
**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, 2018

Or

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

For the transition period from _____ to _____
Commission File Number 001-35348

Intermolecular, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

**3011 N. First Street
San Jose, California**
(Address of Principal Executive Offices)

20-1616267
(I.R.S. Employer
Identification No.)

95134
(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 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, 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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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 November 5, 2018
Common stock, \$0.001 par value	49,752,516

INTERMOLECULAR, INC.
FORM 10-Q FOR THE QUARTER ENDED SEPTEMBER 30, 2018
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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, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 6,889	\$ 6,090
Short-term investments	23,759	18,060
Accounts receivable	3,330	5,519
Prepaid expenses and other current assets	949	1,069
Total current assets	<u>34,927</u>	<u>30,738</u>
Long-term investments	—	1,657
Materials inventory	2,752	2,781
Property and equipment, net	3,497	5,913
Intangible assets, net	2,141	2,620
Other assets	542	600
Total assets	<u>\$ 43,859</u>	<u>\$ 44,309</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 752	\$ 928
Accrued liabilities	917	865
Accrued compensation and employee benefits	2,602	2,535
Deferred revenue	289	941
Total current liabilities	<u>4,560</u>	<u>5,269</u>
Deferred rent	2,737	2,939
Other long-term liabilities	—	28
Total liabilities	<u>7,297</u>	<u>8,236</u>
Commitments and contingencies (note 5)		
Stockholders' equity:		
Common stock, par value \$0.001 per share—200,000,000 shares authorized; 49,748,766 and 49,569,721 shares issued and outstanding as of September 30, 2018 and December 31, 2017, respectively	50	50
Additional paid-in capital	215,606	214,796
Accumulated other comprehensive loss	(19)	(35)
Accumulated deficit	(179,075)	(178,738)
Total stockholders' equity	<u>36,562</u>	<u>36,073</u>
Total liabilities and stockholders' equity	<u>\$ 43,859</u>	<u>\$ 44,309</u>

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)

	<u>Three Months Ended September 30,</u>		<u>Nine Months Ended September 30,</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Revenue:				
Program revenue	\$ 7,354	\$ 6,869	\$ 25,975	\$ 20,160
Licensing and royalty revenue	508	1,753	1,364	6,495
Total revenue	<u>7,862</u>	<u>8,622</u>	<u>27,339</u>	<u>26,655</u>
Cost of revenue:				
Cost of program revenue	2,054	2,864	8,286	8,106
Cost of licensing and royalty revenue	4	11	8	303
Total cost of revenue	<u>2,058</u>	<u>2,875</u>	<u>8,294</u>	<u>8,409</u>
Gross profit	<u>5,804</u>	<u>5,747</u>	<u>19,045</u>	<u>18,246</u>
Operating expenses:				
Research and development	4,463	4,835	12,551	17,328
Sales and marketing	692	874	2,346	3,285
General and administrative	1,581	2,000	5,615	7,225
Restructuring charges	—	—	—	1,351
Total operating expenses	<u>6,736</u>	<u>7,709</u>	<u>20,512</u>	<u>29,189</u>
Loss from operations	(932)	(1,962)	(1,467)	(10,943)
Other income (expense):				
Interest income (expense), net	168	70	413	182
Other income (expense), net	78	64	241	243
Total other income (expense), net	<u>246</u>	<u>134</u>	<u>654</u>	<u>425</u>
Loss before provision for income taxes	(686)	(1,828)	(813)	(10,518)
Provision for income taxes	—	—	1	1
Net loss	<u>\$ (686)</u>	<u>\$ (1,828)</u>	<u>\$ (814)</u>	<u>\$ (10,519)</u>
Net loss per share, basic and diluted	<u>\$ (0.01)</u>	<u>\$ (0.04)</u>	<u>\$ (0.02)</u>	<u>\$ (0.21)</u>
Weighted-average number of shares used in computing net loss per share, basic and diluted	<u>49,746,082</u>	<u>49,554,701</u>	<u>49,667,518</u>	<u>49,543,014</u>

Related Party Transactions

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

	<u>Three Months Ended September 30,</u>		<u>Nine Months Ended September 30,</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Revenue:				
Licensing and royalty revenue	\$ —	\$ —	\$ —	\$ 383
Total revenue	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 383</u>
Cost of Revenue:				
Cost of licensing and royalty revenue	\$ —	\$ —	\$ —	\$ 1
Total cost of revenue	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 1</u>

See accompanying notes to unaudited Condensed Consolidated Financial Statements

Condensed Consolidated Statements of Comprehensive Loss

(In thousands)

(Unaudited)

	<u>Three Months Ended September 30,</u>		<u>Nine Months Ended September 30,</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Net loss	\$ (686)	\$ (1,828)	\$ (814)	\$ (10,519)
Change in unrealized gain (loss) on available-for-sale- securities, net of tax	24	12	16	24
Other comprehensive income	24	12	16	24
Comprehensive loss, net of income tax	<u>\$ (662)</u>	<u>\$ (1,816)</u>	<u>\$ (798)</u>	<u>\$ (10,495)</u>

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,	
	2018	2017
Cash flows from operating activities:		
Net loss	\$ (814)	\$ (10,519)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation, amortization, and accretion	3,514	5,369
Stock-based compensation	624	1,221
Loss on disposal of property and equipment	—	70
Changes in operating assets and liabilities:		
Accounts receivable	2,666	1,587
Prepaid expenses and other assets	177	663
Materials inventory	57	391
Accounts payable	(304)	688
Accrued and other liabilities	(220)	370
Deferred revenue	(652)	485
Net cash provided by operating activities	<u>5,048</u>	<u>325</u>
Cash flows from investing activities:		
Purchase of investments	(21,968)	(15,505)
Redemption of investments	18,151	20,014
Purchase of property and equipment	(620)	(705)
Proceeds from sale of equipment	1	12
Net cash (used in) provided by investing activities	<u>(4,436)</u>	<u>3,816</u>
Cash flows from financing activities:		
Principal payment under capital leases obligations	—	(13)
Proceeds from exercise of common stock options	187	—
Net cash (used in) provided by financing activities	<u>187</u>	<u>(13)</u>
Net increase in cash and cash equivalents	799	4,128
Cash and cash equivalents at beginning of period	6,090	5,759
Cash and cash equivalents at end of period	<u>\$ 6,889</u>	<u>\$ 9,887</u>
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$ —	6
Cash paid for income taxes, net of refunds received	\$ 1	1
Noncash investing/operating activities:		
Transfer of property and equipment to materials inventory	\$ 98	\$ 380
Transfer of materials inventory to property and equipment	\$ 79	\$ 351
Additions to property, equipment and intangible assets not paid at the end of the period	<u>\$ 158</u>	<u>\$ 49</u>

See accompanying notes to unaudited Condensed Consolidated Financial Statements

INTERMOLECULAR, INC. AND SUBSIDIARIES
Notes to Condensed Consolidated Financial Statements

(Unaudited)

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, 2017, as filed with the SEC on March 2, 2018. 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, 2018 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, 2017 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 consists of non-interest bearing balances due from credit-worthy customers.

Significant Accounting Policies

Adoption of New Accounting Standard

In November 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2016-18 (ASU 2016-18), *Restricted Cash*, which requires amounts generally described as restricted cash and restricted cash equivalents be included with cash and cash equivalents when reconciling the total beginning and ending amounts for the periods shown on the statement of cash flows. The Company adopted ASU 2016-18 in the first quarter of 2018 and there was no impact on the Company's Condensed Consolidated Financial Statements as the Company had no restricted cash balances as of September 30, 2018 and December 31, 2017.

On January 1, 2018, the Company adopted the new accounting standard ASC Topic 606, "Revenue from Contracts with Customers" (ASC 606), and all the related amendments (the new revenue standard) to all contracts which were not completed as of January 1, 2018 using the modified retrospective method. The Company recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods.

Revenue Recognition

The Company's principal sources of revenue are from program services and to a lesser extent from royalty revenue from customers who license our intellectual property.

Revenue from contracts with customers is recognized using the following five steps:

- 1) Identify the contract(s) with a customer;
- 2) Identify the performance obligations in the contract;
- 3) Determine the transaction price;
- 4) Allocate the transaction price to the performance obligations in the contract; and
- 5) Recognize revenue when (or as) the Company satisfies a performance obligation.

A contract contains a promise (or promises) to transfer goods or services to a customer. A performance obligation is a promise (or a group of promises) that is distinct. The transaction price is the amount of consideration a Company expects to be entitled from a customer in exchange for providing the goods or services.

The unit of account for revenue recognition is a performance obligation (a good or service). A contract may contain one or more performance obligations. Performance obligations are accounted for separately if they are distinct. A good or service is distinct if the customer can benefit from the good or service either on its own or together with other resources that are readily available to the customer, and the good or service is distinct in the context of the contract. Otherwise performance obligations are combined with other promised goods or services until the Company identifies a bundle of goods or services that is distinct.

The transaction price is allocated to all the separate performance obligations in an arrangement. It reflects the amount of consideration to which the Company expects to be entitled in exchange for transferring goods or services, which may include an estimate of variable consideration to the extent that it is probable of not being subject to significant reversals in the future based on the Company's experience with similar arrangements. The transaction price also reflects the impact of the time value of money if there is a significant financing component present in an arrangement. The transaction price excludes amounts collected on behalf of third parties, such as sales taxes.

Revenue is recognized when the Company satisfies each performance obligation by transferring control of the promised goods or services to the customer. Goods or services can transfer at a point in time or over time depending on the nature of the arrangement.

A majority of our program services revenue is recognized as services are performed using percentage of completion method of contract accounting based on the output or input (i.e., units or labor hours) method, whichever is the most appropriate measure of progress towards completion of the contract

Input method: The use of the input method requires the Company to make reasonably dependable estimates. We use the input method based on labor hours, where revenue is calculated based on the percentage of total hours incurred in relation to total estimated hours at completion of the contract. The Company believes the input method is reasonable because labor hours best reflect the Company's efforts toward satisfying the performance obligation over time. As circumstances change over time, the Company updates its measure of progress to reflect any changes in the outcome of the performance obligation. Such changes to the Company's measure of progress is accounted for as a change in accounting estimate.

License and royalty revenues are recognized based on estimated end-market sales of products that incorporate our intellectual property.

The impact of ASC 606 adoption on our Condensed Consolidated Statement of Operations and Balance Sheet were as follows (in thousands):

	For the three months ended September 30, 2018			For the nine months ended September 30, 2018		
	As Reported	Without Adoption of ASC 606	Effect of Change Higher/(Lower)	As Reported	Without Adoption of ASC 606	Effect of Change Higher/(Lower)
	Condensed Consolidated Statement of Operations					
Revenues						
Licensing and royalty revenue	\$ 508	\$ 485	\$ 23	\$ 1,364	\$ 1,382	\$ (18)
Net loss	(686)	(709)	(23)	(814)	(796)	18
Condensed Consolidated Balance Sheet						
Assets						
Accounts receivable	3,330	2,873	457	3,330	2,873	457
Stockholders' equity						
Accumulated deficit	\$ (179,075)	\$ (179,532)	\$ (457)	\$ (179,075)	\$ (179,532)	\$ (457)

Contract balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and deferred revenue (contract liabilities) on the Condensed Consolidated Balance Sheet. For our contracts, amounts are billed at periodic intervals, such as on monthly basis. Generally, contract assets results from revenue recognition in advance of billings, and contract liabilities results from billing in advance of revenue recognition. These assets and liabilities are reported on the Condensed Consolidated Balance Sheets at the end of each reporting period. The following table provides information about contract assets and contract liabilities from contracts with customers (in thousands):

	Balance at September 30, 2018	Balance at June 30, 2018
Receivables, which are included in Accounts receivable	\$ 2,546	\$ 1,194
Contract assets	784	726
Contract liabilities	\$ 289	\$ 309

All of the contract liability balance of \$0.3 million as of June 30, 2018 was recognized as revenue for the three months ended September 30, 2018.

Practical Expedients and Exemptions

The Company generally expenses sales commissions when incurred if the amortization period is one year or less. These costs are recorded within sales and marketing expenses.

The Company does not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less. For contracts with an original expected length of more than one year, the Company had \$1.9 million of unsatisfied performance obligations as of September 30, 2018. The Company expects to recognize approximately 24% of this amount as revenue in 2018, and the remaining balance in 2019.

Materials Inventory

Materials inventory consists of raw materials in the amount of \$2.8 million as of September 30, 2018 and December 31, 2017.

Accounts Receivable and Allowance for Doubtful Accounts

The Company did not have any allowance for doubtful accounts as of September 30, 2018 and December 31, 2017.

There have been no other 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, 2017.

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,
	2018	2017	2018	2017	2018	2017
Customer A	63%	55%	62%	57%	36%	72%
Customer B	11%	12%	19%	*	10%	19%
Customer C	*	*	*	*	14%	*
Customer D	*	14%	*	14%	*	*
Customer E	*	*	*	*	11%	*
Customer F	*	*	*	*	21%	*

* less than 10%

Recent Accounting Pronouncements

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* in order to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet for those leases classified as operating leases under previous GAAP. ASU 2016-02 requires that a lessee should recognize a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term on the balance sheet. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018 (including interim periods within those periods) using a modified retrospective approach and early adoption is permitted. The Company will adopt ASU 2016-02 in the first quarter of 2019 using the modified retrospective approach. The Company expects to elect the package of practical expedients allowed under the new standard upon transition. Although the Company is in the process of evaluating the impact of adoption of ASU 2016-02 on its Consolidated Financial Statements, the Company currently estimates the most significant change will be related to the recognition of right-of-use assets and lease liabilities on the Company's balance sheet for its real estate operating lease. The adoption of the lease standard will not have a material impact on our results of operations, equity, and cash flows.

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 to their short maturities. 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, 2018			
	Fair Value	Level I	Level II	Level III
Assets:				
Money market funds	\$ 3,513	\$ 3,513	\$ —	\$ —
Corporate debt securities and commercial paper	23,759	—	23,759	—
Total assets measured at fair value	<u>\$ 27,272</u>	<u>\$ 3,513</u>	<u>\$ 23,759</u>	<u>\$ —</u>
	As of December 31, 2017			
	Fair Value	Level I	Level II	Level III
Assets:				
Money market funds	\$ 2,279	\$ 2,279	\$ —	\$ —
Corporate debt securities and commercial paper	19,717	—	19,717	—
Total assets measured at fair value	<u>\$ 21,996</u>	<u>\$ 2,279</u>	<u>\$ 19,717</u>	<u>\$ —</u>

Debt 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 all 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, 2018 (in thousands):

	As of September 30, 2018			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
Assets:				
Cash	\$ 3,376	\$ —	\$ —	\$ 3,376
Money market funds	3,513	—	—	3,513
Corporate debt securities and commercial paper	23,778	—	(19)	23,759
Total cash, cash equivalents and investments	\$ 30,667	\$ —	\$ (19)	\$ 30,648

As of December 31, 2017, the Company had \$35,000 of unrealized losses.

3. Property and Equipment

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

	As of	
	September 30, 2018	December 31, 2017
Lab equipment and machinery	\$ 59,413	\$ 58,937
Leasehold improvements	6,351	6,248
Computer equipment and software	4,514	4,726
Furniture and fixtures	221	221
Construction in progress	444	282
Total property and equipment	70,943	70,414
Less accumulated depreciation	(67,446)	(64,501)
Property and equipment, net	\$ 3,497	\$ 5,913

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

	Three Months Ended		Nine Months Ended September 30,	
	September 30, 2018	September 30, 2017	2018	2017
Depreciation expense	\$ 910	\$ 1,561	\$ 3,244	\$ 4,426

During the third quarter of 2018, the Company determined that it identified indicators of impairment relating to certain lab equipment and machinery. Based on this determination, the Company recorded an impairment charge of \$65,000 in the third quarter of 2018. 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 the Company's determination of fair value.

4. Intangible Assets

Intangible assets, net, consist of the following (in thousands):

	As of	
	September 30, 2018	December 31, 2017
Patents issued	\$ 2,866	\$ 3,829
Patents pending	97	128
Trademarks	40	40
Total intangible assets	3,003	3,997
Less patent amortization	(862)	(1,377)
Intangible assets, net	\$ 2,141	\$ 2,620

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Amortization expense	\$ 46	\$ 79	\$ 171	\$ 245

During third quarter of 2018, the Company identified certain patents with carrying values deemed to not be recoverable. Based on this determination, the Company recorded an impairment charge of \$171,000 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 the Company's 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 November 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,	
	2018	2017	2018	2017
Rent expense	\$ 563	\$ 567	\$ 1,688	\$ 1,685

During the three months ended September 30, 2018, 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 sublease 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 payments under the agreement for the three months ended September 30, 2018 and 2017, respectively.

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 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 obligation was \$0 for the three months ended September 30, 2018 compared to \$2,000 for the three months ended September 30, 2017.

6. Stockholders' Equity

The following represents the activities in the Company's Stockholders' Equity, by quarter, for the nine months ended September 30, 2018 and 2017 (in thousands, except share data):

	Nine Months Ended September 30, 2018					
	Common stock Shares	Amount	Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive loss	Total stockholders' equity
Balances as of December 31, 2017	49,569,721	50	214,796	(178,738)	(35)	36,073
Issuance of common stock from option exercises	16,387	—	16	—	—	16
Vesting of restricted stock units	15,265	—	—	—	—	—
Stock-based compensation	—	—	270	—	—	270
Other comprehensive income (loss)	—	—	—	—	(24)	(24)
ASC 606 Adjustment	—	—	—	476	—	476
Net loss	—	—	—	(623)	—	(623)
Balances as of March 31, 2018	49,601,373	50	215,082	(178,885)	(59)	36,188
Issuance of common stock from option exercises	135,332	—	155	—	—	155
Stock-based compensation	—	—	212	—	—	212
Other comprehensive income (loss)	—	—	—	—	16	16
Net income	—	—	—	496	—	496
Balances as of June 30, 2018	49,736,705	50	215,449	(178,389)	(43)	37,067
Issuance of common stock from option exercises	12,061	—	15	—	—	15
Stock-based compensation	—	—	142	—	—	142
Other comprehensive income (loss)	—	—	—	—	24	24
Net loss	—	—	—	(686)	—	(686)
Balances as of September 30, 2018	<u>49,748,766</u>	<u>\$ 50</u>	<u>\$ 215,606</u>	<u>\$ (179,075)</u>	<u>\$ (19)</u>	<u>\$ 36,562</u>
	Nine Months Ended September 30, 2017					
	Common stock Shares	Amount	Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive loss	Total stockholders' equity
Balances as of December 31, 2016	49,513,528	50	213,313	(168,335)	(32)	44,996
Vesting of restricted stock units	58,673	—	—	—	—	—
Stock-based compensation	—	—	660	—	—	660
Other comprehensive income (loss)	—	—	—	—	11	11
Net loss	—	—	—	(5,835)	—	(5,835)
Balances as of March 31, 2017	49,572,201	50	213,973	(174,170)	(21)	39,832
Forfeiture of restricted stock awards, net	(12,500)	—	—	—	—	—
Stock-based compensation	—	—	322	—	—	322
Net loss	—	—	—	(2,854)	—	(2,854)
Balances as of June 30, 2017	49,559,701	50	214,295	(177,024)	(21)	37,300
Stock-based compensation	—	—	242	—	—	242
Other comprehensive income (loss)	—	—	—	—	12	12
Net loss	—	—	—	(1,828)	—	(1,828)
Balances as of September 30, 2017	<u>49,559,701</u>	<u>\$ 50</u>	<u>\$ 214,537</u>	<u>\$ (178,852)</u>	<u>\$ (9)</u>	<u>\$ 35,726</u>

Stock-Based Compensation

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Expected term (in years)	6.0	6.1	6.0	6.0
Risk-free interest rate	3.0%	2.0%	2.8%	2.1%
Expected volatility	55%	54%	54%	55%
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,	
	2018	2017	2018	2017
Cost of revenue	\$ 33	\$ 38	\$ 125	\$ 144
Research and development	69	61	183	306
Sales and marketing	22	28	73	97
General and administrative	18	115	243	674
Total stock-based compensation	\$ 142	\$ 242	\$ 624	\$ 1,221

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,	
	2018	2017	2018	2017
Stock options	\$ 218	\$ 197	\$ 641	\$ 1,095
Restricted stock awards and restricted stock units (RSUs)	(76)	45	(17)	126
Total stock-based compensation	\$ 142	\$ 242	\$ 624	\$ 1,221

The following table presents unrecognized compensation expense, net of estimated forfeitures, related to the Company's equity compensation plans as of September 30, 2018, which is expected to be recognized over the following weighted-average periods (in thousands):

	Unrecognized Compensation Expense	Weighted- Average Period (in years)
Stock options	\$ 1,693	2.9
RSUs	\$ 218	2.4

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

	Nine Months Ended September 30, 2018		Nine Months Ended September 30, 2017	
	Shares Granted	Weighted- Average Grant Date Fair Value	Shares Granted	Weighted- Average Grant Date Fair Value
Stock options	1,614,400	\$ 1.37	1,893,500	\$ 1.03
RSUs	345,000	\$ 1.35	300,000	\$ 0.96

The total intrinsic value of stock options exercised during the three months ended September 30, 2018 and 2017 was \$5,000 and \$0, respectively. The total intrinsic value of stock options exercised during the nine months ended September 30, 2018 and 2017 was \$33,000 and \$0, respectively.

RSUs that vested during the three months ended September 30, 2018 and 2017 had fair values of \$0 as of the applicable vesting date. RSUs that vested during the nine months ended September 30, 2018 and 2017 had fair values of \$29,000 and \$75,000, respectively, as of the applicable vesting date.

Common Stock

As of September 30, 2018 and December 31, 2017, the Company had reserved shares of common stock for issuance as follows:

	As of September 30, 2018	As of December 31, 2017
Number of stock options outstanding	6,527,080	8,408,228
Number of RSUs outstanding	648,750	519,015
Shares available for future grant	12,583,334	8,780,322
Total shares reserved	<u>19,759,164</u>	<u>17,707,565</u>

7. Net Earnings (Loss) per Share

The following outstanding shares of common stock equivalents were excluded from the computation of diluted net earnings (loss) per share for the periods presented due to their antidilutive effect:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Stock options to purchase common stock	6,527,080	7,635,846	6,527,080	7,635,846
RSUs	648,750	524,765	648,750	524,765

8. Income Taxes

Income tax expense for the nine months ended September 30, 2018 was \$800, on a pretax loss of \$0.8 million. The Company maintained a valuation allowance as of September 30, 2018 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.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation referred to as the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act significantly revised the future ongoing U.S. corporate income tax by, among other things, lowering the U.S. corporate income tax rates and implementing a territorial tax system. The corporate tax rate was reduced from 35% to 21% for tax years beginning after December 31, 2017 and certain provisions exist on which to allow accelerated expensing of equipment for a portion of 2017 and for future years. This largely only affected the value of the Company's deferred tax asset with a corresponding offset to valuation allowance. The Tax Act also limits the amount of net operating losses that can be used to reduce taxable income to 80% for net operating losses generated for periods beginning after December 31, 2017. Existing net operating losses, arising in years on or before December 31, 2017 are not affected by the Tax Act.

In January 2018, the SEC staff issued SAB 118, Income Tax Accounting Implications of the Tax Act to provide guidance for companies that have not completed their accounting for the income tax effects of the Tax Act in the period of enactment, which is the period that includes December 22, 2017. In issuing the guidance, the SEC staff said it was clarifying the application of ASC 740 for companies that may encounter situations where they do not have the necessary information available, prepared or analyzed (including computations) in reasonable detail to complete the accounting for one or more elements of their income tax provision under ASC 740 for the reporting period in which the Tax Act was enacted. The SEC staff said a company that hasn't completed its accounting for the effects of the Tax Act by its financial reporting deadline may report provisional amounts based on reasonable estimates for items for which the accounting is incomplete. Those amounts will be subject to adjustment during a measurement period that begins in the reporting period that includes the Tax Act's enactment date and ends when a company has obtained, prepared and analyzed the information needed to complete the accounting requirements under ASC 740. The measurement period should not extend beyond one year from the enactment date (i.e., the measurement period must be completed by December 22, 2018). The SEC staff said a company that cannot make a reasonable estimate for an income tax effect should not account for that effect until it can make such an estimate.

The Company completed its analysis before the end of the measurement period; no adjustments were made during the nine months ended September 30, 2018. The Company has considered Tax Act legislative changes that became effective in 2018. The Company does not expect the Tax Act to have a significant impact on the results of operations.

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, the 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, 2018 and December 31, 2017, the Company had no accounts receivable and deferred revenue balances in either period with respect to its related party relationship. 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,	
	2018	2017	2018	2017
Related party revenue	\$ —	\$ —	\$ —	\$ 383
Related party cost of revenue	\$ —	\$ —	\$ —	\$ 1

As of September 30, 2018, two 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 of \$26,000 and \$23,000 to the investment firm for the three months ended September 30, 2018 and 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,	
	2018	2017	2018	2017
United States	\$ 1,878	\$ 2,473	\$ 4,895	\$ 9,582
Japan	144	\$ 330	144	\$ 330
Asia-Pacific (excluding Japan)	5,840	5,770	22,300	16,593
Europe and Middle East	—	49	—	150
Total	\$ 7,862	\$ 8,622	\$ 27,339	\$ 26,655

Long-Lived Assets

All of the Company's long-lived assets are located in the U.S.

11. Restructuring Charges

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 nine months ended September 30, 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 as of September 30, 2018 (in thousands).

	As of December 31, 2017	Charge	Cash Payments	As of September 30, 2018
Severance and related expenses	\$ 15	\$ —	\$ (15)	\$ —

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 Condensed Consolidated 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, 2018 to the three and nine months ended September 30, 2017.
- *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, 2017 (2017 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 2017 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 trusted partner for the innovation of advanced materials using high throughput experimentation. Advanced materials are critical to sustaining and advancing many industries, including semiconductor and semiconductor related 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 high productivity combinatorial (HPC™) equipment platform, advanced characterization abilities 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 \$7.9 million for the three months ended September 30, 2018, from \$8.6 million for the three months ended September 30, 2017. Our total revenue increased to \$27.3 million for the nine months ended September 30, 2018, from \$26.7 million for the nine months ended September 30, 2017. For the three months ended September 30, 2018, our net loss decreased to \$0.7 million compared to a net loss of \$1.8 million in the same period last year. For the nine months ended September 30, 2018, our net loss decreased to \$0.8 million compared to net loss of \$10.5 million in the same period last year. Since inception, we have incurred net losses leading to an accumulated deficit of \$179.1 million as of September 30, 2018.

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), new non-volatile memory (NVM) and phase-change memory technologies. Going forward, we currently plan to continue growing our footprint within semiconductors, while expanding our engagement with semiconductor materials and equipment makers.

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 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 performance obligations 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 research and development that is 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, 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, as well as insurance, investor relations and other costs associated with being a public company.

Interest income (expense), net

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

Restructuring Expense

Restructuring expense consists of personnel-related costs associated with workforce reductions we completed during 2017. 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 nine months ended September 30, 2017.

Other Income, net

Other income primarily consists of income that we receive from subleasing a portion of our office space under an 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 Condensed 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 Condensed 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 Condensed 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, 2018 as compared to those disclosed in our 2017 Form 10-K. For further information on our critical and other significant accounting policies, see our 2017 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, 2018 and 2017

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2018	2017	\$ Change	% Change	2018	2017	\$ Change	% Change
	(in thousands)				(in thousands)			
Revenue:								
Program revenue	\$ 7,354	\$ 6,869	\$ 485	7%	\$ 25,975	\$ 20,160	\$ 5,815	29%
Licensing and royalty revenue	508	1,753	(1,245)	-71%	1,364	6,495	(5,131)	-79%
Total revenue	7,862	8,622	(760)	-9%	27,339	26,655	684	3%
Cost of revenue:	2,058	2,875	(817)	-28%	8,294	8,409	(115)	-1%
Gross profit	5,804	5,747	57	1%	19,045	18,246	799	4%
Operating expenses:								
Research and development	4,463	4,835	(372)	-8%	12,551	17,328	(4,777)	-28%
Sales and marketing	692	874	(182)	-21%	2,346	3,285	(939)	-29%
General and administrative	1,581	2,000	(419)	-21%	5,615	7,225	(1,610)	-22%
Restructuring charges	—	—	—		—	1,351	(1,351)	
Total operating expenses	6,736	7,709	(973)	-13%	20,512	29,189	(8,677)	-30%
Loss from operations	(932)	(1,962)	1,030		(1,467)	(10,943)	9,476	
Other income (expense):								
Interest income (expense), net	168	70	98		413	182	231	
Other income (expense), net	78	64	14		241	243	(2)	
Total other income (expense), net	246	134	112		654	425	229	
Loss before provision for income taxes	(686)	(1,828)	1,142		(813)	(10,518)	9,705	
Provision for income taxes	—	—	—		1	1	—	
Net loss	<u>\$ (686)</u>	<u>\$ (1,828)</u>	<u>\$ 1,142</u>		<u>\$ (814)</u>	<u>\$ (10,519)</u>	<u>\$ 9,705</u>	

Revenue

Our revenue decreased by 9%, or \$0.8 million, during the three months ended September 30, 2018 compared to the three months ended September 30, 2017, with a 71% decrease in licensing and royalty revenue which was partially offset by a 7% increase in program revenue. The decrease in licensing and royalty revenue was primarily due to the discontinuance of \$1.3 million in royalty revenue from a US-based customer, which was partially offset by higher royalty-related end-market sales from another customer. The increase in program revenue was primarily due to expanded engagements with both existing and new customers.

Our revenue increased by 3%, or \$0.7 million, during the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017, with a 29% increase in program revenue which was partially offset by a 79% decrease in licensing and royalty revenue. The increase in program services revenue was primarily due to expanded engagements with both existing and new customers. The decrease in licensing and royalty revenue was primarily due to the discontinuance of \$3.8 million in royalty revenue from a US-based customer and the 2017 sale of certain patents to a US-based customer for \$1.5 million which did not recur during the nine months ended September 30, 2018, which were partially offset by higher royalty-related end-market sales from another customer.

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, 2018 and 2017 in dollars (in thousands) and as a percentage of revenue for the periods presented:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2018		2017		2018		2017	
	Revenues	% of Revenues	Revenues	% of Revenues	Revenues	% of Revenues	Revenues	% of Revenues
United States	\$ 1,878	24%	\$ 2,473	29%	\$ 4,895	18%	\$ 9,582	36%
Japan	144	2%	330	4%	144	1%	330	1%
APAC (excluding Japan)	5,840	74%	5,770	67%	22,300	81%	16,593	62%
Europe and Middle East	—	—%	49	0%	—	—%	150	1%
Total	\$ 7,862	100%	\$ 8,622	100%	\$ 27,339	100%	\$ 26,655	100%

Cost of Revenue

Cost of revenue decreased by 28%, or \$0.8 million, during the three month period ended September 30, 2018 compared to the same period in the prior year and 1%, or \$0.1 million, during the nine month period ended September 30, 2018 compared to the same period in the prior year primarily due to decreases in labor and personnel-related expenses, depreciation, materials and other costs associated with programs.

Gross Margin

Our gross profit as a percentage of revenue, 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 74% and 70% for the three and nine months ended September 30, 2018, respectively, compared to 67% and 68% for the three and nine months ended September 30, 2017, respectively. The increase for the three and nine months ended September 30, 2018 was primarily due to a decrease in depreciation and amortization expense, along with other costs associated with programs.

Research and Development

R&D expenses decreased by 8%, or \$0.4 million, during the three months ended September 30, 2018 compared to the three months ended September 30, 2017. The decrease was primarily attributable to a \$0.3 million reduction in depreciation expense and a \$0.1 million decrease in labor and personnel-related expenses.

R&D expenses decreased by 28%, or \$4.8 million, during the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017. The decrease was primarily attributable to a \$2.3 million decrease in labor and personnel-related expenses as a result of our restructuring in March 2017, a \$0.8 million decrease in professional fees, a \$0.8 million decrease in depreciation expense, a \$0.7 million decrease in other R&D related expenses, and a \$0.2 million decrease in facilities expense.

Sales and Marketing

Sales and marketing expenses decreased by 21%, or \$0.2 million, during the three months ended September 30, 2018 compared to the three months ended September 30, 2017. The decrease was primarily attributable to a \$0.1 million decrease in labor and personnel-related expenses as a result of reduced headcount and a \$0.1 million decrease in professional fees.

Sales and marketing expenses decreased by 29%, or \$0.9 million, during the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017. The decrease was primarily attributable to a \$0.7 million decrease in labor and personnel-related expenses as a result of reduced headcount, a \$0.1 million decrease in professional fees, and a \$0.1 million decrease in facilities expense.

General and Administrative

General and administrative expenses decreased by 21%, or \$0.4 million, during the three months ended September 30, 2018 compared to the three months ended September 30, 2017. The decrease was primarily attributable to a \$0.3 million decrease in personnel-related expenses as a result of reduced headcount and a \$0.1 million decrease in professional fees.

General and administrative expenses decreased by 22%, or \$1.6 million, during the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017. The decrease was primarily attributable to a \$1.0 million decrease in

personnel-related expenses as a result of reduced headcount, a \$0.5 million decrease in professional fees, and a \$0.1 million decrease in facilities expense.

Restructuring Charges

Restructuring expenses were \$0 during the three and nine months ended September 30, 2018 compared to \$0 and \$1.4 million during the three and nine months ended September 30, 2017, respectively.

Income (Loss) from Operations

Our operating loss decreased by \$1.0 million during the three months ended September 30, 2018 compared to the three months ended September 30, 2017, primarily due to a decrease in operating expenses following our restructuring that was completed during first quarter 2017.

Our operating loss decreased by \$9.5 million during the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017, primarily due to non-recurring restructuring charges during the three months ended March 31, 2017 and a decrease in labor and personnel-related expenses as a result of the restructuring completed during the first quarter of 2017.

Interest Income (Expense), net

The increase in interest income during the three and nine months ended September 30, 2018, compared to the three and nine months ended September 30, 2017, was primarily related to higher interest rates and balances in our investment accounts.

Other Income (Expense), net

Other income, net, for the three and nine months ended September 30, 2018 consisted principally of sublease income that we received 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, 2018 and 2017 consisted of income taxes on our US and foreign entities and were not significant during these periods.

Net Income (Loss)

Our net loss decreased by \$1.1 million to \$(0.7) million during the three months ended September 30, 2018 compared to a net loss of \$1.8 million during the three months ended September 30, 2017, primarily due to lower operating expenses following our restructuring that was completed during first quarter 2017.

Our net loss decreased by \$9.7 million to \$(0.8) million during the nine months ended September 30, 2018 compared to a net loss of \$10.5 million during the nine months ended September 30, 2017, primarily due to non-recurring restructuring charges during the three months ended March 31, 2017 and a decrease in labor and personnel-related expenses as a result of the restructuring completed during first quarter 2017.

Liquidity and Capital Resources

As of September 30, 2018, we had \$30.6 million of cash, cash equivalents and investments and \$30.4 million of net working capital.

During the three months ended September 30, 2018, we incurred net losses of \$0.7 million compared to a net loss of \$1.8 million in the same period last year. During the nine months ended September 30, 2018 and 2017, we incurred net losses of \$0.8 million and \$10.5 million, respectively. As of September 30, 2018, our accumulated deficit was \$179.1 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; our ability to expand customer 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 collaborative 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 we 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,	
	2018	2017
Net cash provided by operating activities	\$ 5,048	\$ 325
Net cash (used in) provided by investing activities	\$ (4,436)	\$ 3,816
Net cash (used in) provided by financing activities	\$ 187	\$ (13)

Cash Flows from Operating Activities

We had higher positive cash flows from operating activities during the nine months ended September 30, 2018, compared to the nine months ended September 30, 2017, due to improved operating results.

Net cash provided by operating activities during the nine months ended September 30, 2018 was primarily attributable to the non-cash charges of \$3.5 million for depreciation, amortization, and accretion, \$0.6 million for stock-based compensation, and \$2.7 million decrease in accounts receivables, which were offset by our \$0.8 million net loss, a \$0.7 million reduction in deferred revenue, and a \$0.3 million reduction in accounts payable.

Net cash provided by operating activities during the nine months ended September 30, 2017 was primarily attributable to the non-cash charges of \$5.4 million for depreciation, amortization, and accretion, \$1.2 million for stock-based compensation, and a \$1.6 million reduction in accounts receivables, a \$0.7 million decrease in prepaid and other assets, a \$0.4 million decrease in materials inventory, a \$0.7 million increase in accounts payable, a \$0.5 million increase in deferred revenue, and a \$0.4 million increase in accrued liabilities, which were offset by our net loss of \$10.5 million.

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 the sale of intangible assets. In the future, we expect to continue making certain 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, 2018, cash used by investing activities was \$4.4 million as a result of \$3.8 million in net purchases of investments and \$0.6 million in purchases of property, plant and equipment.

During the nine months ended September 30, 2017, cash provided by investing activities was \$3.8 million as a result of \$4.5 million received in net redemption of our investments, partially offset by purchase of \$0.7 million in property, plant and equipment.

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, 2018, cash provided by financing activities was \$0.2 million, primarily from the proceeds of common stock option exercises, compared to cash used of \$13,000 for the nine months ended September 30, 2017, which was for capital lease payments.

Contractual Obligations and Commitments

The following summarizes our contractual obligations as of September 30, 2018 (in thousands):

	Payments Due by Period				
	Total	Less Than One Year	1 - 3 Years	3 - 5 Years	More Than 5 Years
Operating lease obligations	\$ 18,174	\$ 2,294	\$ 5,411	\$ 5,463	\$ 5,006
Purchase obligations	596	596	—	—	—
Total	<u>\$ 18,770</u>	<u>\$ 2,890</u>	<u>\$ 5,411</u>	<u>\$ 5,463</u>	<u>\$ 5,006</u>

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, 2018, we made regular lease payments of \$1.8 million under our 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, 2018, 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 a “smaller reporting company” as defined by Regulation S-K and as such, are not required to provide the information contained in this item pursuant to Regulation S-K.

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, 2018.

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, 2018 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, 2017, 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 2017 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.

Date: November 6, 2018

INTERMOLECULAR, INC.
(Registrant)

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

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 6, 2018

/s/ CHRISTIAN KRAMER

Christian F. Kramer

President and Chief Executive Officer

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 6, 2018

/s/ Bill Roeschlein.
Bill Roeschlein
Chief Financial Officer

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, 2018, 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 6, 2018

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.

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, 2018, 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 6, 2018

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.

