercial product generating revenues. If we experience increased losses, we may have to seek additional financing from public and private sales of our securities, including equity securities. There can be no assurance that additional funding will be available when needed or on acceptable terms.

The factors, risks and uncertainties referred to above and others are more fully described under the heading “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018 filed with the SEC on March 7, 2019, as updated from time to time in our subsequent Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. The forward-looking statements contained herein represent our judgment as of the date of this report. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise, except to the extent required by law.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We own financial instruments that are sensitive to market risk as part of our investment portfolio. We have implemented policies regarding the amount and credit ratings of investments. Our investment portfolio is used to preserve our capital until it is used to fund operations, including our research and development activities. Our investments are evaluated quarterly to determine the fair value of the portfolio.

Our cash equivalents and marketable securities typically include commercial paper, money market funds, and U.S. Treasury bill funds that have investment grade ratings.

Our cash equivalents and our portfolio of marketable securities are subject to market risk due to changes in interest rates. Fixed rate interest securities may have their market value adversely impacted due to a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fall short of expectation due to changes in interest rates or we may suffer losses in principal if we are forced to sell securities that decline in market value due to changes in interest rates. Based on the type of securities we hold, we do not believe a change in interest rates would have a material impact on our financial statements. If interest rates were to increase or decrease by 1%, this would not result in a material change in the fair value of our investment portfolio.

ITEM 4. CONTROLS AND PROCEDURES

Our management, with the participation of our Chief Executive Officer (Principal Executive Officer) and President and Chief Operating Officer (Principal Financial Officer), evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2019. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended ("Exchange Act"), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and financial officer, as appropriate to allow timely decisions regarding required disclosure. Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2019, our Chief Executive Officer (Principal Executive Officer) and President and Chief Operating Officer (Principal Financial Officer) concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

PART II - OTHER INFORMATION

ITEM 1. — LEGAL PROCEEDINGS. None.

ITEM 1A. — RISK FACTORS. For information regarding factors that could affect our results of operations, financial condition and liquidity, see the risk factors discussion provided under "Risk Factors" in Item 1A of ArQule's Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC on March 7, 2019, as updated from time to time in our subsequent Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. See also, "Forward-Looking Statements" included in this Quarterly Report on Form 10-Q.

ITEM 2. — UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS. None.

ITEM 3. — DEFAULTS UPON SENIOR SECURITIES. None.

ITEM 4. — MINE SAFETY DISCLOSURES. Not applicable.

ITEM 5. — OTHERS INFORMATION. None.

ITEM 6. — EXHIBITS.

EXHIBIT NO.	DESCRIPTION
10.1*	Separation of Employment Agreement, dated March 13, 2019, between the Company and Robert Weiskopf.
10.2*	Fifth Amendment to Employment Agreement, dated as of March 29, by and between the Company and Paolo Pucci.
10.3*	Sixth Amendment to Employment Agreement, dated as of March 29, by and between the Company and Peter S. Lawrence
10.4*	Sixth Amendment to Employment Agreement, dated as of March 29, by and between the Company and Brian Schwartz.
10.5*	Letter Agreement, dated April 11, 2019, by and between the Company and Marc Schegerin.
31.1	Rule 13a-14(a) Certificate of Chief Executive Officer, filed herewith.
31.2	Rule 13a-14(a) Certificate of Principal Financial Officer, filed herewith.
32	Rule 13a-14(b) Certificate of Chief Executive Officer and Chief Financial Officer, filed herewith.
101	Interactive Data File

* Indicates a management contract or compensatory plan.

ARQULE, INC.

SIGNATURES

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

ArQule, Inc.

Date: May 1, 2019

/s/ PETER S. LAWRENCE
Peter S. Lawrence
President and Chief Operating Officer
(Duly Authorized Officer and Principal Financial Officer)

Exhibit 10.1

March 13, 2019

Robert J. Weiskopf

Dear Rob:

The purpose of this letter agreement (the "Agreement") is to confirm the terms regarding your separation of employment with ArQule, Inc.[1] ("ArQule" or the "Company"). As more fully set forth below, ArQule desires to provide you with Severance Pay and Severance Benefits described herein in exchange for certain agreements by you. This Agreement will become effective and enforceable on the eighth day after you sign it (the "Effective Date").

1. Separation of Employment. Your employment with ArQule shall terminate on March 29, 2019 (the "Separation Date"). You acknowledge that from and after the Separation Date, you have no authority to, and shall not, represent yourself as an employee or agent of the Company, provided that this provision shall not prevent you from representing yourself as a consultant to the Company during the term of any valid and effective consulting agreement entered into in connection with Section 7 of this Agreement to the extent required to fulfill the terms of any such consulting agreement.

2. Severance Pay and Severance Benefits. In exchange for the mutual covenants set forth in this Agreement and contingent upon your signing and not revoking this Agreement, ArQule shall provide you with the Severance Pay set forth in (i) below and the Severance Benefits set forth in (ii) below, as follows:

(i) Severance Pay for twelve (12) months (the "Severance Period") in the form of continuation of your regular bi-weekly salary of Twelve Thousand Five Hundred and Five Dollars ($12,505.00), subject to all ordinary payroll taxes and withholdings, and in accordance with the Company's payroll policies and procedures (the "Bi-weekly Payment"). Such Severance Pay shall commence on the second payroll period after the Effective Date of this Agreement. To the extent that any payments are not made to you during the Severance Pay Period because this Agreement has not yet become effective, the Company will make a "catch up" payment to you on the first regular payroll date after the Effective Date.

(ii) Upon your making a timely election pursuant to the provisions of the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA), ArQule will pay the standard employer portion of your medical and dental insurance premiums in the amount of One Thousand Four Hundred Eleven Dollars and Eighty Eight Cents ($1,411.88) per month during the Severance Period, provided that you timely pay your regular employee contribution toward your medical and dental insurance premiums as required by ArQule or its COBRA administrator. ArQule's obligations under this subsection are contingent on you making a timely COBRA election. Additionally, ArQule shall only be required to continue and contribute to your medical and dental insurance under this subsection to the same extent that such insurance is provided to persons employed by ArQule. After the Severance Period, you will have the right to continue your medical and dental insurance pursuant to the provisions COBRA solely at your own cost. The "qualifying event" under COBRA shall be deemed to have commenced on the Separation Date.

[1] The parties agree that any obligation or agreement of ArQule, Inc. hereunder shall be the sole and exclusive obligation of ArQule, Inc. only, and wherever the term "ArQule" or "the Company" is otherwise used in this Agreement, it shall refer to ArQule, Inc., and any and all of its divisions, affiliates and subsidiaries and all other related entities, and its and their directors, officers, employees agents, successors and assigns.

3. Other Economic Benefits. Also contingent upon your signing of and not revoking this Agreement, ArQule agrees to provide you with the following Economic Benefits.

(i) 2019 Bonus. You shall be eligible for a 2019 bonus. The award of any bonus and the amount is in the sole discretion of the Board of Directors of ArQule, and will be determined based on the typical procedures for determining the bonuses of ArQule senior executives and employees (i.e., target bonus amount (in your case, 40% of base salary) times a percentage based on the scoring of corporate goals by the CN&G committee and endorsed by the board at its January, 2020 meeting), and any bonus awarded would be paid when such bonuses are paid to other ArQule employees, expected to occur during Q1 of 2020. In addition, to the extent that any such bonus is awarded, the total amount thereof would be prorated at 25% of such amount. You hereby acknowledge that the award of and dollar amount of any 2020 bonus is uncertain and is not guaranteed.

(ii) Stock Options – Extension of Exercise Period. The Company acknowledges that as a result of the separation of your employment with ArQule, you will become eligible for the benefits provided in the ArQule, Inc. Stock Award Policy for Retiring Employees ("Retirement Policy"). Therefore, in accordance with the Retirement Policy, your outstanding unvested stock options will immediately and fully vest on March 29, 2019, and the period for exercise of your outstanding stock options will be extended to the earlier to occur of two years from March 29, 2019 or the expiration of the term of the Award relating to any applicable options. All holding periods and other limitations on sale or other disposition of your outstanding restricted stock, if any, will be removed. A list of your options that will vest and be eligible for exercise on March 29, 2019 is attached hereto on Exhibit A.

For the avoidance of doubt, you will be entitled to exercise only those stock options granted to you under ArQule's Amended and Restated 1994 Equity Incentive Plan (as amended) and 2014 Equity Incentives Plan, as amended, that are or become vested as of March 29, 2019 and are listed in Exhibit A, in accordance with the terms and conditions of the applicable plan(s) and grants and the Retirement Policy. Except for those vested options, you acknowledge and agree that you do not now have, and will not in the future have, rights to vest in any other equity awards or any other plans (of whatever name or kind, including, without limitation, any stock option or restricted stock plan) that you participated in or were eligible to participate in during your employment with ArQule.

4. Acknowledgements. You acknowledge and agree that the Severance Pay and Severance Benefits and the Other Economic Benefits, are not otherwise due or owing to you under any ArQule policy or practice. Further, the Severance Pay and Severance Benefits are not intended to be, and shall not be construed to constitute, a severance plan, and shall confer no benefit on anyone other than the parties hereto; provided, that if you should die prior to the conclusion of the Severance Period, all unpaid amounts provided for in Sections 2(i) and (ii) and 3(i) above shall be paid to your estate. In addition, your estate shall be entitled to exercise your vested options for the period provided in the Retirement Policy. You further acknowledge that except for (i) the specific financial consideration set forth in this Agreement, and (ii) earned but unpaid regular wages earned through the Separation Date, including Twenty Thousand Three Hundred Twenty Dollars and Thirty Cents ($ 20,320.30) (less applicable taxes) representing your accrued and unused PTO, you are not and shall not in the future be entitled to any other compensation including, without limitation, other wages, bonuses, incentives, PTO pay, holiday pay, stock options or other equity, or any other form of compensation or benefit.

5. Confidentiality and Other Obligations. You expressly acknowledge and agree to the following:

(i) Except as expressly agreed in any consulting agreement between you and the Company as contemplated by Section 7 of this Agreement, prior to the Separation Date you shall return to ArQule all ArQule property (including without limitation, keys, identification cards, computer equipment, computer discs and software, memory devices, computer access codes, telephones, references guides, company files and documents, company credit cards, institutional manuals, etc…) and documents and any copies thereof (including, without limitation, laboratory notebooks, financial plans, management reports, and other similar documents and information), and that you will abide by any and all common law and/or statutory obligation relating to the protection and non-disclosure of ArQule's trade secrets and/or confidential and proprietary documents and information. Notwithstanding the foregoing, ArQule will allow you to keep your company issued iPhone but only after it has been decommissioned by the ArQule IT department, which decommissioning shall include removal of all ArQule-related programs, material and access.

(ii) That you remain obligated to and will comply with the covenants set forth in the Employee Non-Disclosure and Inventions Agreement previously executed between ArQule and you (a copy of such agreement being attached hereto as Exhibit B), which agreement also is incorporated herein by reference, and shall survive the signing of this Agreement.

(iii) That all information relating in any way to this Agreement, including the terms and amount of financial consideration provided for in this Agreement, shall be held confidential by you and shall not be publicized or disclosed to any person or entity (other than an immediate family member, legal counsel or financial advisor, provided that any such individual to whom disclosure is made agrees to be bound by these confidentiality obligations), except as mandated by law.

(iv) That you will not make any statements that are professionally or personally disparaging about, or adverse to, the interests of ArQule (including its officers, directors, and employees) including, but not limited to, any statements that disparage any person, product, drug candidate, research program, service, finances, financial condition, capability or any other aspect of the business of ArQule, and that you will not engage in any conduct which is intended to harm professionally or personally the reputation of ArQule (including its officers, directors, and employees).

(v) That the Severance Pay, Severance Benefits and Other Economic Benefits are being offered based on your representations that you have not engaged in any fraudulent or unlawful conduct, and that you have fully disclosed to the Company all material information relating to your job duties for the Company.

6. Cooperation. That during the Severance Period, subject to your reasonable availability as a result of any health, religious or travel related matter, you will make yourself available to ArQule, upon reasonable notice, either by telephone or, if ArQule believes necessary, in person to assist ArQule in any matter relating to the services performed by you during your employment with ArQule including, but not limited to, transitioning your duties to others at ArQule, and ensuring that all documentation is recorded fully and completely. Also, during the Severance Period and thereafter, you further agree that you will cooperate fully with ArQule in the defense or prosecution of any government investigation and any government or third-party claim or action now in existence or which may be brought or threatened in the future against or on behalf of ArQule, including any claim or action against its directors, officers and employees. Your cooperation in connection with any such claim or action shall include your being available, within reason given the constraints of personal commitments as set forth above, future employment or job search activities, to meet with ArQule and its legal counsel to prepare for any proceeding, to provide truthful affidavits, to assist with any audit, inspection, proceeding or other inquiry, and to act as a witness in connection with any litigation or other legal proceeding affecting ArQule. You further agree that should an individual representing a party adverse to the business interests of ArQule (including, without limitation, anyone threatening any form of legal action against ArQule) contact you (directly or indirectly), you will promptly (within 2 business days) inform (in writing) Peter Lawrence of ArQule of that fact, unless prohibited from doing so under court order. At the conclusion of the Severance Period, ArQule shall compensate you for your time in connection with the activities contemplated by this Section 6 at the rate of $250 per hour.

7. Consulting Services. If requested by ArQule, you may, at your sole discretion, and by mutual agreement as to scope and terms of work, provide consulting services to ArQule, on an as needed basis. Such consulting services shall be documented and billed to ArQule at the rate of $250 per hour and shall not exceed a total of $25,000 unless otherwise agreed in writing between you and ArQule. Consulting Services may include, among other assignments, assisting ArQule in any matter relating to the services performed by you during your employment with ArQule. Except as provided in Section 2 above, you acknowledge and agree that you are not and shall not be entitled to any ArQule benefits or other compensation during the Consulting Period. Any cooperation required by the previous Section 6 shall not be deemed Consulting Services.

8. Release of Claims. You hereby acknowledge and agree that by signing this Agreement, you are waiving your right to assert any Claim (as defined below) against ArQule arising from acts or omissions that occurred on or before the later of the Separation Date or the Effective Date of this Agreement. Please note the definition of ArQule contained in footnote 1 of this Agreement. You also represent that you have not asserted or filed any Claim (as defined below) against ArQule.

Your waiver and release is intended to bar any form of legal claim, lawsuit, charge, complaint or any other form of action (jointly referred to as "Claims") against the Company seeking money or any other form of relief, including but not limited to equitable relief (whether declaratory, injunctive or otherwise), damages or any other form of monetary recovery (including but not limited to back pay, front pay, compensatory damages, emotional distress damages, punitive damages, attorneys' fees and any other costs), each as they may have been amended through the Separation Date. You understand that there could be unknown or unanticipated Claims resulting from your employment with the Company and the termination of your employment, and you agree that such Claims are included in this waiver and release. You specifically waive and release the Company from any Claims arising from or related to your employment relationship with the Company or the termination of your employment, including without limitation Claims under any statute, ordinance, regulation, executive order, common law, constitution and/or other source of law of any state, country and/or locality (collectively and individually referred to as "Law"), including but not limited to the United States, the Commonwealth of Massachusetts, and/or any other state or locality where you worked for the Company.

Without limiting the foregoing general waiver and release, except for Claims resulting from the failure of the Company to perform its obligations under this Agreement, you specifically waive and release the Company from any Claims arising from or related to your employment relationship with the Company or the termination thereof, including without limitation:

(i) Claims under any Law concerning discrimination, harassment or fair employment practices, including but not limited to the Massachusetts Fair Employment Practices Act (M.G.L. c. 151B), the Massachusetts Sexual Harassment Law (M.G.L. c. 214, §1C), the Massachusetts Equal Pay Act (M.G.L. c. 149, §105A), the Massachusetts Equal Rights Act (M.G.L. c. 93, §§102, 103), Title VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000e et seq.), 42 U.S.C. § 1981, the Age Discrimination in Employment Act (29 U.S.C. § 621 et seq.) and the Americans with Disabilities Act (42 U.S.C. § 12101 et seq.), each as they may have been amended through the Separation Date or Effective Date, whichever is later.

(ii) Claims under any Law relating to wages, hours, whistleblowing, leaves of absences or any other terms and conditions of employment, including but not limited to the Family and Medical Leave Act of 1993 (29 U.S.C. § 2601 et seq.), the Massachusetts Payment of Wages Law (Massachusetts General Laws Chapter 149, §§ 148, 150), Massachusetts General Laws Chapter 149 in its entirety, Massachusetts General Laws Chapter 151 in its entirety (including but not limited to the minimum wage and overtime provisions), each as they may have been amended through the Separation Date or Effective Date, whichever is later. You specifically acknowledge that you are waiving any Claims for unpaid wages under these and other Laws.

(iii) Claims under any local, state or federal common law theory including, without limitation, any Claim for breach of contract, implied contract, promissory estoppel, quantum meruit, or any Claim sounding in tort.

(iv) Claims arising under the Company's policies or benefit plans.

(v) Claims arising under any other Law or constitution.

Notwithstanding the foregoing, this Section shall not release ArQule from any obligation expressly set forth in this Agreement. You acknowledge and agree that, but for providing this waiver and release, you would not be receiving the Severance Pay, Severance Benefits or other Economic Benefits provided for in this Agreement.

9. OWBPA. Because you are at least forty (40) years of age, you have specific rights under the federal Age Discrimination in Employment Act ("ADEA") and Older Workers Benefits Protection Act ("OWBPA"), which prohibit discrimination on the basis of age. The release in Section 8 is intended to release any Claim you may have against ArQule alleging discrimination on the basis of age under the ADEA, OWBPA and other Laws. Notwithstanding anything to the contrary in this Agreement, the release in Section 8 does not cover rights or Claims under the ADEA that arise from acts or omissions that occur after the Separation Date.

It is ArQule's desire and intent to make certain that you fully understand the provisions and effects of this Agreement. To that end, ArQule hereby advises you in writing to consult with legal counsel for the purpose of reviewing the terms of this Agreement. Also, because you are at least age 40, and consistent with the provisions of the OWBPA, you have twenty-one (21) days (or until April 3, 2019) to consider and accept the provisions of this Agreement by signing below and returning it to ArQule, c/o Peter Lawrence, One Wall Street, Burlington, MA 01803. In addition, you may rescind your assent to this Agreement if, within seven (7) days after the date you sign this Agreement, you deliver a written notice of rescission to the Company. To be effective, such notice of rescission must be hand delivered or postmarked within the seven (7) day period and sent by certified mail, return receipt requested, to Peter Lawrence at the above referenced address.

Also, consistent with the provisions of the OWBPA and other federal discrimination laws (the "Federal Discrimination Laws"), nothing in the general waiver and release set forth in Section 8 above shall be deemed to prohibit you from challenging the validity of this release under the Federal Discrimination Laws or from filing a charge or complaint of age or other employment related discrimination with the Equal Employment Opportunity Commission ("EEOC"), or from participating in any investigation or proceeding conducted by the EEOC. However, the release in Section 8 does prohibit you from seeking or receiving monetary damages or other individual-specific relief in connection with any such charge or complaint of age or other employment-related discrimination. Further, nothing in this Agreement shall be deemed to limit the Company's right to seek immediate dismissal of such charge or complaint on the basis that your signing of this Agreement constitutes a full release of any individual rights under the Federal Discrimination Laws, or the Company's right to seek restitution or other legal remedies to the extent permitted by law of the economic benefits provided to you under this Agreement in the event that you successfully challenge the validity of this release and prevail in any claim under the Federal Discrimination Laws.

10. Company Instruction. The Company agrees to instruct Paolo Pucci, Peter Lawrence, Brian Schwartz and Marc Schegerin not to make any statement to any individual not employed by ArQule that is professionally or personally disparaging about, or adverse to, your interests. You understand and agree that the Company's obligation hereunder is to provide such instructions only, and that a failure by any instructed individual to follow such instructions shall not release you from any of your covenants, including the release set forth in Section 8 above.

11. Consequences of Breach. In addition to any other remedies set forth in this Agreement, a material breach by you of any of your obligations set forth in this Agreement shall, in addition to any other legal or equitable remedy available to ArQule, entitle ArQule to cease any further payment of the Severance Pay and Benefits, and to recover any Severance Pay and Benefits already provided to you. In such case, your release set forth in Section 8 above shall remain in full force and effect.

12. Entire Agreement/Choice of Law/Enforceability/Jury Waiver/Successors and Assigns.

(i) Except as otherwise expressly provided in this Agreement, this Agreement supersedes any and all other prior oral and/or written agreements, and sets forth the entire agreement between you and ArQule. No variations or modifications hereof shall be deemed valid unless reduced to writing and signed by the parties hereto.

(ii) This Agreement shall be deemed to have been made in the Commonwealth of Massachusetts, shall take effect as an instrument under seal, and the validity, interpretation and performance of this Agreement shall be governed by, and construed in accordance with, the internal law of the Commonwealth of Massachusetts, without giving effect to conflict of law principles. You agree that any action, demand, claim or counterclaim relating to the terms and provisions of this Agreement, or to its breach, shall be commenced in Massachusetts in a court of competent jurisdiction, and that venue for such actions shall lie exclusively in Massachusetts. You also agree that a court in Massachusetts will have personal jurisdiction over you, and you waive any right to raise a defense of lack of personal jurisdiction by such a court.

(iii) Both parties further agree that any action, demand, claim or counterclaim relating to this Agreement shall be resolved by a judge alone, and both parties hereby waive and forever renounce the right to a trial before a civil jury.

(iv) If your release of Claims pursuant to Section 8 is determined to be unenforceable in whole or part (except for your release of federal age discrimination Claims, which shall not be subject to this sentence), the Company will have the option, in its sole discretion, to either (a) declare the entire Agreement null and void and require you to refund the Severance Pay and Severance Benefits provided for in this Agreement; or (b) enforce the portions of the Agreement found not to be unenforceable. In the event that any other provision of this Agreement is determined to be unenforceable in whole or in part (including your release of federal age discrimination Claims) the remainder of the Agreement shall be enforced in full.

(v) This Agreement shall inure to the benefit of ArQule and any of its successors and assigns.

(vi) This Agreement is a legally binding document and your signature will commit you to its terms. You acknowledge that you have been advised to discuss all aspects of this Agreement with your attorney or have knowingly and voluntarily chosen not to do so, that you have carefully read and fully understand all of the provisions of this Agreement and that you are voluntarily entering into this Agreement. You further acknowledge that the Company is not providing legal advice to you in connection with this agreement.

By executing this Agreement, you are acknowledging that you have been afforded sufficient time to understand the terms and effects of this Agreement, that your agreements and obligations hereunder are made voluntarily, knowingly and without duress, and that neither ArQule nor its agents or representatives have made any representations inconsistent with the provisions of this Agreement.

To accept the terms of this Agreement, please sign and return the enclosed copy of this Agreement by April 3, 2019.

Very truly yours,

ArQule, Inc.

By: /s/ Peter S. Lawrence
Peter S. Lawrence, President

Dated: March 13, 2019

ACCEPTED AND AGREED:

/s/ Robert J. Weiskopf
Robert J. Weiskopf

Dated: March 13, 2019

Exhibit 10.2

FIFTH AMENDMENT TO EMPLOYMENT AGREEMENT

This Fifth Amendment to Employment Agreement ("Fifth Amendment"), effective as of March 29, 2019 (the "Effective Date") is entered into by and between ArQule, Inc., a Delaware corporation (the "Company") with its principal offices at One Wall Street, Burlington, Massachusetts 01803, and Paolo Pucci ("Executive"). The purpose of this Fifth Amendment is to amend the employment agreement dated as of April 15, 2008 between the Company and Executive, as previously amended (the "Employment Agreement"). Capitalized terms used but not defined in this Fifth Amendment shall have the meanings ascribed to them in the Employment Agreement.

In consideration of the mutual covenants and agreements contained herein and for other good and valuable consideration, the receipt, adequacy and sufficiency of which are hereby acknowledged, the Company and Executive (collectively, the "Parties") hereby agree as follows:

1 **Term of Employment.** Section 1 of the Employment Agreement, as amended, is hereby amended and replaced in its entirety with the following:

"The Company hereby agrees to continue to employ Executive, and Executive hereby accepts such continued employment with the Company, upon the terms and subject to the conditions set forth in the Employment Agreement. The Parties agree that the employment term shall continue through March 31, 2022, unless earlier terminated in accordance with the provisions of Section 5 of the Employment Agreement (the "Employment Term"), provided that the Company shall provide Executive with no fewer than ninety (90) days advance written notice in the event it decides not to extend this Agreement beyond the Employment Term or negotiate in good faith a new agreement, and in the event the Company does not provide such 90-day advance notice, the Company shall pay Executive up to 90 days of his Base Salary in lieu of such advance notice.

2 **Entire Understanding.** This Fifth Amendment constitutes the entire understanding and agreement between the Parties regarding the subject matter hereof and supersedes all prior agreements, written or oral, with respect to the subject matter hereof, except that, other than as explicitly modified by the terms of this Fifth Amendment, the Employment Agreement shall remain in full force and effect in accordance with its provisions. This Fifth Amendment shall be incorporated into the Employment Agreement as an additional provision thereto.

3 **Governing Law.** This Fifth Amendment shall be governed by and construed and enforced in accordance with the law (other than the law governing conflict of law questions) of the Commonwealth of Massachusetts.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Parties have executed or caused to be executed this Fifth Amendment as of the date set forth above.

ARQULE, INC.

By: /s/ William G. Messenger
Name: William G. Messenger
Title: Director

EXECUTIVE

By: /s/ Paolo Pucci
Name: Paolo Pucci

Exhibit 10.3

SIXTH AMENDMENT TO EMPLOYMENT AGREEMENT

This Sixth Amendment to Employment Agreement ("Sixth Amendment"), effective as of March 29, 2019 (the "Effective Date") is entered into by and between ArQule, Inc., a Delaware corporation (the "Company") with its principal offices at One Wall Street, Burlington, Massachusetts 01803, and Peter Lawrence ("Executive"). The purpose of this Sixth Amendment is to amend the employment agreement dated as of April 13, 2006 between the Company and Executive, as previously amended (the "Employment Agreement"). Capitalized terms used but not defined in this Sixth Amendment shall have the meanings ascribed to them in the Employment Agreement.

In consideration of the mutual covenants and agreements contained herein and for other good and valuable consideration, the receipt, adequacy and sufficiency of which are hereby acknowledged, the Company and Executive (collectively, the "Parties") hereby agree as follows:

1 **Term of Employment.** Section 1 of the Employment Agreement, as amended, is hereby amended and replaced in its entirety with the following:

"The Company hereby agrees to continue to employ Executive, and Executive hereby accepts such continued employment with the Company, upon the terms and subject to the conditions set forth in the Employment Agreement. The Parties agree that the employment term shall continue through March 31, 2022, unless earlier terminated in accordance with the provisions of Section 5 of the Employment Agreement (the "Employment Term").

2 **Entire Understanding.** This Sixth Amendment constitutes the entire understanding and agreement between the Parties regarding the subject matter hereof and supersedes all prior agreements, written or oral, with respect to the subject matter hereof, except that, other than as explicitly modified by the terms of this Sixth Amendment, the Employment Agreement shall remain in full force and effect in accordance with its provisions. This Sixth Amendment shall be incorporated into the Employment Agreement as an additional provision thereto.

3 **Governing Law.** This Sixth Amendment shall be governed by and construed and enforced in accordance with the law (other than the law governing conflict of law questions) of the Commonwealth of Massachusetts.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Parties have executed or caused to be executed this Sixth Amendment as of the date set forth above.

ARQULE, INC.

By: /s/ William G. Messenger
Name: William G. Messenger
Title: Director

EXECUTIVE

By: /s/ Peter Lawrence
Name: Peter Lawrence

Exhibit 10.4

FIFTH AMENDMENT TO EMPLOYMENT AGREEMENT

This Fifth Amendment to Employment Agreement ("Fifth Amendment"), effective as of March 29, 2019 (the "Effective Date") is entered into by and between ArQule, Inc., a Delaware corporation (the "Company") with its principal offices at One Wall Street, Burlington, Massachusetts 01803, and Brian Schwartz ("Executive"). The purpose of this Fifth Amendment is to amend the employment agreement dated as of June 17, 2008 between the Company and Executive, as previously amended (the "Employment Agreement"). Capitalized terms used but not defined in this Fifth Amendment shall have the meanings ascribed to them in the Employment Agreement.

In consideration of the mutual covenants and agreements contained herein and for other good and valuable consideration, the receipt, adequacy and sufficiency of which are hereby acknowledged, the Company and Executive (collectively, the "Parties") hereby agree as follows:

1 **Term of Employment.** Section 1 of the Employment Agreement, as amended, is hereby amended and replaced in its entirety with the following:

"The Company hereby agrees to continue to employ Executive, and Executive hereby accepts such continued employment with the Company, upon the terms and subject to the conditions set forth in the Employment Agreement. The Parties agree that the employment term shall continue through March 31, 2022, unless earlier terminated in accordance with the provisions of Section 5 of the Employment Agreement (the "Employment Term").

2 **Entire Understanding.** This Fifth Amendment constitutes the entire understanding and agreement between the Parties regarding the subject matter hereof and supersedes all prior agreements, written or oral, with respect to the subject matter hereof, except that, other than as explicitly modified by the terms of this Fifth Amendment, the Employment Agreement shall remain in full force and effect in accordance with its provisions. This Fifth Amendment shall be incorporated into the Employment Agreement as an additional provision thereto.

3 **Governing Law.** This Fifth Amendment shall be governed by and construed and enforced in accordance with the law (other than the law governing conflict of law questions) of the Commonwealth of Massachusetts.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Parties have executed or caused to be executed this Fifth Amendment as of the date set forth above.

ARQULE, INC.

By: /s/ William G. Messenger
Name: William G. Messenger
Title: Director

EXECUTIVE

By: /s/ Brian Schwartz
Name: Brian Schwartz

Exhibit 10.5

April 11, 2019

Dear Marc,

In connection with your recent promotion, I am pleased to offer you the benefits outlined herein in addition to those contained in your original Offer Letter with ArQule, Inc. (the "Company"), dated March 22, 2018 (the "Offer Letter"). Your new title shall be Senior Vice President, Chief Financial Officer and Treasurer.

If (i) there is a Change of Control[1], and (ii) the Company terminates your employment without Cause[2] or is deemed to terminate your employment without Cause[3] within the period commencing three months prior to the latest possible date of a Change of Control and ending one year after the latest possible date of a Change of Control, subject to your entering into a separation agreement in a form and scope acceptable to the Company which shall include among other standard provisions, a full release of claims by you, affirmation by you of any confidentiality and restrictive covenants, and non-disparagement by you, thereafter you shall be entitled to the following benefits:

(a) A lump sum payment in the amount equal to the sum of (i) your then-in-effect base salary through the end of the twelve (12) month period commencing on the date of termination and (ii) one year's bonus calculated based on the average of the bonuses, if any, paid by the Company to you with respect to the two (2) years preceding the year in which the date of termination occurs, provided that, for purposes of this paragraph only, you shall be deemed to have received your 35 percent bonus target for any year within such 2-year period in which you were not paid a bonus solely because you were not employed by the Company; and

(b) any stock option held by you shall become immediately exercisable as to all option shares without regard to the vesting schedule set forth on the applicable Option Certificate, and any shares of restricted stock previously granted shall immediately be free and clear of any restrictions.

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[1] For purposes of this offer letter, the term Change of Control shall mean: (a) acquisition by any "person" (as such term is defined in Section3(a)(9) of the Securities Exchange Act of 1934) of any amount of the Company's Common Stock so that such person holds or controls fifty percent (50%) or more of the Company's Common Stock; (b) merger or consolidation of the Company with or into any other entity in which the holders of the Company's outstanding shares of capital stock immediately before such merger or consolidation do not, immediately after such merger or consolidation, retain capital stock representing a majority of the voting power of the surviving entity of such merger or consolidation; (c) sale of all or substantially all of the assets of the Company to a third party; (d) within any twenty-four (24) month period, the election by the stockholders of the Company of twenty percent (20%) or more of the directors of the Company other than pursuant to nomination by the Company's management; or (e) Execution of a legally binding, definitive agreement approved by the Board of Directors providing for any of the events set forth in (a), (b), (c) or (d) above.

[2] "Cause" shall mean" (i) your arbitrary, unreasonable, or willful failure to follow the reasonable instructions of the CEO, President or CMO or otherwise perform your duties; (ii) your willful misconduct that is materially injurious to the Company (whether from a monetary perspective or otherwise); (iii) your willful commission of an act constituting fraud with respect to the Company; (iv) conviction of a felony under the laws of the United States or any state thereof; or (v) material breach of your obligations under any agreement or policy of the Company. A final determination of whether Cause exists shall be made by the Board of Directors.

[3] "Termination without Cause" shall be deemed to occur in the event any of the following occurs and your provide notice of termination to the Company within forty-five (45) days thereafter: (a) the Company substantially reduces or diminishes your responsibilities or title without Cause; (b) the Company reduces your base salary or bonus target (other than in connection with a Company-wide decrease in salary or bonus, respectively); (c) the Company materially breaches any of its obligations to you pursuant to this offer letter, and fails to cure such a breach within thirty (30) days of receipt of notice thereof; (d) the Company relocates your place of employment without your written consent by a distance of more than fifty (50) miles; or (e) a successor in interest to the Company fails to assume the obligations of this Offer Letter.

It is the intention of the parties hereto that, to the extent possible, no payment or entitlement pursuant to this letter agreement will give rise to any adverse tax consequences to you under Section 409A of the Internal Revenue Code ("Code") and Department of Treasury regulations and other interpretive guidance issued thereunder, including that issued after the date hereof (collectively, "Section 409A"). This letter agreement shall be interpreted to that end and consistent with that objective. Notwithstanding any other provision herein, if you are a "specified employee" as defined in, and pursuant to, Treas. Reg. Section 1.409A-1(i) on the termination date of your employment, no payment of compensation under this letter agreement shall be made to you during the period lasting six (6) months from such date. If any payment to you is delayed pursuant to the foregoing sentence, such payment instead shall be made in a lump sum payment on the first business day following the expiration of the six-month period referred to in the prior sentence.

Each payment under this letter agreement shall be designated as a "separate payment" within the meaning of Section 409A of the Code. To the extent any reimbursement or in-kind benefit due to you under this letter agreement constitutes "deferred compensation" under Section 409A of the Code, any such reimbursement or in-kind benefit shall be paid to you in a manner consistent with Treas. Reg. Section 1.409A-3(i)(1)(iv).

Other than as explicitly modified by the terms of this letter, the Offer Letter shall remain in full force and effect in accordance with its provisions.

Best regards,

/s/ Peter S. Lawrence

Peter S. Lawrence
President and Chief Operating Officer

Accepted and agreed to by:

/s/ Marc Schegerin
Marc Schegerin

Exhibit 31.1

CERTIFICATE OF THE CHIEF EXECUTIVE OFFICER

I, Paolo Pucci, certify that:

1. I have reviewed this quarterly report on Form 10-Q of ArQule, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: May 1, 2019

/s/ PAOLO PUCCI
Paolo Pucci
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATE OF THE PRINCIPAL FINANCIAL OFFICER

I, Peter S. Lawrence, certify that:

1. I have reviewed this quarterly report on Form 10-Q of ArQule, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: May 1, 2019

/s/ PETER S. LAWRENCE
Peter S. Lawrence
President and Chief Operating Officer
(Principal Financial Officer)

Exhibit 32

ARQULE, INC.

CERTIFICATE OF THE CHIEF EXECUTIVE OFFICER AND

PRINCIPAL FINANCIAL OFFICER

The undersigned, Paolo Pucci Chief Executive Officer (Principal Executive Officer) of ArQule, Inc. (the "Company") and Peter S. Lawrence, President and Chief Operating Officer (Principal Financial Officer), of the Company, both duly elected and currently serving, hereby certify that, to the best of his or her knowledge:

1. the quarterly report on Form 10-Q for the period ending March 31, 2019, filed on behalf of the Company pursuant to the Securities Exchange Act of 1934 (the "Exchange Act") and containing the financial statements of the Company, fully complies with the requirements of section 13(a) of the Exchange Act; and

2. the information contained in such quarterly report fairly presents, in all material respects, the financial condition and results of operations of the Company for the dates and periods covered by such quarterly report.

This certification accompanies the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2019, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (the "2002 Act") and shall not be deemed filed by the Company for purposes of Section 18 of the Exchange Act.

This certification is being made for the exclusive purpose of compliance by the Principal Executive Officer and Principal Financial Officer of the Company with the requirements of Section 906 of the 2002 Act, and may not be disclosed, distributed or used by any person for any reason other than as specifically required by law.

IN WITNESS WHEREOF, the undersigned have executed this Certificate as of the 1st day of May 2019.

/s/ PAOLO PUCCI
Name: Paolo Pucci
Title: Chief Executive Officer
(Principal Executive Officer)

/s/ PETER S. LAWRENCE
Name: Peter S. Lawrence
Title: President and Chief Operating Officer
(Principal Financial Officer)