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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2017

Or

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

For the transition period from to

Commission File Number 001-35348

Intermolecular, Inc.
(Exact Name of Registrant as Specified in its Charter)

Delaware	**20-1616267**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
3011 N. First Street San Jose, California	**95134**
(Address of Principal Executive Offices)	**(Zip Code)**

(408) 582-5700
(Registrant's Telephone Number, Including Area Code)

N/A
(Former Name, Former Address and Former Fiscal Year, if Changed Since Last Report)

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

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

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

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

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

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

Shares outstanding of the registrant's common stock:

Class	Outstanding as of October 30, 2017
Common stock, $0.001 par value	49,559,701

INTERMOLECULAR, INC.

FORM 10-Q FOR THE QUARTER ENDED SEPTEMBER 30, 2017

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PART I — FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

INTERMOLECULAR, INC. AND SUBSIDIARIES

Condensed Consolidated Balance Sheets

(In thousands, except share and per share data)

(Unaudited)

	September 30, 2017	December 31, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	$ 9,887	$ 5,759
Short-term investments	14,852	20,035
Accounts receivable	3,476	5,063
Prepaid expenses and other current assets	1,017	1,397
Total current assets	29,232	32,254
Long-term investments	2,409	1,995
Materials inventory	2,995	3,357
Property and equipment, net	7,096	10,964
Intangible assets, net	3,081	4,001
Other assets	577	597
Total assets	$ 45,390	$ 53,168
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,014	$ 309
Accrued liabilities	1,046	1,451
Accrued compensation and employee benefits	2,564	1,663
Deferred revenue	2,018	1,533
Total current liabilities	6,642	4,956
Deferred rent	2,994	3,149
Other long-term liabilities	28	67
Total liabilities	9,664	8,172
Commitments and contingencies (note 5)		
Stockholders' equity:		
Common stock, par value $0.001 per share—200,000,000 shares authorized; 49,559,701 and 49,513,528 shares issued and outstanding as of September 30, 2017 and December 31, 2016, respectively	50	50
Additional paid-in capital	214,538	213,313
Accumulated other comprehensive loss	(9)	(32)
Accumulated deficit	(178,853)	(168,335)
Total stockholders' equity	35,726	44,996
Total liabilities and stockholders' equity	$ 45,390	$ 53,168

See accompanying notes to unaudited condensed consolidated financial statements

INTERMOLECULAR, INC. AND SUBSIDIARIES

Condensed Consolidated Statements of Operations

(In thousands, except share and per share data)

(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Revenue:				
Program revenue	$ 6,869	$ 8,844	$ 20,160	$ 30,857
Licensing and royalty revenue	1,753	1,730	6,495	5,964
Total revenue	8,622	10,574	26,655	36,821
Cost of revenue:				
Cost of program revenue	2,864	3,431	8,106	12,284
Cost of licensing and royalty revenue	11	25	303	100
Total cost of revenue	2,875	3,456	8,409	12,384
Gross profit	5,747	7,118	18,246	24,437
Operating expenses:				
Research and development	4,835	8,451	17,328	22,279
Sales and marketing	874	1,792	3,285	5,866
General and administrative	2,000	2,667	7,225	7,936
Restructuring charges	—	1,120	1,351	1,120
Total operating expenses	7,709	14,030	29,189	37,201
Loss from operations	(1,962)	(6,912)	(10,943)	(12,764)
Other income (expense):				
Interest income (expense), net	70	51	182	123
Other income (expense), net	64	89	243	204
Total other income (expense), net	134	140	425	327
Loss before provision for income taxes	(1,828)	(6,772)	(10,518)	(12,437)
Provision for income taxes	—	3	1	7
Net loss	$ (1,828)	$ (6,775)	$ (10,519)	$ (12,444)
Net loss per share, basic and diluted	$ (0.04)	$ (0.14)	$ (0.21)	$ (0.25)
Weighted-average number of shares used in computing net loss per share, basic and diluted	49,554,701	49,466,137	49,543,014	49,366,982

Related Party Transactions

The Condensed Consolidated Statements of Operations include the following related party transactions:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Revenue:				
Program revenue	$ —	$ —	$ —	$ 267
Licensing and royalty revenue	—	359	383	1,379
Total revenue	$ —	$ 359	$ 383	$ 1,646
Cost of Revenue:				
Cost of program revenue	$ —	$ —	$ —	$ 102
Cost of licensing and royalty revenue	—	2	1	27
Total cost of revenue	$ —	$ 2	$ 1	$ 129

See accompanying notes to unaudited condensed consolidated financial statements

Condensed Consolidated Statements of Comprehensive Loss

(In thousands)

(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Net loss	$ (1,828)	$ (6,775)	$ (10,519)	$ (12,444)
Change in unrealized gain (loss) on available-for-sale-securities, net of tax	12	(24)	24	5
Other comprehensive income (loss)	12	(24)	24	5
Comprehensive loss, net of income tax	$ (1,816)	$ (6,799)	$ (10,495)	$ (12,439)

See accompanying notes to unaudited condensed consolidated financial statements

INTERMOLECULAR, INC. AND SUBSIDIARIES

Condensed Consolidated Statements of Cash Flows

(In thousands)

(Unaudited)

	Nine Months Ended September 30, 2017	Nine Months Ended September 30, 2016
Cash flows from operating activities:		
Net loss	$ (10,519)	$ (12,444)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation, amortization, and accretion	5,369	7,708
Stock-based compensation	1,221	2,936
(Gain) loss on disposal of property and equipment	70	(19)
Gain on disposal of intangible assets	(1,239)	—
Changes in operating assets and liabilities:		
Accounts receivable	1,587	2,524
Prepaid expenses and other assets	402	118
Materials inventory	391	489
Accounts payable	688	(453)
Accrued and other liabilities	370	(2,088)
Deferred revenue	485	(471)
Net cash used in operating activities	(1,175)	(1,700)
Cash flows from investing activities:		
Purchase of investments	(15,505)	(22,361)
Redemption of investments	20,014	23,526
Purchase of property and equipment	(705)	(2,130)
Proceeds from sale of equipment	12	22
Proceeds from sale of intangible assets	1,500	—
Purchased and capitalized intangible assets	—	(45)
Net cash (used in) provided by investing activities	5,316	(988)
Cash flows from financing activities:		
Payment of capital leases	(13)	(7)
Proceeds from exercise of common stock options	—	714
Net cash (used in) provided by financing activities	(13)	707
Net increase (decrease) in cash and cash equivalents	4,128	(1,981)
Cash and cash equivalents at beginning of period	5,759	11,676
Cash and cash equivalents at end of period	$ 9,887	$ 9,695
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 6	5
Cash paid for income taxes, net of refunds received	$ 1	7
Noncash investing/operating activities:		
Transfer of property and equipment to materials inventory	$ 380	$ 752
Transfer of materials inventory to property and equipment	$ 351	$ 1,335
Additions to property, equipment and intangible assets not paid at the end of the period	$ 49	$ 72

See accompanying notes to unaudited condensed consolidated financial statements

1. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying condensed consolidated financial statements of Intermolecular, Inc. and subsidiaries (the Company) have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) for interim financial information, the instructions to Form 10-Q and Article 10 of Regulation S-X of the Securities and Exchange Commission (SEC). Accordingly, certain information and disclosures normally included in complete financial statements prepared in accordance with GAAP have been condensed or omitted. The information in this report should be read in conjunction with the Company's audited consolidated financial statements and notes thereto included in its Annual Report on Form 10-K for the fiscal year ended December 31, 2016, as filed with the SEC on March 3, 2017. Certain amounts in the prior year's presentations have been reclassified to conform to the current presentation. These reclassifications had no effect on previously reported net income.

In the opinion of management, the accompanying unaudited condensed consolidated financial statements reflect all adjustments (consisting only of normal recurring adjustments) necessary to present fairly the Company's financial position, results of operations and cash flows for the interim periods presented. The operating results for the three and nine months ended September 30, 2017 are not necessarily indicative of the results that may be expected for any other future interim period or full year. The condensed consolidated balance sheet as of December 31, 2016 is derived from the audited consolidated financial statements.

Use of Estimates

The preparation of the accompanying condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions about future events. These estimates and the underlying assumptions affect the amounts of assets and liabilities reported, disclosures about contingent assets and liabilities, and reported amounts of revenue and expenses. Management uses estimates and judgments in determining recognition of revenues, valuations of accounts receivable, inventories, intangible assets, warrants and assumptions used in the calculation of income taxes and stock-based compensation, among others. These estimates and assumptions are based on management's best estimates and judgment. Management evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors, and adjusts such estimates and assumptions when facts and circumstances dictate. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist of cash, cash equivalents, investments and accounts receivable. The Company's cash, cash equivalents and investments consist of demand deposits, money market accounts, certificates of deposit, corporate bonds and commercial paper maintained with high quality financial institutions. The Company's accounts receivable consist of non-interest bearing balances due from credit-worthy customers.

Significant Accounting Policies

There has been no significant changes to the Company's accounting policies since it filed its audited consolidated financial statements in its Annual Report on Form 10-K for the year ended December 31, 2016. During the first quarter of 2017, in connection with a CDP, the Company recognized revenue on the sale of intellectual property that was developed during the term of the CDP.

Materials Inventory

Materials inventories consist of raw materials in the amount of $3.0 million and $3.4 million as of September 30, 2017 and December 31, 2016, respectively.

Accounts Receivable and Allowance for Doubtful Accounts

The Company did not have any allowance for doubtful accounts as of September 30, 2017 and December 31, 2016.

Concentration of Revenue and Accounts Receivable

Significant customers are those that represent more than 10% of the Company's total revenue or accounts receivable. For each significant customer, including related parties, revenue as a percentage of total revenue and accounts receivable as a percentage of total accounts receivable are as follows:

	Revenue				Accounts Receivable	
	Three Months Ended September 30,		Nine Months Ended September 30,		As of September 30,	As of December 31,
	2017	2016	2017	2016	2017	2016
Customer A	55%	49%	57%	35%	60%	69%
Customer B	14%	12%	14%	19%	*	*
Customer C	12%	*	*	13%	22%	*
Customer D	*	11%	*	*	*	*
Customer E	*	*	*	*	11%	*
Customer F	*	*	*	*	*	14%

* less than 10%

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09 (ASU 2014-09) "Revenue from Contracts with Customers." ASU 2014-09 supersedes the revenue recognition requirements in "Revenue Recognition (Topic 605)", and requires entities to recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services. As currently issued, the standard is effective beginning in the first quarter of fiscal year 2018. The Company has performed an initial evaluation of this standard and its impact on the financial statements. This included tasks such as identifying contracts, identifying performance obligations and reviewing the applicable revenue streams. The Company will continue to assess these new requirements, including the new revenue disclosure requirements, prior to implementation which is expected under the modified retrospective method. The Company expects licensing royalty revenues that are currently recognized on a cash basis will be estimated and recognized when delivery occurs/contract/agreement is finalized. The Company expects this change will not have a material impact on its financial statements.

In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. The new guidance enhances the reporting model for financial instruments, which includes amendments to address aspects of recognition, measurement, presentation and disclosure. The update to the standard is effective for the Company in the first quarter of fiscal 2018, with early adoption permitted under limited circumstances. The Company is currently evaluating the effect the Standard will have on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases. ASU 2016-02 requires that lease arrangements longer than 12 months result in an entity recognizing an asset and liability. The updated guidance is effective for interim and annual periods beginning after December 15, 2018, and early adoption is permitted. The Company is currently evaluating the effect the Standard will have on its consolidated financial statements.

2. Fair Value of Financial Instruments

The Company measures and reports its cash equivalents and investments at fair value. The carrying amounts for cash equivalents and investments approximate their fair values due. The following tables set forth the fair value of the Company's cash equivalents and investments by level within the fair value hierarchy (in thousands):

	As of September 30, 2017			
	Fair Value	Level I	Level II	Level III
Assets:				
Money market funds	$ 4,691	$ 4,691	$ —	$ —
Corporate debt securities and commercial paper	17,261	—	17,261	—
Total assets measured at fair value	$ 21,952	$ 4,691	$ 17,261	$ —

	As of December 31, 2016			
	Fair Value	Level I	Level II	Level III
Assets:				
Money market funds	$ 2,669	$ 2,669	$ —	$ —
Corporate debt securities and commercial paper	22,030	—	22,030	—
Total assets measured at fair value	$ 24,699	$ 2,669	$ 22,030	$ —

Investments are classified as "available-for-sale" and are carried at fair value based on quoted markets or other readily available market information. The Company's investment policy requires investments to have a less than twenty four month maturity term and a minimum credit rating of A-. Unrealized gains and losses, net of taxes, are included in accumulated other comprehensive income (loss). Gains and losses are determined using the specific identification method. Cash, cash equivalents, and investments consisted of the following as of September 30, 2017 (in thousands):

	As of September 30, 2017			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
Assets:				
Cash	$ 5,196	$ —	$ —	$ 5,196
Money market funds	4,691	—	—	4,691
Corporate debt securities and commercial paper	17,252	—	(9)	17,261
Total cash, cash equivalents and investments	$ 27,139	$ —	$ (9)	$ 27,148

As of December 31, 2016, the Company had $32,000 of unrealized losses.

3. Property and Equipment

Property and equipment consist of the following (in thousands):

	As of	
	September 30, 2017	December 31, 2016
Lab equipment and machinery (1)	$ 58,849	$ 58,289
Leasehold improvements	6,248	6,246
Computer equipment and software	4,855	4,640
Furniture and fixtures	221	219
Construction in progress	274	590
Total property and equipment	70,447	69,984
Less accumulated depreciation	(63,351)	(59,020)
Property and equipment, net	$ 7,096	$ 10,964

(1) Includes $0 and $90,000 (in net book value) of lab equipment and machinery acquired under capital leases, as of September 30, 2017 and December 31, 2016, respectively. See Note 5 for detailed lease information.

The following table presents depreciation expense included in the Condensed Consolidated Statement of Operations and includes amortization of leasehold improvements (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Depreciation expense	$ 1,561	$ 2,415	$ 4,426	$ 5,639

During the third quarter of 2017, the Company determined that it identified indicators of impairment relating to certain lab equipment. Based on this evaluation, the Company recorded an impairment charge of $96,000 in the third quarter of 2017. Fair value was based on the expected future cash flows using Level 3 inputs under ASC 820, which are cash flows expected to be generated by the market participants, discounted at the risk-free rate of interest. Because of changing market conditions, such as declining usage and rising interest rates, it is reasonably possible that the estimate of expected future cash flows may change in the near term resulting in the need to further adjust our determination of fair value.

4. Intangible Assets

Intangible assets consist of the following (in thousands):

	As of	
	September 30, 2017	December 31, 2016
Patents issued	$ 4,272	$ 4,892
Patents pending	165	385
Trademarks	40	40
Total intangible assets	4,477	5,317
Less patent amortization	(1,396)	(1,316)
Intangible assets, net	$ 3,081	$ 4,001

The following table presents patent amortization expense included in the Condensed Consolidated Statement of Operations (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Amortization expense	$ 79	$ 130	$ 245	$ 394

During third quarter of 2017, the Company identified certain patents with carrying values deemed to not be recoverable. Based on this evaluation, the Company recorded an impairment charge of $11,000 related to these patents. Fair value was based on expected future cash flows using Level 3 inputs under ASC 820, which are cash flows expected to be generated by the market participants, discounted at the risk-free rate of interest. Because of changing market conditions such as decreased demand and rising interest rates, it is reasonably possible that the estimate of expected future cash flows may change in the near term resulting in the need to further adjust our determination of fair value.

5. Commitments and Contingencies

Leases

The Company entered into an operating lease agreement in May 2010 for its San Jose headquarters that was subsequently modified in Nov 2013 and May 2015. The building lease expires in June 2025. Rent expense is being recognized on a straight-line basis over the lease term.

The following table presents rent expense included in the Condensed Consolidated Statement of Operations (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Rent expense	$ 567	$ 566	$ 1,685	$ 1,695

During the third quarter of 2017, the Company made payments of $0.6 million related to this operating lease.

In December 2015, the Company signed a sublease to lease out a portion of office space. The term of the lease is for three years and annual gross rent is approximately $0.3 million. The sublessee moved in during the second quarter of 2016. The Company received $0.1 million in rent payment under the agreement in the third quarter of 2017.

Capital Lease Obligations

During the third quarter of 2016, the Company leased a furnace under a three year lease agreement which was accounted for as a capital lease under ASC 840-30; the underlying asset was included in lab equipment and machinery. The lease agreement contains a cancellation option after 12 months and automatically transfers ownership of the property to the Company, the lessee, at the end of the lease term. The Company terminated the lease in August 2017, recognized a loss of $29,000 and the capital lease obligation of $49,000 was cancelled. The net book value of the underlying asset as of the termination date was $79,000.

Depreciation expense of the furnace recorded under the capital lease obligations was $2,000 for the three months ended September 30, 2017, and $3,000 for the three months ended September 30, 2016.

6. Stockholders' Equity

Stock-Based Compensation

The fair value of the employee stock options granted during the period was estimated on the respective grant date using a Black-Scholes option-pricing model with the following weighted-average assumptions:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Expected term (in years)	6.1	6.1	6.0	6.0
Risk-free interest rate	2.0%	1.3%	2.1%	1.3%
Expected volatility	54%	55%	55%	54%
Expected dividend rate	—%	—%	—%	—%

Stock-based compensation expense, net of estimated forfeitures, was included in the following line items on the Condensed Consolidated Statements of Operations (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Cost of revenue	$ 38	$ 101	$ 144	$ 408
Research and development	61	223	306	759
Sales and marketing	28	178	97	568
General and administrative	115	384	674	1,201
Total stock-based compensation	$ 242	$ 886	$ 1,221	$ 2,936

The following table presents stock-based compensation expense, net of estimated forfeitures, by grant type (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Stock options	$ 197	$ 770	$ 1,095	$ 2,518
Restricted stock awards and restricted stock units (RSUs)	45	116	126	418
Total stock-based compensation	$ 242	$ 886	$ 1,221	$ 2,936

The following table presents unrecognized compensation expense, net of estimated forfeitures, related to the Company's equity compensation plans as of September 30, 2017, which is expected to be recognized over the following weighted-average periods (in thousands, except for weighted-average period):

	Unrecognized Compensation Expense	Weighted-Average Period (in years)
Stock options	$ 1,218	2.9
RSUs	$ 280	2.4

The following table presents details on grants made by the Company for the following periods:

	Nine Months Ended September 30, 2017		Nine Months Ended September 30, 2016	
	Shares Granted	Weighted-Average Grant Date Fair Value	Shares Granted	Weighted-Average Grant Date Fair Value
Stock options	1,893,500	$ 1.03	2,285,000	$ 0.69
RSUs	300,000	$ 0.96	200,000	$ 0.99

The total intrinsic value of stock options exercised during the nine months ended September 30, 2017 and 2016 was $0 million and $0.2 million, respectively.

RSUs that vested during the nine months ended September 30, 2017 and 2016 had fair values of $0.1 million and $0.3 million, respectively, as of the vesting date.

Common Stock

As of September 30, 2017 and December 31, 2016, the Company had reserved shares of common stock for issuance as follows:

	As of September 30, 2017	As of December 31, 2016
Number of stock options outstanding	7,635,846	10,048,607
Number of RSUs outstanding	524,765	323,663
Shares available for future grant	9,556,981	5,163,386
Total shares reserved	17,717,592	15,535,656

7. Net Loss per Share

The following outstanding shares of common stock equivalents were excluded from the computation of diluted net loss per share for the periods presented because including them would have been antidilutive:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Stock options to purchase common stock	7,635,846	11,312,403	7,635,846	11,312,403
RSUs	524,765	388,381	524,765	388,381

8. Income Taxes

Income tax expense for the nine months ended September 30, 2017 was $800 or -0.0076%, on a pretax loss of $10.5 million. The difference between the Company's effective tax rate and the federal statutory rate of 35% is primarily attributable to the losses incurred by the Company. The Company maintained a valuation allowance as of September 30, 2017 against all of its deferred tax assets. The Company intends to maintain a full valuation allowance until sufficient positive evidence exists to support its reduction.

9. Related Party Transactions

In November 2006, the Company entered into an Alliance Agreement with a related party that was a beneficial owner of more than 5% of the Company’s common stock at the time. During 2016, this related party sold all its holdings of the Company’s stock and owned no Company’s common stock as of December 31, 2016. Since November 2006, the agreement has been amended numerous times with the last amendment signed in December 2013. The other party to the Alliance Agreement and the Company each had an independent board member that served on both companies’ boards of directors; however the independent board member for the other party to the Alliance Agreement did not stand for re-election as director at the other company effective May 24, 2017 and thus the other company is no longer a related party.

As of September 30, 2017 and December 31, 2016, the Company had no accounts receivable and deferred revenue balance in either period with respect to its related party relationships. The following table presents related party revenue included in the Condensed Consolidated Statement of Operations (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Related party revenue	$ —	$ 359	$ 383	$ 1,646
Related party cost of revenue	$ —	$ 2	$ 1	$ 129

As of September 30, 2017, representatives of an investment firm that is a beneficial owner of approximately 29.7% of the Company’s common stock, are members of the board of directors of the Company. The Company incurred director fees expenses of $23,000 and $57,000 to the investment firm for the three and nine months ended September 30, 2017 respectively.

10. Information about Geographic Areas

Revenue

Revenue by geography is based on the billing address of the customer. The following table sets forth revenue by geographic area (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
United States	$ 2,473	$ 4,060	$ 9,582	$ 17,421
Japan	330	—	330	313
Asia-Pacific ex Japan	5,770	6,393	16,593	18,365
Europe and Middle East	49	121	150	722
Total	$ 8,622	$ 10,574	$ 26,655	$ 36,821

Long-Lived Assets

Substantially all of the Company's long-lived assets are located in the U.S. An insignificant amount of long-lived assets reside in the Company's foreign subsidiaries and branches in Hong Kong and Taiwan.

11. Restructuring Charges

During September 2016, Company initiated a reduction in its workforce to improve its cost structure and align spending with continuing operations plans. The reduction constituted approximately 13% of the Company's global workforce. As a result of reduction in its workforce, the Company recorded expenses related to employee severance and termination benefits of approximately $1.1 million. All of the expenses related to the September 2016 reduction in the Company's workforce has been paid.

In March, 2017, the Company initiated a reduction in its workforce to reduce operating costs and to achieve profitability. The reduction in its workforce constituted approximately 18% of the Company's global workforce. As a result of the reduction in its workforce, the Company recorded expenses related to employee severance and termination benefits of approximately $1.4 million, which was recognized during the three months ended March 31, 2017. All such related expenses are recorded within "Restructuring charges" on the Condensed Consolidated Statements of Operations, and related accruals are included in accrued liabilities and accrued compensation and employee benefits on the Condensed Consolidated Balance Sheets. The following table presents accrued liabilities for severance and related expenses and payments (in thousands) as of September 30, 2017.

	As of December 31, 2016	Charge	Cash Payments	As of September 30, 2017
Severance and related expenses	$ —	$ 1,351	$ (1,322)	$ 29

12. Dissolution of Intermolecular Japan Limited a wholly owned subsidiary of the Company

In May 2017, the Company's Japan subsidiary was dissolved. As of the date of the dissolution, the subsidiary had assets of $225,000 and no liabilities. A loss of $3,000 was recognized on the dissolution.

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

Our Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is provided in addition to the accompanying consolidated condensed financial statements and notes to assist readers in understanding our results of operations, financial condition and cash flows. Our MD&A is organized as follows:

- *Overview.* Discussion of our business and overall analysis of financial and other highlights affecting our company in order to provide context for the remainder of MD&A.
- *Strategy.* Our overall strategy.
- *Basis of Presentation.* A summary of the primary elements of our financial results.
- *Critical Accounting Estimates.* Accounting estimates that we believe are most important to understanding the assumptions and judgments incorporated in our reported financial results and forecasts.
- *Results of Operations.* An analysis of our financial results comparing the three and nine months ended September 30, 2017 to the three and nine months ended September 30, 2016.
- *Liquidity and Capital Resources.* An analysis of changes in our balance sheets and cash flows, and discussion of our financial condition and sources of liquidity.

The following discussion and analysis should be read in conjunction with our condensed consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q (Form 10-Q) and our audited consolidated financial statements and related notes included in our Annual Report on Form 10-K for our fiscal year ended December 31, 2016 (2016 Form 10-K), as filed with the Securities and Exchange Commission. This Form 10-Q contains forward-looking statements that involve risks and uncertainties, as well as assumptions that, if they never materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. The statements contained in this Form 10-Q that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are often identified by the use of words such as, but not limited to, "may," "will," "expect," "believe," "anticipate," "intend," "could," "should," "estimate," or "continue," and similar expressions or variations intended to identify forward-looking statements. These statements are based on the beliefs and assumptions of our management based on information currently available to management. Such forward-looking statements are subject to risks, uncertainties and other important factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled "Risk Factors" in Part II, Item 1A of this Form 10-Q and in our 2016 Form 10-K. Furthermore, such forward-looking statements speak only as of the date of this Form 10-Q. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

Overview

We are a partner for the innovation of advanced materials using high throughput experimentation. Advanced materials are critical to sustaining and advancing many industries, including the semiconductor, consumer electronics, aerospace and automotive industries. Using traditional experimental techniques, it can take many years to discover new advanced materials and many more years to deploy them in the marketplace. By leveraging our proprietary HPC platform and multi-disciplinary development team, we strive to enable our customers to more rapidly discover advanced materials and tailor them to suit their needs.

We were founded in 2004 and are headquartered in San Jose, California. Our total revenue decreased to $8.6 million and $26.7 million for the three and nine months ended September 30, 2017 from $10.6 million and $36.8 million for the three and nine months ended September 30, 2016. Our net loss decreased to $1.8 million and $10.5 million for the three and nine months ended September 30, 2017, respectively, compared to net loss of $6.8 million and $12.4 million for the three and nine months ended September 30, 2016 respectively. Since inception, we have incurred net losses aggregating to an accumulated deficit of $178.9 million as of September 30, 2017.

Strategy

We currently target large markets that rely on advanced materials for differentiation. Within these broad markets, we target customers that have track records of technological innovation, have significant materials-based research and development (R&D), and are pursuing technical advancements that are critical to their success and strategy. Generally, our approach is most relevant to industries that rely heavily upon advanced thin film materials such as those achieved using physical vapor deposition (PVD) and atomic layer deposition (ALD) processing tools; however, our approach is also relevant to discovering and understanding advanced materials more broadly, including advanced bulk materials such as metal alloys. Historically, we have partnered most extensively in the semiconductor industry and particularly in the area of semiconductor memory such as dynamic RAM (DRAM) and new non-volatile memory (NVM) technologies. Going forward, we currently plan to continue growing our footprint within semiconductors, while expanding our engagements within the semiconductor ecosystem.

Basis of Presentation

How We Generate Revenue

Our customer engagement process primarily generates revenue in two ways: program revenue; and licensing and royalty revenue. Programs are our primary engagement model with customers and are structured to result in program fees, and in some cases licensing and/or royalty revenue arrangements.

- *Program revenue.* Program revenue may include payments for research services, milestone payments, and subscription payments for dedicated and shared workflow tools used in the programs and reimbursed payments for consumables and outside services from third parties. Individual programs typically range from six months up to three years. We recognize program revenue in a manner consistent with activities performed. As we engage new customers and negotiate extensions for existing customer agreements that are nearing completion, we expect program revenue to continue to fluctuate.
- *Licensing and royalty revenue.* Licensing and royalty revenue consists of licensing fees and royalties for granting our customers rights to our proprietary technology and intellectual property (IP). Specifically, this includes licensing the HPC capabilities of our workflows, licensing our informatics and analysis software, and licensing fees and royalties on products commercialized by our customers that incorporate technology developed through our programs. In certain instances, minimum license fees and royalties may be guaranteed by customer contracts and are recognized as revenue ratably over the related periods. In addition, licensing and royalty revenue may include sale of intellectual property when title transfers if there are no remaining deliverables related to the intellectual property transfer. During the first quarter of 2017, in connection with a CDP, we recognized revenue on the sale of intellectual property that was developed during the term of the CDP. We anticipate our licensing and royalty revenue to continue to fluctuate based on the timing and amount of minimum license fees guaranteed by certain customer contracts and the timing of customer reported volume-based royalties.

Cost of Revenue

Our cost of revenue is variable and depends on the product mix and type of revenue earned in each period relating to our customer programs.

- *Cost of program revenue.* Our cost of program revenue primarily consists of salaries and other personnel-related expenses, including stock-based compensation, for our research and development scientists, engineers and development fab process operations employees. Additionally, our cost of revenue includes costs of wafers, targets, materials, program-related supplies, third-party professional fees and depreciation of equipment used in programs. We include inventory obsolescence and customer related asset impairments in cost of program revenue.
- *Cost of licensing and royalty revenue.* Our cost of licensing and royalty revenue has, and we expect will continue to, primarily consist of the amortization of acquired patents, which were acquired as part of our Symyx asset purchase in November 2011, and licensing obligations.

Research and Development

Our R&D expenses consist of costs incurred for development and continuous improvement of our HPC platform, expansion of software capabilities and application research and development that are not associated with customer programs. R&D costs include personnel-related expenses, including stock-based compensation expenses, for our technical staff as well as consultant costs, parts and prototypes, wafers, chemicals, supply costs, facilities costs, utilities costs related to laboratories and offices occupied by technical staff, depreciation on equipment used by technical staff, long-lived R&D assets impairment, and outside services, such as machining and third-party R&D costs. We recognize R&D overhead costs that are not allocated to a customer program as expenses within R&D.

Sales and Marketing

Our sales and marketing expenses consist primarily of personnel-related costs, including stock-based compensation, for our sales and marketing employees, facility costs and professional expenses. Professional expenses consist of external website and marketing communication consulting costs and market research.

General and Administrative

General and administrative expenses consist primarily of personnel-related costs, including stock-based compensation, as well as professional services and facilities costs related to our executive, finance, legal, human resources, management information systems and information technology functions. Professional services consist of outside accounting, information technology, consulting and legal costs. We also incur significant accounting and legal costs related to compliance with rules and regulations enacted by the Securities and Exchange Commission, including the costs of maintaining compliance with Section 404 of the Sarbanes-Oxley Act, as well as insurance, investor relations and other costs associated with being a public company.

Interest income (expense), net

Interest expense consists primarily of interest on a capital lease for a furnace initiated in July 2016, but that was terminated in August 2017. Interest income represents interest earned on our cash, cash equivalents and investments. We expect interest income will vary each reporting period depending on our average investment balances during the period and market interest rates.

Other Income, net

Other income primarily consisted of sublease income that we receive from subleasing a portion of our office space under a sublease agreement entered into in December 2015. The term of the lease is for three years and annual gross rent is approximately $0.3 million. The sublessee moved in and occupied the space during the second quarter of 2016. Other income (expense) also includes foreign exchange gains and losses that have not been significant.

Critical Accounting Estimates

Our consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States and include our accounts and the accounts of our wholly-owned subsidiaries. The preparation of our consolidated financial statements requires our management to make estimates, assumptions and judgments that affect the reported amounts of assets and liabilities and disclosures for contingent assets and liabilities as of the date of the financial statements, and the reported amounts of revenue and expenses during the applicable periods. Management bases its estimates, assumptions and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances. Different assumptions and judgments would change the estimates used in the preparation of our consolidated financial statements which, in turn, could change the results from those reported. Our management evaluates its estimates, assumptions and judgments on an ongoing basis.

There have been no material changes in the matters for which we make critical accounting estimates in the preparation of our condensed consolidated financial statements during the three and nine months ended September 30, 2017 as compared to those disclosed in our 2016 Form 10-K. For further information on our critical and other significant accounting policies, see our 2016 Form 10-K.

Recent Accounting Pronouncements

See Note 1 of the Notes to Condensed Consolidated Financial Statements included in this Form 10-Q for recent accounting pronouncements that could have an effect on us.

Results of Operations

Comparison of the Three and Nine Months Ended September 30, 2017 and 2016

	Three Months Ended September 30, 2017	Three Months Ended September 30, 2016	$ Change	% Change	Nine Months Ended September 30, 2017	Nine Months Ended September 30, 2016	$ Change	% Change
	(in thousands)				(in thousands)			
Revenue:								
Program revenue	$ 6,869	$ 8,844	$ (1,975)	-22%	$ 20,160	$ 30,857	$ (10,697)	-35%
Licensing and royalty revenue	1,753	1,730	23	1%	6,495	5,964	531	9%
Total revenue	8,622	10,574	(1,952)	-18%	26,655	36,821	(10,166)	-28%
Cost of revenue:	2,875	3,456	(581)	-17%	8,409	12,384	(3,975)	-32%
Gross profit	5,747	7,118	(1,371)	-19%	18,246	24,437	(6,191)	-25%
Operating expenses:								
Research and development	4,835	8,451	(3,616)	-43%	17,328	22,279	(4,951)	-22%
Sales and marketing	874	1,792	(918)	-51%	3,285	5,866	(2,581)	-44%
General and administrative	2,000	2,667	(667)	-25%	7,225	7,936	(711)	-9%
Restructuring charges	—	1,120	(1,120)		1,351	1,120	231	
Total operating expenses	7,709	14,030	(6,321)	-45%	29,189	37,201	(8,012)	-22%
Loss from operations	(1,962)	(6,912)	4,950		(10,943)	(12,764)	1,821	
Other income (expense):								
Interest income (expense), net	70	51	19		182	123	59	
Other income (expense), net	64	89	(25)		243	204	39	
Total other income (expense), net	134	140	(6)		425	327	98	
Loss before provision for income taxes	(1,828)	(6,772)	4,944		(10,518)	(12,437)	1,919	
Provision for income taxes	—	3	(3)		1	7	(6)	
Net loss	$ (1,828)	$ (6,775)	$ 4,947		$ (10,519)	$ (12,444)	$ 1,925	

Revenue

Our revenue decreased by 18% during the three months ended September 30, 2017, as compared to the three months ended September 30, 2016, due to a 22% decline in program revenue, partially offset by 1% increase in licensing and royalty revenue. The decrease in program revenue was driven by the scheduled completion and reduction of program agreements.

Our revenue decreased by 28% during the nine months ended September 30, 2017, as compared to the nine months ended September 30, 2016, due to a 35% decline in program revenue, partially offset by 9% increase in licensing and royalty revenue. The decrease in program revenue was driven by the scheduled completion and reduction of program agreements. The increase in licensing and royalty revenue was primarily due to the sale of certain patents to a customer for $1.5 million during the three months ended March 31, 2017.

We expect our revenue to fluctuate from period to period based on demand for, and our resources to fulfill, our services, project completion schedules and end-market sales.

The following table presents revenue by geographic region, based on invoiced locations, during the three and nine months ended September 30, 2017 and 2016 in dollars (in thousands) and as a percentage of revenue for the periods presented:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2017		2016		2017		2016	
	Revenues	% of Revenues	Revenues	% of Revenues	Revenues	% of Revenues	Revenues	% of Revenues
United States	$ 2,473	29%	$ 4,060	39%	$ 9,582	36%	$ 17,421	47%
Japan	330	4%	—	—%	330	1%	313	1%
APAC ex Japan	5,770	67%	6,393	60%	16,593	62%	18,365	50%
Europe and Middle East	49	—%	121	1%	150	1%	722	2%
Total	$ 8,622	100%	$ 10,574	100%	$ 26,655	100%	$ 36,821	100%

The decrease in revenue from the United States region in the three and nine months ended September 30, 2017, as compared to the same periods ended September 30, 2016, are due to scheduled completion and reduction of program arrangements.

Cost of Revenue

Cost of revenue decreased by 17% and 32% during the three and nine months ended September 30, 2017, respectively, as compared to the same periods ended September 30, 2016, due to decreases in labor and personnel-related expenses, depreciation, materials and other costs associated with programs. Stock-based compensation, which was included in personnel-related expenses, decreased by $0.1 million and $0.3 million for the three and nine months ended September 30, 2017, respectively, compared to the three and nine months ended September 30, 2016.

Gross Margin

Our gross profit as a percentage of net revenues, or gross margin, has been and will continue to be affected by a variety of factors, including the mix of program revenue and licensing and royalty revenue recognized during the period. We achieve a higher gross margin on licensing and royalty revenue as compared to program revenue.

Gross margin was 67% and 68% during the three and nine months ended September 30, 2017, respectively as, compared to 67% and 66% for the three and nine months ended September 30, 2016. The increase for the nine months ended September 30, 2017 was primarily attributable due to decrease in direct labor, materials and other costs associated with programs.

Research and Development

R&D expenses decreased by 43% during the three months ended September 30, 2017, as compared to the three months ended September 30, 2016. The changes were primarily attributable to a $1.1 million decrease in labor and personnel-related expenses and $1.4 million decrease in professional fees.

R&D expenses decreased by 22% during the nine months ended September 30, 2017, as compared to the nine months ended September 30, 2016. The changes were primarily attributable to a $2.7 million decrease in labor and personnel-related expenses and $1.3 million decrease in professional fees.

Sales and Marketing

Sales and marketing expenses decreased by 51% during the three months ended September 30, 2017, compared to the three months ended September 30, 2016. The decrease was primarily attributable to a $0.8 million decrease in personnel-related expenses as a result of reduced headcount.

Sales and marketing expenses decreased by 44% during the nine months ended September 30, 2017, compared to the nine months ended September 30, 2016. The decrease was primarily attributable to a $2.2 million decrease in personnel-related expenses as a result of reduced headcount.

General and Administrative

General and administrative expenses decreased by 25% during the three months ended September 30, 2017, as compared to the three months ended September 30, 2016. The decrease was primarily attributable to decrease in personnel cost and professional fees.

General and administrative expenses decreased by 9% during the nine months ended September 30, 2017, as compared to the nine months ended September 30, 2016. The decrease was primarily attributable to a decrease in personnel cost and professional fees.

Restructuring Charges

Restructuring expenses were $0 and $1.4 million during the three and nine months ended September 30, 2017. In March 2017, we initiated a restructuring plan to reduce our workforce by 18%, pursuant to which charges of $1.4 million were incurred for severance and other personnel related costs.

Restructuring expenses were $1.1 million during the three and nine months ended September 30, 2016. In September 2016, we initiated a restructuring plan to reduce workforce by 13%, pursuant to which charges of $1.1 million were incurred for severance and other personnel related costs.

Loss from Operations

Our operating loss decreased by $4.9 million during the three months ended September 30, 2017, compared to the three months ended September 30, 2016, due to decrease in labor and personnel-related expenses as a result of restructuring completed during third quarter 2016.

Our operating loss decreased by $1.9 million during the nine months ended September 30, 2017, compared to the nine months ended September 30, 2016, due to decrease in labor and personnel-related expenses as a result of restructuring completed during third quarter 2016 and first quarter of 2017.

Interest Income (Expense), net

The increases in interest income during the three and nine months ended September 30, 2017, as compared to the three and nine months ended September 30, 2016 were primarily related to higher income on our investments.

Other Income (Expense), net

Other Income, net, for the three and nine months ended September 30, 2017 consisted principally of sublease income that we recorded from subleasing a portion of our office space under an agreement entered into in December 2015. The sublessee moved in and occupied the space during the second quarter of 2016.

Provision for Income Taxes

Provision for Income Taxes during the three and nine months ended September 30, 2017 and 2016 consisted of income taxes on our US and foreign entities and were not significant during these periods.

Net Loss

Our net loss decreased by $4.9 million during the three months ended September 30, 2017, compared to the three months ended September 30, 2016. The decrease was primarily due to decrease in labor and personnel-related expenses related to the restructuring completed during third quarter of 2016.

Our net loss decreased by $1.9 million during the nine months ended September 30, 2017, compared to the nine months ended September 30, 2016. The decrease was primarily due to decrease in labor and personnel-related expenses as a result of the restructurings completed during the third quarter of 2016 and the first quarter of 2017.

Liquidity and Capital Resources

Prior to our initial public offering in November 2011, we substantially satisfied our capital and liquidity needs through private placements of redeemable convertible preferred stock and, to a lesser extent, cash flow from operations. As of September 30, 2017, we had $27.1 million of cash, cash equivalents and investments and $22.6 million of net working capital.

To date, we have incurred significant losses. During the three months ended September 30, 2017 and 2016, we incurred net losses of $1.8 million and $6.8 million, respectively. As of September 30, 2017, our accumulated deficit was $178.9 million.

We believe that we have the financial resources needed to meet business requirements for the next 12 months. However, our forecast of the period of time through which our financial resources will be adequate to meet business requirements are forward-looking statements and involve risks and uncertainties. Our future capital requirements will depend on many factors, many of which are set forth in greater detail under the caption “Risk Factors,” but generally include without limitation our rate of revenue growth, our expansion of our sales and marketing activities and overhead expenses, the timing and extent of our spending to support our R&D efforts and our ability to expand programs in the semiconductor industry, whether we are successful in obtaining payments from customers, the financial stability of our customers, whether we can enter into additional contracts in our target industries, the progress and scope of R&D projects performed by us and our customers, the effect of any acquisitions of other businesses or technologies that we may make in the future, the filing, prosecution and enforcement of patent claims, how much funding we may need to develop or enhance our solutions or HPC platform and any necessary responses to competitive pressures. To the extent that existing cash, cash equivalents, investments and cash from operations are insufficient to fund our operations, we may need to raise additional funds through public or private equity or debt financing. We may also seek to invest in or acquire complementary businesses, applications or technologies, any of which could also require us to seek additional equity or debt financing. Additional funds may not be available on terms favorable to us or at all. We maintain almost all of our cash and investments in the United States and therefore are not generally subject to restrictions or tax obligations as we access the cash.

Cash Flows

The following summary of our cash flows for the periods indicated has been derived from our condensed consolidated financial statements included elsewhere in this filing (in thousands):

	Nine Months Ended September 30,	
	2017	2016
Net cash used in operating activities	$ (1,175)	$ (1,700)
Net cash (used in) provided by investing activities	$ 5,316	$ (988)
Net cash (used in) provided by financing activities	$ (13)	$ 707

Cash Flows from Operating Activities

We experienced negative cash flows from operating activities during each of the nine months ended September 30, 2017 and September 30, 2016, primarily due to operating results.

Net cash used in operating activities during the nine months ended September 30, 2017 was primarily attributable to our net loss of $10.5 million, offset by non-cash charges of $5.4 million for depreciation, amortization, and accretion and $1.2 million for stock-based compensation and $0.7 million increase in accounts payable and $1.6 million decrease in accounts receivables.

Net cash provided by operating activities during the nine months ended September 30, 2016 was attributable to our net loss of $12.4 million, which was offset by non-cash charges of $7.7 million for depreciation, amortization, and accretion and $2.9 million for stock-based compensation.

We expect that cash flows from operating activities will fluctuate in future periods due to a number of factors, including our operating results, amounts of non-cash charges, the timing of our billings, collections and disbursements.

Cash Flows from Investing Activities

Our investing activities consist primarily of purchases and maturities of short-term investments, capital expenditures to purchase property and equipment and sale of intangible assets. In the future, we expect we will continue to make modest capital expenditures to support our operations, and to incur costs to protect our investment in our developed technology and IP.

During the nine months ended September 30, 2017, cash provided by investing activities was $5.3 million as a result of $1.5 million received from sale of intangible assets and $4.5 million received in the net redemption of our investments, partially offset by purchase of property, plant and equipment of $0.7 million.

During the nine months ended September 30, 2016, cash used in investing activities was $1.0 million, a result of $1.2 million in the net redemptions of short-term investments, offset by $2.1 million in capital expenditures.

Cash Flows from Financing Activities

To date, we have financed our operations primarily with proceeds from the sale of our redeemable convertible preferred stock and proceeds received from our initial public offering.

During the nine months ended September 30, 2017, cash used by financing activities was $13,000 for the capital lease payments, as compared to cash provided of $0.7 million for the nine months ended September 30, 2016, which was primarily from the proceeds of common stock option exercises.

Contractual Obligations and Commitments

The following summarizes our contractual obligations as of September 30, 2017 (in thousands):

	Payments Due by Period				
	Total	Less Than One Year	1 - 3 Years	3 - 5 Years	More Than 5 Years
Operating lease obligations	$ 20,618	$ 2,238	$ 5,279	$ 5,330	$ 7,771
Purchase obligations	318	318	—	—	—
Total	$ 20,936	$ 2,556	$ 5,279	$ 5,330	$ 7,771

Operating lease agreements represent our obligations to make payments under our non-cancelable lease agreement for our facility in San Jose, California. During the nine months ended September 30, 2017, we made regular lease payments of $1.8 million under this operating lease agreement. Purchase obligations consist of firm, non-cancelable agreements to purchase property and equipment and inventory items.

Off-Balance Sheet Arrangements

As of September 30, 2017, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which are established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in interest rates and foreign currency exchange rates. We do not hold or issue financial instruments for trading purposes.

Interest Rate Sensitivity

The primary objectives of our investment activities are to preserve principal, provide liquidity and maximize income without exposing us to significant risk of loss. The securities we invest in are subject to market risk and a change in prevailing interest rates may cause the principal amount of our investments to fluctuate. We maintain our portfolio of cash equivalents and investments in a variety of securities, including commercial paper, corporate debt securities and money market funds. As of September 30, 2017, our investments were primarily in commercial paper, corporate notes and bonds and money market funds. If overall interest rates fell 10% for the three months ended September 30, 2017, our interest income would have decreased by an immaterial amount, assuming consistent investment levels.

Foreign Currency Exchange Risk

As we expand internationally, our consolidated results of operations and cash flows will become increasingly subject to fluctuations due to changes in foreign currency exchange rates. Our revenue is denominated in U.S. dollars. Our expenses are generally denominated in the currencies in which our operations are located, which is primarily in the United States, with an insignificant portion of expenses incurred in the local currencies of our wholly-owned subsidiaries in Hong Kong and our wholly-owned branch in Taiwan. The effect of a hypothetical 10% change in foreign currency exchange rates applicable to our business would not have a material impact on our consolidated financial statements. To date, we have not entered into any material foreign currency hedging contracts, although we may do so in the future.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined in Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended, as of September 30, 2017.

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 (the "Exchange Act"), means controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as the principal executive and financial officers, respectively, to allow timely decisions regarding required disclosures.

Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report.

Changes in internal control over financial reporting

We made no changes to our internal control over financial reporting during the quarterly period ended September 30, 2017 that has materially affected, or that is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and our Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of internal control will be met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of the controls must be considered relative to their costs. While our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of their effectiveness, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, will be detected. These inherent limitations include the realities that judgments in decision making can be faulty and that breakdowns can occur because of simple errors or mistakes. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and may not be detected. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, we may become involved in legal proceedings and claims arising in the ordinary course of our business, including but not limited to legal proceedings and claims brought by employees or former employees relating to working conditions or other issues. We are not currently a party to any legal proceedings the outcome of which, if determined adversely to us, we believe would individually or in the aggregate have a material adverse effect on our business, operating results, financial condition or cash flows.

ITEM 1A. RISK FACTORS

The risks described in Part I, Item 1A, “Risk Factors,” in our Annual Report on Form 10-K for the year ended December 31, 2016, could materially and adversely affect our business, financial condition or future results. These risk factors are not the only risks facing our company. Risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and operating results. The Risk Factors section of our 2016 Annual Report on Form 10-K remains current in all material respects.

ITEM 6. EXHIBITS

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Date	Number	
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				X
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				X
101.INS	XBRL Instance Document				X
101.SCH	XBRL Taxonomy Extension Schema Document				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document				X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				X

SIGNATURES

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

INTERMOLECULAR, INC.
(Registrant)

Date: November 2, 2017

By: /s/ Bill Roeschlein
Bill Roeschlein
Chief Financial Officer

Exhibit 31.1

Certification of Chief Executive Officer

Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Christian F. Kramer, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: November 2, 2017

/s/ CHRISTIAN KRAMER
Christian F. Kramer
President and Chief Executive Officer

Exhibit 31.2

Certification of Chief Financial Officer

Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Bill Roeschlein, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: November 2, 2017

/s/ Bill Roeschlein.
Bill Roeschlein
Chief Financial Officer

Exhibit 32.1

Certification of Chief Executive Officer

Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906

of the Sarbanes-Oxley Act of 2002

In connection with the Quarterly Report of Intermolecular, Inc. (the "Company") on Form 10-Q for the three months ended September 30, 2017, as filed with the Securities and Exchange Commission (the "Report"), Christian F. Kramer, President and Chief Executive Officer of the Company, does hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- The information in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 2, 2017

By: /s/ CHRISTIAN F. KRAMER
Name: Christian F. Kramer
Title: *President and Chief Executive Officer*

A signed original of this written statement required by Rule 13a-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

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

Exhibit 32.2

Certification of Chief Financial Officer

Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906

of the Sarbanes-Oxley Act of 2002

In connection with the Quarterly Report of Intermolecular, Inc. (the "Company") on Form 10-Q for the three months ended September 30, 2017, as filed with the Securities and Exchange Commission (the "Report"), Bill Roeschlein, Chief Financial Officer of the Company, does hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- The information in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 2, 2017

By: /s/ Bill Roeschlein
Name: Bill Roeschlein
Title: *Chief Financial Officer*

A signed original of this written statement required by Rule 13a-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

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