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

FORM 10-Q

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

For the quarterly period ended 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 000-14656

REPLIGEN CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

04-2729386
(I.R.S. Employer
Identification No.)

41 Seyon Street, Bldg. 1, Suite 100
Waltham, MA
(Address of principal executive offices)

02453
(Zip Code)

Registrant's telephone number, including area code: (781) 250-0111

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

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

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

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

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

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 or Rule 12b-2 of the Securities Exchange Act of 1934.

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 the number of shares outstanding of each of the issuer’s classes of common stock, as of November 2, 2017.

<u>Class</u>	<u>Number of Shares</u>
Common Stock, par value \$.01 per share	43,565,306

Table of Contents

	<u>PAGE</u>
PART I FINANCIAL INFORMATION	
Item 1. Unaudited Condensed Consolidated Financial Statements	
Condensed Consolidated Balance Sheets as of September 30, 2017 and December 31, 2016	3
Condensed Consolidated Statements of Comprehensive Income for the Three- and Nine-Month Periods Ended September 30, 2017 and 2016	4
Condensed Consolidated Statements of Cash Flows for the Nine-Month Periods Ended September 30, 2017 and 2016	5
Notes to Unaudited Condensed Consolidated Financial Statements	6
Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations	25
Item 3. Quantitative and Qualitative Disclosures About Market Risk	33
Item 4. Controls and Procedures	34
PART II OTHER INFORMATION	35
Item 1. Legal Proceedings	35
Item 1A. Risk Factors	35
Item 2. Unregistered Sales of Equity Securities and Use of Proceeds	35
Item 3. Defaults Upon Senior Securities	35
Item 4. Mine Safety Disclosures	35
Item 5. Other Information	35
Item 6. Exhibits	35
Signatures	37

REPLIGEN CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)

(in thousands, except share data)	September 30, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	\$ 159,666	\$ 122,233
Marketable securities	—	19,547
Accounts receivable, less reserve for doubtful accounts of \$32 at September 30, 2017 and \$23 at December 31, 2016	29,479	15,194
Other receivables	598	839
Inventories	38,663	24,696
Prepaid expenses and other current assets	2,789	1,644
Total current assets	<u>231,195</u>	<u>184,153</u>
Property, plant and equipment, net	22,056	14,956
Intangible assets, net	147,416	29,806
Goodwill	326,652	59,548
Restricted cash	450	450
Other assets	6,467	—
Total assets	<u><u>\$ 734,236</u></u>	<u><u>\$ 288,913</u></u>
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 6,423	\$ 5,061
Accrued liabilities	13,793	16,014
Convertible senior notes, current portion	98,231	—
Total current liabilities	<u>118,447</u>	<u>21,075</u>
Convertible senior notes	—	95,272
Deferred tax liabilities	37,347	2,103
Other long-term liabilities	1,573	1,699
Commitments and contingencies (Note 15)		
Stockholders' equity:		
Preferred stock, \$.01 par value, 5,000,000 shares authorized, no shares issued or outstanding	—	—
Common stock, \$.01 par value, 80,000,000 shares authorized, 43,559,081 shares at September 30, 2017 and 33,844,074 shares at December 31, 2016 issued and outstanding	436	338
Additional paid-in capital	626,766	242,036
Accumulated other comprehensive loss	(6,647)	(13,749)
Accumulated deficit	(43,686)	(59,861)
Total stockholders' equity	<u>576,869</u>	<u>168,764</u>
Total liabilities and stockholders' equity	<u><u>\$ 734,236</u></u>	<u><u>\$ 288,913</u></u>

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

REPLIGEN CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited)

(in thousands, except share and per share data)	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Revenue:				
Product revenue	\$ 36,514	\$ 24,677	\$ 99,516	\$ 78,942
Royalty and other revenue	66	—	108	—
Total revenue	36,580	24,677	99,624	78,942
Operating expenses:				
Cost of product revenue	19,987	11,242	47,913	34,955
Research and development	2,001	1,886	5,603	5,316
Selling, general and administrative	14,998	7,127	35,365	22,286
Contingent consideration – fair value adjustments	—	675	—	3,317
Total operating expenses	36,986	20,930	88,881	65,874
Income (loss) from operations	(406)	3,747	10,743	13,068
Investment income	102	97	308	234
Interest expense	(1,618)	(1,555)	(4,804)	(2,198)
Other income (expense)	(100)	(75)	(548)	(979)
Income (loss) before income taxes	(2,022)	2,214	5,699	10,125
Income tax (benefit) provision	(6,691)	1,059	(10,476)	3,474
Net income	\$ 4,669	\$ 1,155	\$ 16,175	\$ 6,651
Earnings per share:				
Basic	\$ 0.11	\$ 0.03	\$ 0.44	\$ 0.20
Diluted	\$ 0.11	\$ 0.03	\$ 0.43	\$ 0.20
Weighted average shares outstanding:				
Basic	41,236,554	33,779,141	36,435,591	33,485,448
Diluted	42,563,002	34,312,887	37,386,333	34,011,534
Other comprehensive income:				
Unrealized gain (loss) on investments	—	74	5	89
Foreign currency translation gain (loss)	2,025	(386)	7,097	(1,019)
Comprehensive income	\$ 6,694	\$ 843	\$ 23,277	\$ 5,721

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

REPLIGEN CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

(In thousands)	Nine months ended September 30,	
	2017	2016
Cash flows from operating activities:		
Net income	\$ 16,175	\$ 6,651
Adjustments to reconcile net income to net cash used in operating activities:		
Depreciation and amortization	6,374	3,844
Non-cash interest expense	2,958	1,320
Stock-based compensation expense	4,845	3,341
Deferred tax expense	(13,062)	326
Loss on revaluation of contingent consideration	—	3,317
Gain on sale of fixed assets	—	(15)
Loss on disposal of assets	64	25
Changes in assets and liabilities:		
Accounts receivable	(8,472)	(3,270)
Other receivables	196	20
Inventories	699	(6,457)
Prepaid expenses and other current assets	(739)	820
Other assets	(704)	—
Accounts payable	159	(1,918)
Accrued liabilities	(6,089)	(2,389)
Long-term liabilities	(171)	(48)
Net cash provided by operating activities	2,233	5,567
Cash flows from investing activities:		
Acquisition of Spectrum, Inc., net of cash received	(112,941)	—
Acquisition of Atoll GmbH, net of cash received	—	(8,767)
Purchases of marketable securities	(48)	(21,394)
Redemptions of marketable securities	19,600	19,700
Proceeds from sale of fixed assets	—	45
Purchases of property, plant and equipment	(3,686)	(3,462)
Net cash used in investing activities	(97,075)	(13,878)
Cash flows from financing activities:		
Proceeds from issuance of common stock, net of issuance costs	129,309	—
Proceeds from issuance of convertible senior notes, net of issuance costs	—	111,070
Exercise of stock options	2,035	1,630
Payment of contingent considerations	(1,702)	(498)
Net cash provided by financing activities	129,642	112,202
Effect of exchange rate changes on cash and cash equivalents	2,633	(332)
Net increase in cash and cash equivalents	37,433	103,559
Cash and cash equivalents, beginning of period	122,233	54,092
Cash and cash equivalents, end of period	\$ 159,666	\$ 157,651
Supplemental disclosure of non-cash activities:		
Income taxes paid	\$ 3,555	\$ 2,888
Interest paid	\$ 1,222	\$ —
Payment of contingent consideration in common stock	\$ 1,062	\$ 875
Stock tendered for acquisition of Spectrum, Inc.	\$ 247,575	\$ —
Stock tendered for acquisition of Atoll GmbH	\$ —	\$ 14,135

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

REPLIGEN CORPORATION

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

1. Basis of Presentation

The condensed consolidated financial statements included herein have been prepared by Repligen Corporation (the “Company,” “Repligen” or “we”) in accordance with generally accepted accounting principles in the United States (“U.S. GAAP”) and pursuant to the rules and regulations of the Securities and Exchange Commission (“SEC”), for Quarterly Reports on Form 10-Q and Article 10 of Regulation S-X and do not include all of the information and footnote disclosures required by U.S. GAAP. These condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and accompanying notes thereto included in the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

The condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries, Repligen Sweden AB (“Repligen Sweden”), Repligen GmbH (acquired as Atoll GmbH on April 1, 2016 and renamed on September 20, 2016), Repligen Singapore Pte. Ltd., our former subsidiary, TangenX Technology Corporation (“TangenX,” acquired on December 14, 2016 and merged into the Company as of June 30, 2017) and Spectrum LifeSciences, LLC (“Spectrum,” acquired on August 1, 2017). All significant intercompany accounts and transactions have been eliminated in consolidation.

In the opinion of management, the accompanying unaudited condensed consolidated financial statements include all adjustments, consisting of only normal, recurring adjustments necessary for a fair presentation of the financial position, results of operations and cash flows. The results of operations for the interim periods presented are not necessarily indicative of results to be expected for the entire year.

Recently Issued Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09, “Revenue from Contracts with Customers (Topic 606),” which supersedes the revenue recognition requirements in Accounting Standards Codification Topic 605, *Revenue Recognition*, and creates a new Topic 606, *Revenue from Contracts with Customers*. Two adoption methods are permitted: retrospectively to all prior reporting periods presented, with certain practical expedients permitted; or retrospectively with the cumulative effect of initially adopting the ASU recognized at the date of initial application. The adoption of this ASU will include updates as provided under ASU 2015-14, “Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date”; ASU 2016-08, “Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)”; ASU 2016-10, “Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing”; and ASU 2016-12, “Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients.” The Company intends to adopt the provisions of Topic 606 using the modified retrospective method effective January 1, 2018. The Company has substantially completed its assessment of the impact of the new revenue standard on the current contracts of all principal revenue streams except those related to the recently acquired business of Spectrum. The Company will complete its assessment of the impact of the new revenue standard on Spectrum’s revenue arrangements in the fourth quarter of 2017. The Company is currently updating its revenue recognition policies and procedures and developing a framework for the newly required financial statement disclosures. While the Company has not made a final determination on the impact of this new revenue standard to its consolidated financial statements, it does not expect this impact to be material.

In July 2015, the FASB issued ASU No. 2015-11, “Inventory (Topic 330): Simplifying the Measurement of Inventory” (“ASU 2015-11”). ASU 2015-11 requires inventory be measured at the lower of cost and net realizable value, and options that currently exist for market value be eliminated. ASU 2015-11 defines net realizable value as estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The guidance is effective prospectively for reporting periods beginning after December 15, 2016 and interim periods within those fiscal years with early adoption permitted. The Company adopted the provisions of ASU 2015-11 as of January 1, 2017, and this standard did not have a material impact on its consolidated 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.” (“ASU 2016-01”) This guidance changes how entities measure equity investments that do not result in consolidation and are not accounted for under the equity method. Entities will be required to measure these investments at fair value at the end of each reporting period and recognize changes in fair value in net income. A practicability

exception will be available for equity investments that do not have readily determinable fair values; however, the exception requires the Company to consider relevant transactions that can be reasonably known to identify any observable price changes that would impact the fair value. This guidance also changes certain disclosure requirements and other aspects of current U.S. GAAP. This guidance is effective for annual periods beginning after December 15, 2017, and is applicable to the Company in 2018. Upon adoption, the Company will be required to recognize unrealized gains and losses on its equity securities directly through the Company's consolidated statements of operations, whereas these equity securities currently are designated as available for sale, and unrealized gains and losses are recognized within accumulated other comprehensive income.

In February 2016, the FASB issued ASU No. 2016-02, "Leases (Topic 842)" ("ASU 2016-02"). ASU 2016-02 requires lessees to recognize a right-of-use asset and a lease liability for most leases. Extensive quantitative and qualitative disclosures, including significant judgments made by management, will be required to provide greater insight into the extent of revenue and expense recognized and expected to be recognized from existing contracts. The accounting applied by a lessor is largely unchanged from that applied under the current standard. The standard must be adopted using a modified retrospective transition approach and provides for certain practical expedients. This ASU is effective for public entities for fiscal years beginning after December 15, 2018, with early adoption permitted. The Company has not assessed the impact of the new standard on its consolidated financial statements, but does expect this new standard to have a material impact on the Company's consolidated balance sheet.

In March 2016, the FASB issued ASU No. 2016-09, "Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting", which aims to simplify several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, classification of certain items on the statement of cash flows and accounting for forfeitures. This ASU is effective for public entities for fiscal years beginning after December 15, 2016, with early adoption permitted. The Company adopted the provisions of this ASU as of January 1, 2017. As a result of this standard, the Company increased its U.S. federal and state net operating loss carryovers by approximately \$5.3 million for previously unrecognized excess tax benefits outstanding as of January 1, 2017. Since the Company maintained a full valuation allowance on its net U.S. deferred tax assets as of the adoption date, the Company recorded a corresponding increase to the valuation allowance and the impact of adopting ASU 2016-09 on retained earnings is zero.

In August 2016, the FASB issued ASU No. 2016-15, "Statement of Cash Flows (Topic 203): Classification of Certain Cash Receipts and Cash Payments". ASU No. 2016-15 addresses eight specific cash flow issues and clarifies their presentation and classification in the Statement of Cash Flows. This ASU is effective for fiscal years beginning after December 15, 2017 and is to be applied retrospectively with early adoption permitted. The Company currently classifies payments up to the amount of its contingent consideration liability recognized at the date of its acquisition as financing activities, with additional payments classified as operating activities. As a result, the Company does not expect the adoption of ASU 2016-15 to have a material impact on its consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-01, "Business Combinations (Topic 805): Clarifying the Definition of a Business", which clarifies the definition of a business to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. This ASU is effective for public entities for fiscal years beginning after December 15, 2017, with early adoption permitted. The Company does not expect the adoption of ASU 2017-01 to have a material impact on the Company's consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04, "Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment," eliminating the requirement to calculate the implied fair value, essentially eliminating step two from the goodwill impairment test. The new standard requires goodwill impairment to be based upon the results of step one of the impairment test, which is defined as the excess of the carrying value of a reporting unit over its fair value. The impairment charge will be limited to the amount of goodwill allocated to that reporting unit. The standard is effective for the Company on a prospective basis beginning on January 1, 2020, with early adoption permitted. This new guidance is not expected to have a material impact on the Company's consolidated financial statements.

2. Acquisitions

Acquisition of Spectrum LifeSciences, LLC

On August 1, 2017, the Company completed the acquisition of Spectrum pursuant to the terms of the Agreement and Plan of Merger and Reorganization, dated as of June 22, 2017 (such acquisition, the "Spectrum Acquisition").

[Table of Contents](#)

Spectrum is a diversified filtration company with a differentiated portfolio of hollow fiber cartridges, bench-top to commercial scale filtration and perfusion systems and a broad portfolio of disposable and single-use solutions. Spectrum's products are primarily used for the filtration, isolation, purification and concentration of monoclonal antibodies, vaccines, recombinant proteins, diagnostic products and cell therapies where the company offers both standard and customized solutions to its bioprocessing customers.

Spectrum's filtration products include its KrosFlo® line of hollow-fiber cartridges, tangential flow filtration (TFF) systems and single-use flow path consumables, as well as its Spectra/Por® portfolio of laboratory dialysis products and its Pro-Connex® single-use hollow fiber Module-Bag-Tubing (MBT) sets. Outside of filtration, the company sells its Spectra/Chrom® liquid chromatography products for research applications. These bioprocessing products account for the majority of Spectrum revenues. Spectrum also offers a line of operating room products.

The Spectrum Acquisition was accounted for as a purchase of a business under ASC 805, Business Combinations. The Spectrum Acquisition was funded through payment of approximately \$122.9 million in cash, 6,153,995 unregistered shares of the Company's common stock totaling \$247.6 million and an estimated working capital adjustment of approximately \$1.0 million for a total purchase price of \$371.5 million.

Consideration Transferred

The Company accounted for the Spectrum Acquisition as a purchase of a business under U.S. GAAP. Under the acquisition method of accounting, the assets of Spectrum were recorded as of the acquisition date, at their respective fair values, and consolidated with those of the Company. The fair value of the net assets acquired was approximately \$371.5 million.

The estimated consideration and preliminary purchase price information has been prepared using a preliminary valuation. The preparation of the valuation required the use of significant assumptions and estimates. Critical estimates included, but were not limited to, future expected cash flows, including projected revenues and expenses, and the applicable discount rates. These estimates were based on assumptions that the Company believes to be reasonable; however, actual results may differ from these estimates.

The total consideration transferred follows (in thousands):

Cash consideration	\$ 122,932
Equity consideration	247,575
Working capital adjustment	955
Net assets acquired	<u>\$371,462</u>

Acquisition-related costs are not included as a component of consideration transferred, but are expensed in the periods in which the costs are incurred. The Company has incurred \$3,378,000 and \$5,761,000 in costs related to the Spectrum Acquisition for the three- and nine-month periods ended September 30, 2017, respectively. These costs are primarily included in selling, general and administrative expenses in the consolidated statements of operations.

Fair Value of Net Assets Acquired

The allocation of purchase price was based on the fair value of assets acquired and liabilities assumed as of August 1, 2017, based on the preliminary valuation. The components and allocation of the purchase price consists of the following amounts (in thousands):

Cash and cash equivalents	\$ 9,990
Accounts receivable	5,124
Inventory	13,774
Prepaid expenses and other assets	547
Fixed assets	6,015
Deferred tax assets	1,102
Customer relationships	78,400
Developed technology	38,560
Trademark and tradename	2,160
Non-competition agreements	960
Goodwill	265,084
Accounts payable	(1,142)
Unrecognized tax benefit	(576)
Accrued liabilities	(5,535)
Deferred tax liabilities, net	(43,001)
Fair value of net assets acquired	<u>\$371,462</u>

Of the consideration paid, \$78.4 million represents the fair value of customer relationships that will be amortized over the weighted average determined useful life of 16 years, and \$38.6 million represents the fair value of developed technology that will be amortized over a determined useful life of 20 years. \$960,000 represents the fair value of non-competition agreements that will be amortized over a determined life of 3 years. \$2.2 million represents the fair value of trademarks and trade names that are determined to have an indefinite useful life. The aforementioned intangible assets will be amortized on a straight-line basis.

[Table of Contents](#)

The goodwill of \$265.1 million represents future economic benefits expected to arise from synergies from combining operations and commercial organizations to increase market presence and the extension of existing customer relationships. None of the goodwill recorded is expected to be deductible for income tax purposes.

The purchase price allocation is subject to adjustment as purchase accounting is preliminary as of September 30, 2017. The final purchase price allocation will be determined upon completion of a final valuation analysis, and the fair value allocation of assets acquired and liabilities assumed could differ materially from the preliminary valuation analysis. The final allocation may include, but not be limited to, changes in the fair value of property, plant and equipment; changes in allocations to intangible assets and goodwill; changes in deferred tax assets and liabilities; and changes in the values of other assets and liabilities.

Revenue, Net Income and Pro Forma Presentation

The Company recorded revenue from Spectrum of \$7,550,000 from August 1, 2017 through September 30, 2017. The Company has included the operating results of Spectrum in its consolidated statements of operations since the August 1, 2017 acquisition date. The following table presents unaudited supplemental pro forma information as if the Spectrum Acquisition had occurred as of January 1, 2016 (in thousands, except per share data):

	Nine months ended September 30, 2017
Total revenue	\$ 121,301
Net income	\$ 14,994
Earnings per share:	
Basic	\$ 0.36
Diluted	\$ 0.36

Prior to the Spectrum Acquisition, Spectrum did not generate monthly or quarterly financial statements that were prepared in accordance with U.S. GAAP. Therefore, the effort to create Spectrum interim financial information for 2016 would be administratively impracticable. As a result, the unaudited supplemental pro forma information for the nine-month period ended September 30, 2016 has been omitted.

The unaudited pro forma information for the nine-month period ended September 30, 2017 was calculated after applying the Company's accounting policies and the impact of acquisition date fair value adjustments. The unaudited pro forma net income for the nine-month period ended September 30, 2017 was adjusted to exclude acquisition-related transaction costs, retention costs solely related to the acquisition, the impact of the fair value step-up to inventory and the release of the valuation allowance on the Company's deferred tax assets, as these expenses would have been incurred in the prior year assuming the Spectrum Acquisition closed on January 1, 2016.

These pro forma condensed consolidated financial results include certain adjustments to reflect the pro forma results of operations as if the acquisition had occurred as of January 1, 2016. The pro forma information does not reflect the effect of costs or synergies that would have been expected to result from the integration of the acquisition. The pro forma information does not purport to be indicative of the results of operations that actually would have resulted had the combinations occurred at the beginning of the period presented, or of future results of the consolidated entities.

TangenX Technology Corporation

On December 14, 2016, the Company acquired TangenX, pursuant to the terms of the Share Purchase Agreement, dated as of December 14, 2016, by and among the Company, John Connors and Novasep Process SAS (such acquisition, the "TangenX Acquisition"). Through the TangenX Acquisition, the Company acquired all outstanding shares and the business of TangenX, including TangenX's innovative single-use Sius line of tangential flow filtration ("TFF") cassettes and hardware used in downstream biopharmaceutical manufacturing processes.

TangenX™ TFF products are used in the filtration of biological drugs, thereby expanding Repligen's filtration portfolio and complementing the OPUS® pre-packed column product line in downstream purification. Effective June 30, 2017, TangenX was legally merged with and into the Company.

The TangenX Acquisition was accounted for as a purchase of a business under ASC 805, "Business Combinations." The total purchase price of the TangenX Acquisition was \$37.1 million in cash.

Consideration Transferred

The Company accounted for the TangenX Acquisition as a purchase of a business under U.S. GAAP. Under the acquisition method of accounting, the assets of TangenX were recorded as of the acquisition date, at their respective fair values, and consolidated with those of the Company. The fair value of the net assets acquired was approximately \$37.1 million.

The preparation of the valuation required the use of significant assumptions and estimates. Critical estimates included, but were not limited to, future expected cash flows, including projected revenues and expenses, and the applicable discount rates. These estimates were based on assumptions that the Company believes to be reasonable. However, actual results may differ from these estimates.

The total consideration transferred follows (in thousands):

Cash consideration	\$37,532
Less: working capital adjustment	(382)
Net assets acquired	<u>\$37,150</u>

Acquisition-related costs are not included as a component of consideration transferred, but are expensed in the periods in which the costs are incurred. The Company incurred \$0 and \$376,000 in transaction costs for the three- and nine-month periods ended September 30, 2017, respectively, and \$935,000 in transaction costs for the year ended December 31, 2016 related to the TangenX Acquisition. The transaction costs are included in selling, general and administrative expenses in the consolidated statements of operations.

Fair Value of Net Assets Acquired

The allocation of purchase price was based on the fair value of assets acquired and liabilities assumed as of December 14, 2016. The components and allocation of the purchase price consists of the following amounts (in thousands):

Cash and cash equivalents	\$ 1,218
Accounts receivable	459
Other receivables	111
Inventory	936
Other current assets	50
Fixed assets, net	215
Customer relationships	6,192
Developed technology	6,044
Non-competition agreements	21
Trademark and trade name	11
Accounts payable and other liabilities assumed	(3,083)
Deferred tax liabilities	(4,525)
Goodwill	<u>29,501</u>
Net assets acquired	<u>\$37,150</u>

Of the consideration paid, \$6.2 million represents the fair value of customer relationships that will be amortized over the determined useful life of 13 years and \$6.0 million represents the fair value of developed technology that will be amortized over a determined useful life of 20 years. \$21,000 represents the fair value of non-competition agreements that will be amortized over a determined life of 2 years. \$11,000 represents the fair value of trademarks and trade names that will be amortized over a determined useful life of 5 years. The aforementioned intangible assets will be amortized on a straight-line basis.

The goodwill of \$29.5 million represents future economic benefits expected to arise from synergies from combining operations and the extension of existing customer relationships. None of the goodwill recorded is expected to be deductible for income tax purposes.

Atoll GmbH

On April 1, 2016, the Company's subsidiary, Repligen Sweden, acquired Atoll GmbH ("Atoll") from UV-Cap GmbH & Co. KG ("UV Cap") pursuant to a Share Purchase Agreement (the "Atoll Share Purchase Agreement"), dated as of March 31, 2016 (such acquisition, the "Atoll Acquisition"), by and among Repligen Sweden, UV Cap, and the Company, in its capacity as guarantor of the obligations of Repligen Sweden under the Atoll Share Purchase Agreement. The Atoll Acquisition was subject to certain closing conditions that did not occur until April 1, 2016. Payment for the Atoll Acquisition was denominated in Euros but is reflected here in U.S. dollars for presentation purposes.

In connection with the Atoll Acquisition, the Company issued and contributed 538,700 shares of the Company's common stock, par value of \$0.01 per share valued at \$14.1 million (the "Atoll Stock Consideration") to Repligen Sweden through a transfer by the Company on behalf of Repligen Sweden to fulfill Repligen Sweden's obligation to deliver the Atoll Stock Consideration under the Atoll Share Purchase Agreement. The issuance of the Atoll Stock Consideration was not registered under the Securities Act of 1933, as amended (the "Securities Act"), in reliance upon the exemption from registration provided by Section 4(2) of the Securities Act. The Atoll Stock Consideration was based on the fair value of the Company's common stock on April 1, 2016.

This acquisition strengthened Repligen's bioprocessing business by adding a complementary extension to an existing product line while expanding its direct sales presence worldwide. On September 20, 2016, Atoll changed its name to Repligen GmbH.

The Atoll Acquisition was accounted for as a purchase of a business under ASC 805, "Business Combinations." The total purchase price of the Atoll Acquisition was \$25.3 million, consisting of an upfront cash payment of \$10.2 million, less \$74,000 as a result of the final determination of working capital, issuance of the Atoll Stock Consideration, and a milestone payment of \$1.1 million for achievement of specific revenue growth targets met for 2016. The \$1.1 million potential contingent consideration had an initial probability weighted fair value at the time of the closing of the Atoll Acquisition of approximately \$952,000.

Consideration Transferred

The Company accounted for the Atoll Acquisition as the purchase of a business under U.S. GAAP. Under the acquisition method of accounting, the assets of Atoll were recorded as of the acquisition date, at their respective fair values, and consolidated with those of the Company. The fair value of the net assets acquired was approximately \$25.3 million.

The preparation of the valuation required the use of significant assumptions and estimates. Critical estimates included, but were not limited to, future expected cash flows, including projected revenues and expenses, and the applicable discount rates. These estimates were based on assumptions that the Company believes to be reasonable. However, actual results may differ from these estimates.

The total consideration transferred follows (in thousands):

Cash consideration, less \$74 of working capital adjustments	\$10,176
Equity consideration	14,138
Estimated fair value of contingent consideration	952
Total consideration transferred	<u>\$25,266</u>

The fair value of contingent consideration was determined based upon a probability weighted analysis of expected future milestone and settlement payments to be made to UV Cap. Pursuant to the terms of the Atoll Share Purchase Agreement, the Company would make a contingent consideration payment of \$1.1 million if specific revenue growth targets were met for 2016. Because the specified revenue growth targets were met for 2016, the Company made the contingent consideration payment in March 2017. No further measurement of this liability is required as of September 30, 2017.

Acquisition related costs are not included as a component of consideration transferred, but are expensed in the periods in which the costs are incurred. The Company incurred \$1,307,000 in transaction costs in 2016 related to the Atoll Acquisition. The transaction costs are included in selling, general and administrative expenses in the consolidated statements of operations.

Fair Value of Net Assets Acquired

The allocation of purchase price was based on the fair value of assets acquired and liabilities assumed as of April 1, 2016. The components and allocation of the purchase price consists of the following amounts (in thousands):

Cash and cash equivalents	\$ 1,409
Accounts receivable	697
Inventory	155
Other current assets	169
Fixed assets, net	114
Customer relationships	5,318
Developed technology	2,175
Non-competition agreements	57
Trademark and trade name	11
Deferred tax assets	885
Accounts payable and other liabilities assumed	(599)
Deferred tax liabilities	(2,202)
Goodwill	17,077
Net assets acquired	<u>\$25,266</u>

Of the consideration paid, \$5.3 million represents the fair value of customer relationships that will be amortized over the determined useful life of 13 years and \$2.2 million represents the fair value of developed technology that will be amortized over a determined useful life of 14 years. \$57,000 represents the fair value of non-competition agreements and \$11,000 represents the fair value of trademarks and trade names that will be amortized over a determined useful life of 2 years. The aforementioned intangible assets will be amortized on a straight-line basis.

The goodwill of \$17.1 million represents future economic benefits expected to arise from synergies from combining operations, utilizing the Company's existing sales infrastructure to increase market presence and the extension of existing customer relationships. None of the goodwill recorded is expected to be deductible for income tax purposes.

3. Revenue Recognition*Product Sales*

The Company's revenue recognition policy is to recognize revenues from product sales and services in accordance with ASC 605, *Revenue Recognition*. These standards require that revenues are recognized when persuasive evidence of an arrangement exists, product delivery, including customer acceptance when required, has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured. Determination of whether these criteria have been met are based on management's judgments primarily regarding the fixed nature of the fee charged for the product delivered and the collectability of those fees. The Company has a few longstanding customers who comprise the majority of revenue and have excellent payment histories and therefore the Company does not require collateral. The Company has had no significant write-offs of uncollectible invoices in the periods presented. When more than one element such as equipment, consumables, and services are contained in a single arrangement, the Company allocates revenue between the elements based on each element's relative selling price, provided that each element meets the criteria for treatment as a separate unit of accounting. An item is considered a separate unit of accounting if it has value to the customer on a stand-alone basis. The selling price of the undelivered elements is determined by the price charged when the element is sold separately, or in cases when the item is not sold separately, by third-party evidence of selling price or management's best estimate of selling price.

The Company's product revenues are from the sale of bioprocessing products, equipment devices, and related consumables used with these equipment devices to customers in the life science and biopharmaceutical industries. On product sales to end customers, revenue is recognized, net of discounts, when both the title and risk of loss have transferred to the customer, as determined by the shipping terms provided there are no uncertainties regarding acceptance, and all obligations have been completed. Generally, our product arrangements for equipment sales are multiple element arrangements, and may include services, such as installation and training, and multiple products, such as consumables and spare parts. In accordance with ASC 605-25, based on terms and conditions of the product arrangements, the Company believes that these services and undelivered products can be accounted for separately from the delivered product element, as the delivered products have value to our customers on a standalone basis. Accordingly, revenue for services not yet performed at the time of product shipment are deferred and recognized as such services are performed. The relative selling price of any undelivered products is also deferred at the time of shipment and recognized as revenue when these products are delivered. For product sales to distributors, the Company recognizes revenue for both equipment and consumables upon delivery to the distributor unless direct shipment to the end user is requested. In this case, revenue is recognized upon delivery to the end user's location. In general, distributors are responsible for shipment to the end customer along with installation, training and acceptance of the equipment by the end customer. Sales to distributors are not contingent upon resale of the product.

At the time of sale, the Company also evaluates the need to accrue for warranty and sales returns. The supply agreements the Company has with its customers and the related purchase orders identify the terms and conditions of each sale and the price of the goods ordered. Due to the nature of the sales arrangements, inventory produced for sale is tested for quality specifications prior to shipment. Since the product is manufactured to order and in compliance with required specifications prior to shipment, the likelihood of sales return, warranty or other issues is largely diminished. Furthermore, there is no customer right of return in our sales agreements. Sales returns and warranty issues are infrequent and have not had a material impact on the Company's financial statements historically.

Shipping and handling fees are recorded as a component of product revenue, with the associated costs recorded as a component of cost of product revenue.

Therapeutics Licensing Agreements

Activities under licensing agreements are evaluated in accordance with ASC 605-25 to determine if they represent a multiple element revenue arrangement. The Company identifies the deliverables included within the agreement and evaluates which deliverables represent separate units of accounting. The Company accounts for those components as separate units of accounting if the following two criteria are met:

- The delivered item or items have value to the customer on a stand-alone basis; and
- If there is a general right of return relative to the delivered items, delivery or performance of the undelivered items is considered probable and within the Company's control.

Factors considered in this determination include, among other things, whether any other vendors sell the items separately and if the licensee could use the delivered item for its intended purpose without the receipt of the remaining deliverables. If multiple deliverables included in an arrangement are separable into different units of accounting, the Company allocates the arrangement consideration to those units of accounting. The amount of allocable arrangement consideration is limited to amounts that are fixed or determinable. Arrangement consideration is allocated at the inception of the arrangement to the identified units of accounting based on their relative selling price. Revenue is recognized for each unit of accounting when the appropriate revenue recognition criteria are met.

Future milestone payments, if any, under a license agreement will be recognized under the provisions of ASC 605-28, which the Company adopted on January 1, 2011. The Company has elected to recognize a payment that is contingent upon the achievement of a substantive milestone in its entirety in the period in which the milestone is achieved. A milestone is substantive if:

- It can only be achieved based in whole or in part on either the Company's performance or the occurrence of a specific outcome resulting from the Company's performance;
- There is substantive uncertainty at the date an arrangement is entered into that the event will be achieved; and
- It would result in additional payments being due to the entity.

The commercial milestone payments and royalty payments received under license agreements, if any, will be recognized as revenue when they are earned.

Sale of Intellectual Property to BioMarin

In January 2014, the Company entered into an asset purchase agreement (the "BioMarin Asset Purchase Agreement") with BioMarin Pharmaceutical Inc. ("BioMarin") to sell Repligen's histone deacetylase inhibitor (HDACi) portfolio. Pursuant to the terms of the BioMarin Asset Purchase Agreement, the Company is entitled to receive up to \$160 million in potential future milestone payments, comprised of:

- Up to \$60 million related to the achievement of specified clinical and regulatory milestone events; and
- Up to \$100 million related to the achievement of specified commercial sales events, specifically the first commercial sale in specific territories.

In addition, Repligen is eligible to receive royalties on sales of therapeutic products originating from the HDACi portfolio. The royalty rates are tiered and begin in the mid-single-digits for the first HDACi portfolio product and for the first non-HDACi portfolio product with lesser amounts for any backup products developed under the BioMarin Asset Purchase Agreement. The Company's receipt of these royalties is subject to customary offsets and deductions. There are no refund provisions in this agreement. Any milestones earned upon specified clinical development or commercial sales events or future royalty payments, under the BioMarin Asset Purchase Agreement will be recognized as revenue when they are earned.

[Table of Contents](#)

Activities under this agreement were evaluated in accordance with ASC 605-25 to determine if they represented a multiple element revenue arrangement. The Company identified the following deliverables in the BioMarin Asset Purchase Agreement:

- The assignment by the Company to BioMarin of its intellectual property rights in the HDACi portfolio and the Scripps Agreement (the “Transferred Assets”); and
- The transfer of certain notebooks, data, documents, biological materials (if any) and other such documents in our possession that might be useful to further development of the program (the “Technology Transfer”).

Two criteria must be met in order for a deliverable to be considered a separate unit of accounting. The first criterion requires that the delivered item or items have value to the customer on a stand-alone basis. The second criterion, which relates to evaluating a general right of return, is not applicable because such a provision does not exist in the BioMarin Asset Purchase Agreement. The deliverables outlined above were deemed to have stand-alone value and to meet the criteria to be accounted for as separate units of accounting. Factors considered in this determination included, among other things, BioMarin’s right under the agreement to assign the Transferred Assets, whether any other vendors sell the items separately and if BioMarin could use the delivered item for its intended purpose without the receipt of the remaining deliverables. If multiple deliverables included in an arrangement are separable into different units of accounting, the multiple-element arrangements guidance addresses how to allocate the arrangement consideration to those units of accounting. The amount of allocable arrangement consideration is limited to amounts that are fixed or determinable. Arrangement consideration is allocated at the inception of the arrangement to the identified units of accounting based on their relative selling price.

The Company evaluated the potential milestones in accordance with ASC 605-28, which allows an entity to make an accounting policy election to recognize a payment that is contingent upon the achievement of a substantive milestone in its entirety in the period in which the milestone is achieved. This evaluation included an assessment of the risks that must be overcome to achieve the respective milestone as well as whether the achievement of the milestone was due in part to our initial clinical work, the level of effort and investment required to achieve the respective milestone and whether the milestone consideration is reasonable relative to all deliverables and payment terms in the arrangement. There is considerable judgment involved in determining whether a milestone satisfies all of the criteria required to conclude that a milestone is substantive. Milestones that are not considered substantive are recognized as earned if there are no remaining performance obligations or over the remaining period of performance, assuming all other revenue recognition criteria are met.

The Company believes that the \$60 million of specified clinical and regulatory milestone payments are substantive. Therefore, any such milestones achieved will be recognized as revenue when earned.

Any milestones achieved upon specified commercial sales events or future royalty payments are considered contingent revenue under the BioMarin Asset Purchase Agreement, and will be recognized as revenue when they are earned as there are no undelivered elements remaining and no continuing performance obligations under the arrangement.

4. Accumulated Other Comprehensive Income

The following table summarizes the changes in accumulated other comprehensive income by component (in thousands):

(In thousands)	Unrealized gain (loss) on investments	Foreign currency translation gain (loss)	Total
Balance at December 31, 2016	\$ (5)	\$ (13,744)	\$ (13,749)
Other comprehensive income	5	7,097	7,102
Balance at September 30, 2017	<u>\$ —</u>	<u>\$ (6,647)</u>	<u>\$ (6,647)</u>

5. Earnings Per Share

The Company reports earnings per share in accordance with ASC Topic 260, “Earnings Per Share,” which establishes standards for computing and presenting earnings per share. Basic earnings per share is computed by dividing net income available to common shareholders by the weighted-average number of common shares outstanding during the period. Diluted earnings per share is computed by dividing net income available to common shareholders by the weighted-average number of common shares and dilutive common share equivalents then outstanding. Potential common share equivalents consist of restricted stock awards and the incremental common shares issuable upon the exercise of stock options. Under the treasury stock method, unexercised “in-the-money”

[Table of Contents](#)

stock options and warrants are assumed to be exercised at the beginning of the period or at issuance, if later. The assumed proceeds are then used to purchase common shares at the average market price during the period. Share-based payment awards that entitle their holders to receive non-forfeitable dividends before vesting are considered participating securities and are considered in the calculation of basic and diluted earnings per share. There were no such participating securities outstanding during the three- and nine-month periods ended September 30, 2017 and 2016.

Basic and diluted weighted average shares outstanding were as follows:

	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Weighted average common shares	41,236,554	33,779,141	36,435,591	33,485,448
Dilutive common stock options and restricted stock units	484,242	533,746	454,340	526,086
Dilutive effect of senior convertible notes	842,206	—	496,402	—
Weighted average common shares, assuming dilution	<u>42,563,002</u>	<u>34,312,887</u>	<u>37,386,333</u>	<u>34,011,534</u>

At September 30, 2017, there were outstanding options to purchase 749,669 shares of the Company's common stock at a weighted average exercise price of \$20.84 per share and 515,468 restricted stock units. For the three- and nine-month periods ended September 30, 2017, 162,544 and 326,572 options to purchase shares of the Company's common stock, respectively, were excluded from the calculation of diluted earnings per share because the exercise prices of the stock options were greater than or equal to the average price of the common shares, and were therefore anti-dilutive. As provided by the terms of the indenture underlying the Company's 2.125% Convertible Senior Notes due 2021 (the "Notes"), the Company has a choice to settle the conversion obligation for the Notes in cash, shares or any combination of the two. The Company currently intends to settle the face value of the Notes in cash and any excess conversion premium in shares. During the third quarter of 2017, the closing price of the Company's common stock exceeded 130% of the conversion price of the Notes for more than 20 trading days of the last 30 consecutive trading days of the quarter. As a result, the Notes are convertible at the option of the holders of the Notes during the fourth quarter of 2017; however, no holders have elected to convert any of their Notes as of the date of this filing. The Company applies the provisions of ASC 260, *Earnings Per Share*, Subsection 10-45-44, to determine the diluted weighted average shares outstanding as it relates to the conversion spread on the Notes. Accordingly, the face value of the Notes is not included in the calculation of diluted income per share, but the dilutive effect of the conversion premium is considered in the calculation of diluted net income per share using the treasury stock method. The share figures in the table above represent the estimated incremental shares that would be issued related to the conversion premium, assuming conversion of all the outstanding Notes as of September 30, 2017.

At September 30, 2016, there were outstanding options to purchase 1,198,673 shares of the Company's common stock at a weighted average exercise price of \$12.03 per share. For the three- and nine-month periods ended September 30, 2016, 253,754 and 348,608 options to purchase shares of the Company's common stock, respectively, were excluded from the calculation of diluted earnings per share because the exercise prices of the stock options were greater than or equal to the average price of the common shares, and were therefore anti-dilutive. The Company applies the provisions of ASC 260, *Earnings Per Share*, Subsection 10-45-44, to determine the diluted weighted average shares outstanding as it relates to the conversion spread on the Notes. Accordingly, the face value of the Notes is not included in the calculation of diluted income per share. There is no dilutive effect of the conversion premium on the Notes for the three- and nine-month periods ended September 30, 2016, as the weighted average price of the Company's common stock was less than the conversion price of the Notes.

6. Cash, Cash Equivalents and Marketable Securities

At September 30, 2017, the Company did not have any marketable securities.

As of December 31, 2016, the Company's investments included money market funds and short-term marketable securities. These marketable securities were classified as available-for-sale. Marketable securities are investments with original maturities of greater than 90 days. Long-term marketable securities are securities with maturities of greater than one year.

Investments in marketable securities consisted of the following at December 31, 2016 (in thousands):

	December 31, 2016			
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value
Marketable securities:				
U.S. Government and agency securities	\$ 807	\$ —	\$ —	\$ 807
Corporate and other debt securities	18,745	2	(7)	18,740
Total	<u>\$ 19,552</u>	<u>\$ 2</u>	<u>\$ (7)</u>	<u>\$19,547</u>

There were no long-term marketable securities as of December 31, 2016.

Management reviewed the Company's investments as of December 31, 2016 and concluded that there are no securities with other than temporary impairments in the investment portfolio. The Company did not intend to sell any investments in an unrealized loss position, and it was not more likely than not that the Company will be required to sell the investments before recovery of their amortized cost bases.

7. Inventories

Inventories relate to the Company's bioprocessing business. The Company values inventory at cost or, if lower, market value, using the first-in, first-out method. The Company reviews its inventories at least quarterly and records a provision for excess and obsolete inventory based on its estimates of expected sales volume, production capacity and expiration dates of raw materials, work-in-process and finished products. Expected sales volumes are determined based on supply forecasts provided by key customers for the next 3 to 12 months. The Company writes down inventory that has become obsolete, inventory that has a cost basis in excess of its expected net realizable value, and inventory in excess of expected requirements to cost of product revenue. Manufacturing of bioprocessing finished goods is done to order and tested for quality specifications prior to shipment. Reserves for excess and obsolete inventory were approximately \$406,000 at September 30, 2017 and \$435,000 at December 31, 2016.

A change in the estimated timing or amount of demand for the Company's products could result in additional provisions for excess inventory quantities on hand. Any significant unanticipated changes in demand or unexpected quality failures could have a significant impact on the value of inventory and reported operating results. During all periods presented in the accompanying financial statements, there have been no material adjustments related to a revised estimate of inventory valuations.

Work-in-process and finished products inventories consist of material, labor, outside processing costs and manufacturing overhead. Inventories consist of the following (in thousands):

	September 30, 2017	December 31, 2016
Raw Materials	\$ 22,235	\$ 14,954
Work-in-process	3,633	2,789
Finished products	12,795	6,953
Total	<u>\$ 38,663</u>	<u>\$ 24,696</u>

8. Property, Plant and Equipment

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

	<u>September 30, 2017</u>	<u>December 31, 2016</u>
Land	\$ 1,021	\$ —
Buildings	768	—
Leasehold improvements	15,743	14,592
Equipment	19,543	15,214
Furniture and fixtures	4,111	3,218
Construction in progress	3,286	1,264
Total property, plant and equipment	44,472	34,288
Less: accumulated depreciation	(22,416)	(19,332)
Property, plant and equipment, net	<u>\$ 22,056</u>	<u>\$ 14,956</u>

Depreciation expense totaled approximately \$2,988,000 and \$2,360,000 for the nine-month periods ended September 30, 2017 and 2016, respectively.

9. Intangible Assets

Intangible assets are amortized over their useful lives using the straight-line method, as applicable, and the amortization expense is recorded within selling, general and administrative expense in the Company's statements of comprehensive income.

The Company reviews its indefinite-lived intangible assets not subject to amortization to determine if adverse conditions exist or a change in circumstances exists that would indicate an impairment. Intangible assets and their related useful lives are reviewed at least annually to determine if any adverse conditions exist that would indicate the carrying value of these assets may not be recoverable. More frequent impairment assessments are conducted if certain conditions exist, including a change in the competitive landscape, any internal decisions to pursue new or different technology strategies, a loss of a significant customer, or a significant change in the marketplace, including changes in the prices paid for our products or changes in the size of the market for our products. An impairment results if the carrying value of the asset exceeds the estimated fair value of the asset. If the estimate of an intangible asset's remaining useful life is changed, the remaining carrying amount of the intangible asset is amortized prospectively over the revised remaining useful life. The Company continues to believe that its intangible assets are recoverable at September 30, 2017.

Intangible assets consisted of the following at September 30, 2017 (in thousands):

	<u>Gross Carrying Amount</u>	<u>Accumulated Amortization</u>	<u>Weighted Average Useful Life (in years)</u>
Technology – developed	\$ 51,775	\$ (2,491)	19
Patents	240	(230)	8
Customer relationships	102,090	(7,774)	15
Trademark – indefinite lived	2,860	—	—
Other intangibles	1,062	(116)	3
Total intangible assets	<u>\$ 158,027</u>	<u>\$ (10,611)</u>	16

[Table of Contents](#)

Intangible assets consisted of the following at December 31, 2016 (in thousands):

	Gross Carrying Amount	Accumulated Amortization	Weighted Average Useful Life (in years)
Technology – developed	\$ 12,911	\$ (1,468)	17
Patents	240	(208)	8
Customer relationships	22,555	(4,995)	11
Trademark/ tradename	711	—	—
Other intangibles	84	(24)	2
Total intangible assets	<u>\$ 36,501</u>	<u>\$ (6,695)</u>	13

Amortization expense for amortized intangible assets was approximately \$3,476,000 and \$1,484,000 for the nine-month periods ended September 30, 2017 and 2016, respectively. As of September 30, 2017, the Company expects to record amortization expense as follows (in thousands):

Years Ending	Amortization Expense
December 31, 2017 (three months remaining)	\$ 2,625
December 31, 2018	10,308
December 31, 2019	10,214
December 31, 2020	9,619
December 31, 2021	9,046

10. Accrued Liabilities

Accrued liabilities consist of the following (in thousands):

	September 30, 2017	December 31, 2016
Employee compensation	\$ 6,497	\$ 5,586
Accrued interest payable	806	204
Accrued purchases	448	382
Taxes	591	1,692
Contingent consideration	—	6,119
Royalties	1,064	248
Professional fees	734	411
Accrued warranty	528	178
Unearned revenue	1,299	408
Other accrued expenses	1,826	786
Total	<u>\$ 13,793</u>	<u>\$ 16,014</u>

11. Convertible Senior Notes

The carrying value of the Company's convertible senior notes is as follows:

	September 30, 2017	December 31, 2016
2.125% Convertible Senior Notes due 2021:		
Principal amount	\$ 115,000	\$ 115,000
Unamortized debt discount	(14,261)	(16,777)
Unamortized debt issuance costs	(2,508)	(2,951)
Total convertible senior notes	<u>\$ 98,231</u>	<u>\$ 95,272</u>

On May 24, 2016, the Company issued \$115 million aggregate principal amount of its 2.125% Convertible Senior Notes due 2021 (the "Notes"). The net proceeds from the sale of the Notes, after deducting the underwriting discounts and commissions and other related offering expenses, were approximately \$111.1 million. The Notes bear interest at the rate of 2.125% per annum, payable semiannually in arrears on June 1 and December 1 of each year, beginning on December 1, 2016.

[Table of Contents](#)

The Notes will mature on June 1, 2021, unless earlier repurchased, redeemed or converted in accordance with their terms. Prior to March 1, 2021, the Notes will be convertible at the option of holders of the Notes only upon satisfaction of certain conditions and during certain periods, and thereafter, the notes will be convertible at any time until the close of business on the second scheduled trading day immediately preceding the maturity date. Upon conversion, holders of the Notes will receive shares of the Company's common stock, cash or a combination thereof, at the Company's election. It is the Company's current intent and policy to settle all conversions through combination settlement, which involves satisfying the principal amount outstanding with cash and any note conversion value over the principal amount in shares of the Company's common stock.

During the third quarter of 2017, the closing price of the Company's common stock exceeded 130% of the conversion price of the Notes for more than 20 trading days of the last 30 consecutive trading days of the quarter. As a result, the Notes are convertible at the option of the holders of the Notes during the fourth quarter of 2017. As a result, the Company reclassified the carrying value of the Notes to current liabilities from long term liabilities on the Company's consolidated balance sheet as of September 30, 2017. In the event the closing price conditions are met in the fourth quarter of 2017 or a future fiscal quarter, the Notes will be convertible at a holder's option during the immediately following fiscal quarter. As of September 30, 2017, the if-converted value of the Notes exceeded the aggregate principal amount by approximately \$39.8 million. As of the date of this filing, none of the Notes have been converted by the holders of such Notes.

The conversion rate for the Notes will initially be 31.1813 shares of the Company's common stock per \$1,000 principal amount of Notes, which is equivalent to an initial conversion price of approximately \$32.07 per common share, and is subject to adjustment under the terms of the Notes. Holders of the Notes may require the Company to repurchase their Notes upon the occurrence of a fundamental change prior to maturity for cash at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased plus accrued and unpaid interest, if any, to, but excluding, the repurchase date.

The Company will not have the right to redeem the Notes prior to June 5, 2019, but may redeem the Notes, at its option, in whole or in part, on any business day on or after June 5, 2019 and prior to the maturity date if the last reported sale price of the Company's common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which the Company provides written notice of redemption. The redemption price will be equal to 100% of the principal amount of the principal amount of Notes to be redeemed plus accrued and unpaid interest to, but excluding, the redemption date.

The Notes contain customary terms and events of default. If an event of default (other than certain events of bankruptcy, insolvency or reorganization involving the Company) occurs and is continuing, the holders of at least 25% in aggregate principal amount of the outstanding Notes may declare 100% of the principal of, and any accrued and unpaid interest on, all of the Notes to be due and payable. Upon the occurrence of certain events of bankruptcy, insolvency or reorganization involving the Company, 100% of the principal of and accrued and unpaid interest, if any, on all of the Notes will become due and payable automatically. Notwithstanding the foregoing, the Notes provide that, to the extent the Company elects and for up to 270 days, the sole remedy for an event of default relating to certain failures by the Company to comply with certain reporting covenants consist exclusively of the right to receive additional interest on the Notes. The Company is not aware of any events of default, current events or market conditions that would allow holders to call or convert the Notes as of September 30, 2017, except as noted below.

The cash conversion feature of the Notes required bifurcation from the Notes and was initially accounted for as an equity instrument classified to stockholders' equity, as the conversion feature was determined to be clearly and closely related to the Company's stock. Based on market data available for publicly traded, senior, unsecured corporate bonds issued by companies in the same industry and asset base and with similar maturity, the Company estimated the implied interest rate, assuming no conversion option. Assumptions used in the estimate represent what market participants would use in pricing the liability component, including market interest rates, credit standing, and yield curves, all of which are defined as Level 2 observable inputs. The estimated implied interest rate was applied to the Notes, which resulted in a fair value of the liability component of \$96,289,000 upon issuance, calculated as the present value of implied future payments based on the \$115 million aggregate principal amount. The equity component of the Notes was recognized as a debt discount, recorded in additional paid-in capital, and represents the difference between the aggregate principal of the Notes and the fair value of the Notes without conversion option on their issuance date. The debt discount is amortized to interest expense using the effective interest method over five years, or the life of the Notes. The Company assesses the equity classification of the cash conversion feature quarterly, and it is not remeasured as long as it continues to meet the conditions for equity classification.

Interest expense recognized on the Notes during the three-month period ended September 30, 2017 includes \$611,000, \$852,000 and \$150,000 for the contractual coupon interest, the accretion of the debt discount and the amortization of the debt issuance costs, respectively. Interest expense recognized on the Notes during the nine-month period ended September 30, 2017 includes \$1,833,000, \$2,516,000 and \$442,000 for the contractual coupon interest, the accretion of the debt discount and the amortization of the debt issuance costs, respectively. The effective interest rate on the Notes is 6.6%, which includes the interest on the Notes, amortization of the debt discount and debt issuance costs. As of September 30, 2017, the carrying value of the Notes was approximately \$98.2 million and the fair value of the principal was approximately \$154.8 million. The fair value of the Notes was determined based on the most recent trade activity of the Notes as of September 30, 2017.

12. Equity and Stock-Based Compensation

Public Offering of Common Stock

On July 3, 2017, the Company completed a public offering in which 2,807,017 shares of its common stock were sold to the public at a price of \$42.75 per share. The underwriters were granted an option, which they exercised in full, to purchase an additional 421,052 shares of the Company's common stock. The total proceeds from this offering, net of underwriting discounts, commissions and other offering expenses, totaled approximately \$129.3 million.

Stock-Based Compensation

For the three-month periods ended September 30, 2017 and 2016, the Company recorded stock-based compensation expense of approximately \$1,817,000 and \$1,282,000, respectively, for share-based awards granted under the Second Amended and Restated 2001 Repligen Corporation Stock Plan (the "2001 Plan") and the Repligen Corporation Amended and Restated 2012 Stock Option and Incentive Plan (the "2012 Plan," and collectively with the 2001 Plan and the 1992 Repligen Corporation Stock Option Plan, the "Plans"). The Company recorded stock-based compensation expense of approximately \$4,845,000 and \$3,341,000 for the nine-month periods ended September 30, 2017 and 2016, respectively, for share-based awards granted under the Plans.

The following table presents stock-based compensation expense included in the Company's consolidated statements of comprehensive income (in thousands):

	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Cost of product revenue	\$ 197	\$ 116	\$ 491	\$ 260
Research and development	127	177	338	362
Selling, general and administrative	1,493	989	4,016	2,719
Total	<u>\$ 1,817</u>	<u>\$ 1,282</u>	<u>\$ 4,845</u>	<u>\$ 3,341</u>

The 2012 Plan allows for the granting of incentive and nonqualified options to purchase shares of common stock, restricted stock and other equity awards. Employee grants under the Plans generally vest over a three to five-year period, with 20%-33% vesting on the first anniversary of the date of grant and the remainder vesting in equal yearly installments thereafter. Nonqualified options issued to non-employee directors under the Plans generally vest over one year. Options granted under the Plans have a maximum term of ten years from the date of grant and generally, the exercise price of the stock options equals the fair market value of the Company's common stock on the date of grant. At September 30, 2017, options to purchase 749,669 shares and 515,468 restricted stock units were outstanding under the Plans. At September 30, 2017, 1,228,987 shares were available for future grant under the 2012 Plan.

The Company uses the Black-Scholes option pricing model to calculate the fair value of stock option awards on the grant date, and the Company uses the value of the common stock as of the grant date to value restricted stock units. The Company measures stock-based compensation cost at the grant date based on the estimated fair value of the award. The Company recognizes expense on awards with service based vesting over the employee's requisite service period on a straight-line basis. In the third quarter of 2017, the Company issued performance stock units to certain individuals related to the Spectrum Acquisition which are tied to the achievement of certain revenue and gross margin metrics and the passage of time. The Company recognizes expense on performance based awards over the vesting period of each tranche when it is probable that the performance metrics will be achieved. The Company recognizes stock-based compensation expense for options that are ultimately expected to vest, and accordingly, such compensation expense has been adjusted for estimated forfeitures.

[Table of Contents](#)

Information regarding option activity for the nine-month period ended September 30, 2017 under the Plans is summarized below:

	Options Outstanding	Weighted- Average Exercise Price Per Share	Weighted- Average Remaining Contractual Term (in years)	(in thousands) Aggregate Intrinsic Value
Options outstanding at December 31, 2016	882,748	\$ 16.88		
Granted	101,844	33.38		
Exercised	(201,966)	10.08		
Forfeited/cancelled	(32,957)	20.31		
Options outstanding at September 30, 2017	749,669	\$ 20.84	6.72	\$ 13,205
Options exercisable at September 30, 2017	423,217	\$ 15.86	5.53	\$ 9,602
Vested and expected to vest at September 30, 2017 ⁽¹⁾	739,381	\$ 20.74	6.70	\$ 13,065

- (1) Represents the number of vested options as of September 30, 2017 plus the number of unvested options expected to vest as of September 30, 2017 based on the unvested outstanding options at September 30, 2017 adjusted for estimated forfeiture rates of 8% for awards granted to non-executive level employees and 3% for awards granted to executive level employees.

The aggregate intrinsic value in the table above represents the total pre-tax intrinsic value (the difference between the closing price of the common stock on September 30, 2017 of \$38.32 per share and the exercise price of each in-the-money option) that would have been received by the option holders had all option holders exercised their options on September 30, 2017.

The weighted average grant date fair value of options granted during the nine-month periods ended September 30, 2017 and 2016 was \$16.94 and \$13.55, respectively. The total fair value of stock options that vested during the nine-month periods ended September 30, 2017 and 2016 was approximately \$2,074,000 and \$1,590,000, respectively.

Information regarding restricted stock unit and performance stock unit activity for the nine-month period ended September 30, 2017 under the Plans is summarized below:

	Units Outstanding	Weighted- Average Exercise Price Per Share	Weighted- Average Remaining Contractual Term (in years)	(in thousands) Aggregate Intrinsic Value
Restricted stock units outstanding at December 31, 2016	353,838	\$ —		
Granted	279,054	—		
Exercised	(100,221)	—		
Forfeited/cancelled	(17,203)	—		
Restricted stock units outstanding at September 30, 2017	515,468	\$ —	2.80	\$ 19,753
Vested and expected to vest at September 30, 2017 ⁽¹⁾	488,104	\$ —	2.66	\$ 18,704

- (1) Represents the number of vested restricted stock units as of September 30, 2017 plus the number of unvested restricted stock units expected to vest as of September 30, 2017 based on the unvested outstanding restricted stock units at September 30, 2017 adjusted for estimated forfeiture rates of 8% for awards granted to non-executive level employees and 3% for awards granted to executive level employees.

The aggregate intrinsic value in the table above represents the total pre-tax intrinsic value (equal to the closing price of the common stock on September 30, 2017 of \$38.32 per share) that would have been received by the restricted stock unit holders had all restricted stock units vested on September 30, 2017. The aggregate intrinsic value of restricted stock units vested during the nine-month periods ended September 30, 2017 and 2016 was approximately \$3,480,000 and \$1,479,000, respectively.

The weighted average grant date fair value of restricted stock units granted during the nine-month periods ended September 30, 2017 and 2016 was \$36.85 and \$26.28, respectively. The total grant date fair value of restricted stock units that vested during the nine-month periods ended September 30, 2017 and 2016 was approximately \$2,565,000 and \$1,315,000, respectively.

As of September 30, 2017, there was \$18,114,000 of total unrecognized compensation cost related to unvested share-based awards. This cost is expected to be recognized over a weighted average remaining requisite service period of 2.66 years.

13. Income Taxes

The Company's effective tax rate for the three- and nine-month periods ended September 30, 2017 was 330.9% and (183.8%), respectively, compared to 47.8% and 34.3%, respectively, for the corresponding periods in the prior year.

In the second quarter of 2017, the Company completed a sale of intellectual property to Repligen Sweden AB that allowed for the Company to utilize certain of its U.S. deferred tax assets. Accordingly, the Company reduced its valuation allowance on its U.S. deferred tax assets by approximately \$9,200,000 in the second quarter of 2017 and recorded a \$5,625,000 tax benefit on the Company's consolidated statement of operations as a result of the sale of the intellectual property.

In the third quarter of 2017, in conjunction with the Spectrum Acquisition, the Company determined that its U.S. deferred tax assets were more likely than not to be realized after considering deferred tax liabilities related to the acquired intangible assets. Accordingly, the Company reduced its valuation allowance on its U.S. deferred tax assets by approximately \$6,611,000 in the third quarter of 2017.

For the three- and nine-month periods ended September 30, 2017, the effective tax rate differed from the U.S. statutory tax rate of 34% primarily due to valuation allowance releases related to the sale of intellectual property, the Spectrum Acquisition and lower statutory tax rates on foreign profits. For the three-month period ended September 30, 2016, the effective tax rate was higher than the U.S. statutory tax rate of 34% primarily due to unbenefited domestic losses, partially offset by lower statutory tax rates in foreign jurisdictions.

At December 31, 2016, the Company had net operating loss carryforwards of approximately \$48,550,000 in the U.S., net operating loss carryforwards of approximately €2,287,000 (approximately \$2,407,000) in Germany, federal business tax credit carryforwards of \$1,745,000 and state business tax credit carryforwards of approximately \$442,000 available to reduce future domestic income taxes, if any. The net operating loss and business tax credits carryforwards will continue to expire at various dates through December 2036. The net operating loss and business tax credit carryforwards are subject to review and possible adjustment by the Internal Revenue Service. While an IRC Section 382 study was completed in the second quarter of 2017, and no current limitations were identified, use of these net operating loss and business tax credit carryforwards may be limited in the future based on certain changes in the ownership interest of significant stockholders.

ASU 2016-09 states that previously unrecognized excess tax benefits related to stock based compensation should be recognized on a modified retrospective basis. As such, the Company increased its U.S. federal and state net operating loss carryovers by approximately \$5.3 million as of January 1, 2017 for previously unrecognized stock based compensation excess tax benefits outstanding as of the beginning of the period. Because the Company maintained a full valuation allowance on its U.S. deferred tax assets at that date, the Company recorded a corresponding increase to the valuation allowance as of January 1, 2017, and the impact of adopting ASU 2016-09 on retained earnings is zero.

In the first quarter of 2017, Repligen Germany GmbH was subject to a tax examination for the years 2012 through 2015. The examination was general in nature, covering all aspects of the subsidiary's operations prior to the Atoll Acquisition on April 1, 2016. There were no material findings as a result of this examination, and the examination was closed by the German tax authorities.

The Company's tax returns are subject to examination by federal, state and international taxing authorities for the following periods:

Jurisdiction	Fiscal years subject to examination
United States – federal and state	2014-2016
Sweden	2011-2016
Germany	2016
Netherlands	2012-2016

14. Fair Value Measurement

In determining the fair value of its assets and liabilities, the Company uses various valuation approaches. The Company employs a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability and are developed based on the best information available in the circumstances. The fair value hierarchy is broken down into three levels based on the source of inputs as follows:

Level 1 – Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access

[Table of Contents](#)

- Level 2 – Valuations based on quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active and models for which all significant inputs are observable, either directly or indirectly
- Level 3 – Valuations based on inputs that are unobservable and significant to the overall fair value measurement

The availability of observable inputs can vary among the various types of financial assets and liabilities. To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for financial statement disclosure purposes, the level in the fair value hierarchy within which the fair value measurement is categorized is based on the lowest level input that is significant to the overall fair value measurement.

The Company's fixed income investments have historically comprised of obligations of U.S. government agencies and corporate marketable securities. These investments have been initially valued at the transaction price and subsequently valued, at the end of each reporting period, utilizing third party pricing services or other market observable data. The pricing services utilize industry standard valuation models, including both income and market based approaches and observable market inputs to determine value. These observable market inputs include reportable trades, benchmark yields, credit spreads, broker/dealer quotes, bids, offers, current spot rates and other industry and economic events. At least annually, the Company validates applicable prices provided by third party pricing services by reviewing their pricing methods and matrices, obtaining market values from other pricing sources, analyzing pricing data in certain instances and confirming that the relevant markets are active.

As of September 30, 2017, the Company had no assets or liabilities for which fair value measurement is either required or has been elected to be applied.

As of December 31, 2016, the Company had accrued liabilities with a fair value of \$6,119,000 related to contingent consideration in connection with the Refine and Atoll business combinations. The contingent consideration related to Refine was based on actual 2016 revenues. The contingent consideration related to Atoll was based on meeting revenue growth targets in 2016. These valuations are Level 3 valuations, as the primary inputs are unobservable. All contingent consideration liabilities were paid in the first quarter of 2017.

The following table provides a rollforward of the fair value of contingent consideration (in thousands):

Balance at December 31, 2016	\$ 6,119
Payments	(6,119)
Balance at September 30, 2017	<u>\$ —</u>

In May 2016, the Company issued \$115 million aggregate principal amount of the Notes due June 1, 2021. Interest is payable semi-annually in arrears on June 1 and December 1 of each year, beginning on December 1, 2016. As of September 30, 2017, the carrying value of the Notes was approximately \$98.2 million, net of unamortized discount, and the fair value of the Notes was approximately \$154.8 million. The fair value of the Notes was determined based on the most recent trade activity of the Notes as of September 30, 2017. These valuations are Level 1 valuations, as the valuations are based on unadjusted quoted prices in active markets that the Company has the ability to access. The Notes are discussed in more detail in Note 11, "Long Term Debt."

There were no re-measurements to fair value during the three months ended September 30, 2017 of financial assets and liabilities that are not measured at fair value on a recurring basis.

15. Commitments and Contingencies

Future minimum rental commitments under the Company's leases as of September 30, 2017 are as follows (in thousands):

	Minimum Rental Commitments
2017 (three months remaining)	\$ 939
2018	3,644
2019	3,367
2020	3,060
2021	2,751
Thereafter	2,319

16. Related Party Transactions

In July 2017, in conjunction with the Spectrum Acquisition, the Board of Directors engaged one of the Company's independent directors to serve as the chairperson of the Spectrum Integration Committee. In this role, this Director will work directly with the Company's executive team on general integration strategy and focus on the integration of Spectrum's operations and commercial organization with the Company. As of September 30, 2017, the Company has accrued approximately \$95,000 of expense related to this director's services.

Additionally, certain facilities leased by Spectrum are owned by the former owner of Spectrum, who currently holds greater than 10% of the Company's outstanding common stock. The lease amounts paid to this shareholder were negotiated in connection with the Spectrum Acquisition. The Company has incurred rent expense totaling \$134,000 for the three-month period ended September 30, 2017 related to these leases.

17. Segment Reporting

The Company views its operations, makes decisions regarding how to allocate resources and manages its business as one operating segment. As a result, the financial information disclosed herein represents all of the material financial information related to the Company's principal operating segment.

The following table represents the Company's total revenue by geographic area (based on the location of the customer):

	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
United States	45%	45%	40%	40%
Sweden	15%	23%	23%	29%
United Kingdom and Ireland	10%	11%	13%	14%
Other	30%	21%	24%	17%
Total	100%	100%	100%	100%

Revenue from significant customers as a percentage of the Company's total revenue is as follows:

	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
GE Healthcare	17%	23%	24%	29%
MilliporeSigma	14%	28%	18%	30%

Significant accounts receivable balances as a percentage of the Company's total trade accounts receivable are as follows:

	September 30, 2017	December 31, 2016
GE Healthcare	20%	26%
MilliporeSigma	11%	8%

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

Overview

We are a bioprocessing-focused, global life sciences company bringing over 30 years of expertise and innovation to our customers. Our mission is to inspire advances in bioprocessing as a trusted partner in the production of biologic drugs that improve human health worldwide.

Focused on delivering cost and process efficiencies, we offer innovative technologies that help set new standards in the way that our customers manufacture biologic drugs. We develop and market a broad range of high-value products and flexible solutions that address critical steps in the production of biologic drugs – principally antibody-based therapeutics, recombinant proteins and vaccines – while ensuring that the highest drug quality and safety standards are upheld.

Since our strategic decision in 2012 to focus fully on building our bioprocessing business, we have expanded and diversified our product offering beyond our core Protein A affinity ligands portfolio, and believe we are well-positioned in the bioprocessing market as single-use and continuous processing technologies are increasingly adopted by biopharmaceutical manufacturers. This expansion has been through a combination of internal innovations and acquisitions. Our Proteins business today includes cell culture growth factors in addition to our longstanding Protein A ligands. In recent years, we have significantly expanded our Chromatography business, which includes our best-in-class OPUS® pre-packed columns as well as our ELISA kits and chromatography resins. In addition, we have established a Filtration business that includes our leading XCell™ ATF and TangenX™ tangential flow filtration (“TFF”) product lines, and with our acquisition of Spectrum, Inc. (“Spectrum”) on August 1, 2017 we added a diverse line of hollow fiber TFF products and systems.

Our team has substantial experience in biomanufacturing and works with industry leaders and customers to develop innovative solutions that address pressure points in the bioproduction process. Our bioprocessing products drive process efficiency, cost and yield improvements for our customers. In upstream processes, our XCell™ ATF filtration devices and cell culture supplements are used in clinical and commercial-stage manufacturing to improve biologic drug yields. In downstream processes, our Protein A ligands are a critical component of Protein A resins used to purify over 70 antibody-based drugs on the market and over 300 drugs in clinical development. Also in downstream processes, our OPUS® pre-packed chromatography columns (PPCs) are used in the purification of clinical-stage biologics, and our TangenX™ flat sheet TFF filtration cassettes are used to concentrate clinical and commercial-stage biologic drugs. Spectrum KrosFlo™ TFF systems are used downstream in ultrafiltration and diafiltration applications as well as microfiltration applications. In perfusion (continuous) processes, Spectrum KrosFlo™ TFF is upstream in cell retention applications.

We manufacture and supply our Protein products, such as Protein A ligands, through long-term agreements with major life sciences companies, such as GE Healthcare and MilliporeSigma, who in turn produce and sell Protein A resins to biopharmaceutical companies and contract manufacturing organizations (“CMOs”). We manufacture and supply our cell culture supplements through a distribution agreement with MilliporeSigma.

We sell our Chromatography and Filtration products directly to biopharmaceutical companies and CMOs. These products are manufactured or assembled internally and marketed globally through a direct commercial organization in the United States (US) and Europe, and through a combination of direct sales and distributors in Asia. Since 2014, we have steadily invested in our global commercial organization to support our growing Chromatography and Filtration businesses; we have added 32 sales, marketing, product management, service and applications personnel to form a 40-person commercial team as of September 30, 2017. The acquisition of Spectrum further expands our commercial organization in the US and Europe, and adds a direct sales presence in Asia Pacific regions.

Our commercial and R&D teams have a track record of launching new products and building new markets for acquired technologies. For example, since acquiring the XCell™ ATF business in 2014, we have expanded its market penetration through increased customer interaction, product extensions and new applications that increase flexibility and convenience for customers, while streamlining their biomanufacturing workflows.

Our acquisitions since 2012 have bolstered our direct-to-customer product offering. In 2014, we acquired our XCell™ ATF line from Refine Technologies LLC. We completed two acquisitions in 2016, acquiring Atoll GmbH (“Atoll”) in April (the “Atoll Acquisition”) and TangenX Technology Corporation (“TangenX”) in December (the “TangenX Acquisition”). The Atoll Acquisition strengthened our Chromatography business by broadening our line of OPUS® pre-packed columns (to include lab- and process development-scale columns) and establishing a customer-facing center in Europe. The TangenX Acquisition strengthened our Filtration business, balancing our existing upstream XCell™ ATF line with a downstream line of TangenX™ Sius™ TFF filtration products. On August 1, 2017, we acquired Spectrum, a leader in bioprocess filtration with expertise in hollow fiber technology based in Rancho Dominguez, California (the “Spectrum Acquisition”). We believe the addition of Spectrum will strengthen our Filtration business and support our flagship XCell™ ATF product line with an extensive consumables portfolio. We also believe the Spectrum Acquisition will help diversify our markets beyond monoclonal antibody manufacturing, into vaccine and recombinant protein production.

[Table of Contents](#)

Our internal innovation has also driven the growth of our direct-to-customer product offerings. Internally, we develop and market our process-scale OPUS[®] pre-packed chromatography columns. Also through internal innovation, we have extended both our OPUS[®] and XCell[™] ATF product lines, to include more size options and technology features to benefit our customers. For example in 2016 we introduced OPUS[®] R, a resin recovery feature on our largest OPUS[®] columns, and we launched a single-use (disposable) alternative to our stainless steel XCell[™] ATF Systems, XCell[™] ATF Single-use. Notably, the Spectrum Acquisition satisfies a strategic goal of owning the hollow fiber filter cartridges that can be used in our XCell[™] ATF devices. Spectrum has historically been a key supplier of these filters to us.

Many of our products are early in their adoption cycle and, together with the expansion of our commercial organization and strategic acquisitions, have contributed to product revenue expansion from \$41.8 million in 2012 to \$104.5 million in 2016. While all product franchises have grown, our diversification strategy has resulted in our direct product sales accounting for approximately 50% of our bioprocessing revenue in 2016, compared to approximately 20% in 2012. To meet increased demand for our products, we have increased and continue to increase the volume and scale of manufacturing at our manufacturing facilities in the United States and Sweden and plan to expand manufacturing capacity at our newly acquired manufacturing facilities in the United States and Germany.

Customers use our products to produce initial quantities of drug for clinical studies, then scale-up to larger volumes as the drug progresses to commercial production following regulatory approval. Detailed specifications for a drug's manufacturing process are included in applications that must be approved by regulators, such as the U.S. Food and Drug Administration ("FDA") and the European Medicines Agency, throughout the clinical trial process and prior to final commercial approval. As a result, products that become part of the manufacturing specifications of a late-stage clinical or commercial process can be very "sticky" due to the costs and uncertainties associated with displacing them.

On August 1, 2017, the Company completed the Spectrum Acquisition for approximately \$122.9 million in cash, 6,153,995 unregistered shares of the Company's common stock totaling \$247.6 million and an estimated working capital adjustment of approximately \$1.0 million for a total purchase price of \$371.5 million, subject to further adjustment based on working capital adjustment provisions, and indemnification obligations of holders of equity securities of Spectrum receiving merger consideration.

Spectrum is a diversified filtration company with a differentiated portfolio of hollow fiber cartridges, bench-top to commercial scale filtration and perfusion systems and a broad portfolio of disposable and single-use solutions. Spectrum's products are primarily used for the filtration, isolation, purification and concentration of monoclonal antibodies, vaccines, recombinant proteins, diagnostic products and cell therapies where the company offers both standard and customized solutions to its bioprocessing customers.

Spectrum's filtration products include its KrosFlo[®] line of hollow-fiber cartridges, TFF systems and single-use flow path consumables, as well as its Spectra/Por[®] portfolio of laboratory dialysis products and its Pro-Connex[®] single-use hollow fiber Module-Bag-Tubing (MBT) sets. Outside of filtration, the company sells its Spectra/Chrom[®] liquid chromatography products for research applications. These bioprocessing products account for the majority of Spectrum revenues. Spectrum also offers a line of operating room products.

Critical Accounting Policies and Estimates

A "critical accounting policy" is one which is both important to the portrayal of our financial condition and results and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. For additional information, please see the discussion of our critical accounting policies in Management's Discussion and Analysis of Financial Condition and Results of Operations and our significant accounting policies in Note 2 to the Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2016.

Results of Operations

Revenues

Revenues for the three- and nine-month periods ended September 30, 2017 and 2016 were as follows:

(in thousands, except percentages)	Three months ended September 30,				Nine months ended September 30,			
	2017	2016	\$ Change	% Change	2017	2016	\$ Change	% Change
Product revenue	\$36,514	\$24,677	\$11,837	48.0%	\$99,516	\$78,942	\$20,574	26.1%
Royalty and other revenue	66	—	66	100.0%	108	—	108	100.0%
Total revenues	<u>\$36,580</u>	<u>\$24,677</u>	<u>\$11,903</u>	48.2%	<u>\$99,624</u>	<u>\$78,942</u>	<u>\$20,682</u>	26.2%

Revenues increased 48.2% and 26.2% in the current three- and nine-month periods, respectively, compared to the corresponding periods in the prior year. This increase was primarily due to increases in orders for our XCell ATF systems and OPUS pre-packed chromatography columns from our key bioprocessing customers, in addition to revenues from the Spectrum Acquisition, Atoll Acquisition and TangenX Acquisition in 2017. Sales of our bioprocessing products are impacted by the timing of orders, development efforts at our customers or end-users and regulatory approvals for biologics that incorporate our products, which may result in significant quarterly fluctuations. Such quarterly fluctuations are expected, but they may not be predictive of future revenue or otherwise indicate a trend.

Costs and operating expenses

Total costs and operating expenses for the three- and nine-month periods ended September 30, 2017 and 2016 were comprised of the following:

(in thousands, except percentages)	Three months ended September 30,				Nine months ended September 30,			
	2017	2016	\$ Change	% Change	2017	2016	\$ Change	% Change
Cost of product revenue	\$19,987	\$11,242	\$ 8,745	77.8%	\$47,913	\$34,955	\$12,958	37.1%
Research and development	2,001	1,886	115	6.1%	5,603	5,316	287	5.4%
Selling, general and administrative	14,998	7,127	7,871	110.4%	35,365	22,286	13,079	58.7%
Contingent consideration – fair value adjustments	—	675	(675)	(100.0%)	—	3,317	(3,317)	(100.0%)
Total costs and operating expenses	<u>\$36,986</u>	<u>\$20,930</u>	<u>\$16,056</u>	76.7%	<u>\$88,881</u>	<u>\$65,874</u>	<u>\$23,007</u>	34.9%

Cost of product revenue increased 77.8% and 37.1% in the current three- and nine-month periods, respectively, compared to the corresponding periods in the prior year. This increase is primarily due to the increased product revenues noted above; the impact of the Spectrum Acquisition, the Atoll Acquisition and the TangenX Acquisition; and product mix. Gross margins may fluctuate in the fourth quarters of 2017 based on expected production volume and product mix.

Research and development expenses increased 6.1% and 5.4% in the current three- and nine-month periods, respectively, compared to the corresponding periods in the prior year. This increase is primarily related to the timing and scale of our various bioprocessing product development projects as well as costs related to continuing projects assumed as part of the Spectrum Acquisition. Expenses generally include personnel costs, external development costs, supplies and other expenses related to our new products in development.

Selling, general and administrative expenses increased 110.4% and 58.7% in the current three- and nine-month periods, respectively, compared to the corresponding periods in the prior year. This increase is primarily due to additional expense resulting from our acquisitions of Spectrum, Atoll and TangenX, the continued buildout of our administrative infrastructure to support future growth, and the continued expansion of our customer-facing activities to drive sales of our bioprocessing products.

Contingent consideration fair value adjustments were approximately \$675,000 and \$3,317,000 for the three- and nine-month periods ended September 30, 2016. These fair value adjustments were related to the increased probability of achieving the 2016 sales milestone under the Refine acquisition agreement. There was no such expense in 2017, as the contingent consideration periods for the Atoll Acquisition and Refine Acquisition ended in 2016.

[Table of Contents](#)

Investment income

Investment income for the three- and nine-month periods ended September 30, 2017 and 2016 was as follows:

(in thousands, except percentages)	Three months ended September 30,				Nine months ended September 30,			
	2017	2016	\$ Change	% Change	2017	2016	\$ Change	% Change
Investment income	\$102	\$ 97	\$ 5	5.2%	\$308	\$234	\$ 74	31.6%

Investment income includes income earned on invested cash balances. Increases in investment income in the current three- and nine-month periods, respectively, compared to the corresponding periods in the prior year are mainly attributable to higher average interest rates and higher average invested cash balances related to the receipt of proceeds from the issuance of our 2.125% Convertible Senior Notes due 2021 (the “Notes”) in May 2016 and our issuance of common stock in July 2017.

Interest expense

Interest expense for the three- and nine-month periods ended September 30, 2017 and 2016 was as follows:

(in thousands, except percentages)	Three months ended September 30,				Nine months ended September 30,			
	2017	2016	\$ Change	% Change	2017	2016	\$ Change	% Change
Interest expense	\$(1,618)	\$(1,555)	\$ (63)	4.1%	\$(4,804)	\$(2,198)	\$ (2,606)	118.6%

Increases in interest expense in the current three- and nine-month periods, respectively, compared to the corresponding periods in the prior year are attributable to interest expense related to the issuance of the Notes in May 2016.

Other income (expense)

Other income (expense) for the three- and nine-month periods ended September 30, 2017 and 2016 was as follows:

(in thousands, except percentages)	Three months ended September 30,				Nine months ended September 30,			
	2017	2016	\$ Change	% Change	2017	2016	\$ Change	% Change
Other income (expense)	\$(100)	\$(75)	\$ (25)	33.3%	\$(548)	\$(979)	\$ 431	44.0%

Changes in other income (expense) in the current three- and nine-month periods, respectively, compared to the corresponding periods in the prior year are primarily attributable to foreign currency losses related to amounts due from non-Swedish kronor-based customers and cash balances denominated in U.S. dollars and British pounds held by our Sweden operations.

Income tax (benefit) provision

Income tax (benefit) provision for the three- and nine-month periods ended September 30, 2017 and 2016 was as follows:

(in thousands, except percentages)	Three months ended September 30,				Nine months ended September 30,			
	2017	2016	\$ Change	% Change	2017	2016	\$ Change	% Change
Income tax provision	\$(6,691)	\$1,059	\$ (7,750)	(731.8%)	\$(10,476)	\$3,474	\$ (13,950)	(401.6%)

For the three- and nine-month periods ended September 30, 2017, we had losses before taxes of \$(2,022,000) and income before taxes of \$5,699,000, respectively, and recorded a tax benefit of \$(6,691,000) and \$(10,476,000), respectively. The effective tax rate was 330.9% and (183.8%) for the three- and nine-month periods ended September 30, 2017, respectively, and is based upon the estimated income for the year and the composition of the income in different jurisdictions. The effective tax rate was lower than the U.S. statutory tax rate of 34% primarily due to a benefit of approximately \$6,611,000 related to the release of the valuation allowance on deferred tax assets held in the U.S. resulting from the Spectrum Acquisition in the third quarter of 2017 and a benefit of approximately \$5,625,000 related to the reduction of the Company’s valuation allowance on its deferred tax assets resulting from the sale of certain intellectual property to Repligen Sweden AB in the second quarter of 2017.

For the three- and nine-month periods ended September 30, 2016, we had income before taxes of \$2,214,000 and \$10,125,000, respectively, and recorded a tax provision of \$1,059,000 and \$3,474,000, respectively. The effective tax rate was 47.8% and 34.3% for the three- and nine-month periods ended September 30, 2016, respectively, and is based upon the estimated income for the year and the composition of the income in different jurisdictions. The effective tax rate in the prior year is lower than the U.S. statutory tax rate primarily due to lower statutory tax rates in foreign jurisdictions and the tax treatment of contingent consideration expense and related payments.

Non-GAAP Financial Measures

We provide non-GAAP adjusted income from operations, adjusted net income, and adjusted EBITDA as supplemental measures to GAAP measures regarding our operating performance. A detailed explanation and a reconciliation of each non-GAAP financial measure to its most comparable GAAP financial measure are provided below.

We include this financial information because we believe these measures provide a more accurate comparison of our financial results between periods and more accurately reflect how management reviews its financial results. We excluded the impact of certain acquisition-related items because we believe that the resulting charges do not accurately reflect the performance of our ongoing operations for the period in which such charges are incurred.

In the first quarter of 2017, we began deducting intangible amortization in our presentation of non-GAAP financial metrics. The non-GAAP financial metrics included in our Quarterly Reports on Form 10-Q for the quarter ended September 30, 2016 do not deduct intangible amortization. However, we have included a deduction for the non-GAAP financial metrics below for the three- and nine-month periods ended September 30, 2016 for comparability. As a result, the non-GAAP financial metrics below differ from those included in our Quarterly Reports on Form 10-Q for the quarter ended September 30, 2016.

Adjusted Income from Operations

Adjusted income from operations is measured by taking income from operations as reported in accordance with GAAP and excluding acquisition and integration costs, inventory step-up charges, amortization of intangible assets and contingent consideration expense booked through our consolidated statements of comprehensive income.

The following is a reconciliation of income from operations in accordance with GAAP to adjusted income from operations for the three- and nine-month periods ended September 30, 2017 and 2016 (in thousands):

	<u>Three months ended September 30,</u>		<u>Nine months ended September 30,</u>	
	<u>2017</u>	<u>2016</u>	<u>2017</u>	<u>2016</u>
GAAP income (loss) from operations	\$ (406)	\$ 3,747	\$ 10,743	\$ 13,068
Non-GAAP adjustments to net income:				
Acquisition and integration costs	3,378	144	6,165	1,262
Inventory step-up charges	2,720	—	2,720	—
Intangible amortization	1,993	552	3,476	1,484
Contingent consideration – fair value adjustments	—	675	—	3,317
Non-GAAP adjusted income from operations	<u>\$ 7,685</u>	<u>\$ 5,118</u>	<u>\$ 23,104</u>	<u>\$ 19,131</u>

Adjusted Net Income

Adjusted net income is measured by taking net income as reported in accordance with GAAP and excluding acquisition and integration costs, inventory step-up charges, amortization of intangible assets and related tax effects, contingent consideration expense, non-cash interest expense and the partial release of the valuation allowance on our deferred tax assets booked through our consolidated statements of comprehensive income.

[Table of Contents](#)

The following is a reconciliation of net income in accordance with GAAP to adjusted net income for the three-month periods ended September 30, 2017 and 2016:

	Three Months Ended September 30,			
	2017		2016	
	(in thousands) Amount	Fully Diluted Earnings per Share	(in thousands) Amount	Fully Diluted Earnings per Share
GAAP net income	\$ 4,669	\$ 0.11	\$ 1,155	\$ 0.03
Non-GAAP adjustments to net income:				
Acquisition and integration costs	3,378	0.08	144	0.00
Inventory step-up charges	2,720	0.06	—	—
Contingent consideration – fair value adjustments	—	—	675	0.02
Intangible amortization	1,993	0.05	552	0.02
Non-cash interest expense	1,002	0.02	938	0.03
Tax effect of intangible amortization and acquisition costs	(577)	(0.01)	(104)	(0.00)
Release of valuation allowance on deferred tax assets	(6,611)	(0.16)	—	—
Non-GAAP adjusted net income	<u>\$ 6,574</u>	<u>\$ 0.15</u>	<u>\$ 3,360</u>	<u>\$ 0.10</u>

The following is a reconciliation of net income in accordance with GAAP to non-GAAP adjusted net income for the nine-month periods ended September 30, 2017 and 2016:

	Nine Months Ended September 30,			
	2017		2016	
	(in thousands) Amount	Fully Diluted Earnings per Share	(in thousands) Amount	Fully Diluted Earnings per Share
GAAP net income	\$ 16,175	\$ 0.43	\$ 6,651	\$ 0.20
Non-GAAP adjustments to net income:				
Acquisition and integration costs	6,165	0.16	1,262	0.04
Inventory step-up charges	2,720	0.07	—	—
Contingent consideration – fair value adjustments	—	—	3,317	0.10
Intangible amortization	3,476	0.09	1,484	0.04
Non-cash interest expense	2,958	0.08	1,320	0.04
Tax effect of intangible amortization and acquisition costs	(781)	(0.02)	(313)	(0.01)
Release of valuation allowance on deferred tax assets	(12,236)	(0.33)	—	—
Non-GAAP adjusted net income	<u>\$ 18,477</u>	<u>\$ 0.49</u>	<u>\$ 13,721</u>	<u>\$ 0.40</u>

Per share totals may not add due to rounding.

Adjusted EBITDA

Adjusted EBITDA is measured by taking net income as reported in accordance with GAAP, excluding investment income, interest expense, taxes, depreciation and amortization, and excluding acquisition and integration costs, inventory step-up charges and contingent consideration expenses booked through our consolidated statements of comprehensive income.

[Table of Contents](#)

The following is a reconciliation of net income in accordance with GAAP to adjusted EBITDA for the three- and nine-month periods ended September 30, 2017 and 2016 (in thousands):

	<u>Three months ended September 30,</u>		<u>Nine months ended September 30,</u>	
	<u>2017</u>	<u>2016</u>	<u>2017</u>	<u>2016</u>
GAAP net income	\$ 4,669	\$ 1,155	\$ 16,175	\$ 6,651
Non-GAAP EBITDA adjustments to net income:				
Investment income	(102)	(97)	(308)	(234)
Interest expense	1,618	1,555	4,804	2,198
Tax provision	(6,691)	1,059	(10,476)	3,474
Depreciation	1,130	824	2,988	2,360
Amortization	1,993	552	3,476	1,484
EBITDA	2,617	5,048	16,659	15,933
Other non-GAAP adjustments:				
Acquisition and integration costs	3,378	144	6,165	1,262
Inventory step-up charges	2,720	—	2,720	—
Contingent consideration – fair value adjustments	—	675	—	3,317
Adjusted EBITDA	<u>\$ 8,715</u>	<u>\$ 5,867</u>	<u>\$ 25,544</u>	<u>\$ 20,512</u>

Liquidity and Capital Resources

We have financed our operations primarily through revenues derived from product sales, research grants, proceeds and royalties from license arrangements, a litigation settlement, sales of equity securities and issuance of convertible debt. Our revenue for the foreseeable future will primarily be limited to our bioprocessing product revenue.

At September 30, 2017, we had cash and cash equivalents of \$159,666,000 compared to cash and marketable securities of \$141,780,000 at December 31, 2016. A deposit for leased office space of \$450,000 is classified as restricted cash and is not included in cash and marketable securities totals as of September 30, 2017 and December 31, 2016.

In July 2017, we completed a public offering in which 2,807,017 shares of our common stock were sold to the public at a price of \$42.75 per share. The underwriters were granted an option, which they exercised in full, to purchase an additional 421,052 shares of our common stock. The total proceeds from this offering, net of underwriting discounts, commissions and other offering expenses, totaled approximately \$129.3 million.

On August 1, 2017, we completed our acquisition of Spectrum for approximately \$122.9 million in cash and 6,153,995 unregistered shares of the Company's common stock.

During the third quarter of 2017, the closing price of the Company's common stock exceeded 130% of the conversion price of the Notes for more than 20 trading days of the last 30 consecutive trading days of the quarter. As a result, the Notes are convertible at the option of the holders of the Notes during the fourth quarter of 2017. As a result, the Notes with a face value of \$115 million and a carrying value of \$98.2 million are classified as current liabilities on the Company's consolidated balance sheet as of September 30, 2017. It is the Company's policy and intent to settle the face value of the Notes in cash and any excess conversion premium in shares of our common stock. As of the date of this filing, none of the Notes have been converted by the holders of such Notes.

Operating activities

For the nine-month period ended September 30, 2017, our operating activities provided cash of \$2,233,000 reflecting net income of \$16,175,000 and non-cash charges totaling \$1,115,000 primarily related to depreciation, amortization, non-cash interest expense, deferred tax expense and stock-based compensation charges. An increase in accounts receivable consumed \$8,472,000 of cash, and was primarily due to the increase in revenues and timing of cash receipts from customers. Payments of accrued liabilities consumed \$6,089,000 of cash, and were mainly due to the payment of contingent consideration to Refine and Atoll related to 2016 sales milestones and the payment of certain Spectrum liabilities in the third quarter of 2017. The remaining cash flow provided by operations resulted from net unfavorable changes in various other working capital accounts.

For the nine-month period ended September 30, 2016, our operating activities provided cash of \$5,567,000 reflecting net income of \$6,651,000 and non-cash charges totaling \$12,148,000 including depreciation, amortization, non-cash interest expense, stock-based compensation charges, deferred tax expenses and the revaluation of contingent consideration. An increase in accounts receivable consumed \$3,270,000 of cash, and was primarily due to the timing of cash receipts from customers. An increase in inventories

[Table of Contents](#)

consumed \$6,457,000 of cash to support future revenues. Decreases in accounts payable consumed \$1,918,000 of cash, and were due primarily due to purchasing activity and timing of cash payments to vendors. Payments of accrued liabilities consumed \$2,389,000 of cash, and was mainly due to the payment of contingent consideration to Refine related to 2015 sales milestones.

Investing activities

Our investing activities consumed \$97,075,000 of cash for the nine-month period ended September 30, 2017, primarily due to the payment of cash consideration of \$112,941,000 (net of cash received) for the Spectrum Acquisition and \$3,686,000 used for fixed asset additions, partially offset by net redemptions of marketable securities of \$19,552,000. For the nine-month period ended September 30, 2016, our investing activities consumed \$13,878,000 for the nine-month period ended September 30, 2016. On April 1, 2016 we paid approximately \$8.8 million (net of cash received) as cash consideration for the acquisition of Atoll, \$3,462,000 used for fixed asset additions and net purchases of marketable securities of \$1,694,000.

Financing activities

For the nine-month period ended September 30, 2017, our financing activities provided \$129,642,000 of cash. In July 2017, we completed a public offering in which 2,807,017 shares of our common stock were sold to the public at a price of \$42.75 per share. The underwriters were granted an option, which they exercised in full, to purchase an additional 421,052 shares of our common stock. The total proceeds from this offering, net of underwriting discounts, commissions and other offering expenses, totaled approximately \$129.3 million. Proceeds from stock option exercises in the nine-month period ended September 30, 2017 were \$2,035,000, partially offset by contingent consideration payments of \$1,702,000 related to the initial valuation of the likelihood that the 2016 XCell™ ATF sales milestones and Atoll revenue growth milestones would be achieved. For the nine-month period ended September 30, 2016, our financing activities provided \$112,202,000 of cash. In May 2016, we received net proceeds of \$111.1 million from the issuance of the Notes. Proceeds from exercises of stock options totaling \$1,630,000 were partially offset by contingent consideration payments of \$498,000 which stemmed from the initial valuation of the likelihood that the 2015 ATF sales milestone would be achieved.

We do not currently use derivative financial instruments.

Working capital decreased by approximately \$50,330,000 to \$112,748,000 at September 30, 2017 from \$163,078,000 at December 31, 2016 due to the various changes noted above as well as the reclassification of the Notes to current liabilities from long term liabilities, as these Notes are convertible at the option of the holders of these Notes in the fourth quarter of 2017.

Our future capital requirements will depend on many factors, including the following:

- the expansion of our bioprocessing business;
- the ability to sustain sales and profits of our bioprocessing products;
- market acceptance of our new products;
- our ability to acquire additional bioprocessing products;
- the resources required to successfully integrate the acquisitions of Refine and Atoll and recognize expected synergies;
- our identification and execution of strategic acquisitions or business combinations;
- the scope of and progress made in our research and development activities;
- the extent of any share repurchase activity;
- the election of any Note holders to convert their Notes during an eligible period; and
- the success of any proposed financing efforts.

Absent acquisitions of additional businesses, products, product candidates or intellectual property, we believe our current cash balances are adequate to meet our cash needs for at least twelve months from the date of this filing, even if all of the Notes are converted by the holders of those Notes in the fourth quarter of 2017. We expect operating expenses to increase as we integrate Spectrum into our business, continue to develop and expand our bioprocessing product lines and expand our commercial capabilities for the foreseeable future. Our future capital requirements may include, but are not limited to, purchases of property, plant and equipment, the acquisition of additional bioprocessing products and technologies to complement our existing manufacturing capabilities, continued investment in our intellectual property portfolio and future repayment of convertible debt.

We plan to continue to invest in our bioprocessing business and in key research and development activities associated with the development of new bioprocessing products. We actively evaluate various strategic transactions on an ongoing basis, including monetizing existing assets and licensing or acquiring complementary products, technologies or businesses that would complement our

[Table of Contents](#)

existing portfolio of development programs. We continue to seek to acquire such potential assets that may offer us the best opportunity to create value for our shareholders. In order to acquire such assets, we may need to seek additional financing to fund these investments. This may require the issuance or sale of additional equity or debt securities. The sale of additional equity may result in additional dilution to our stockholders. Should we need to secure additional financing to acquire a product, fund future investment in research and development, or meet our future liquidity requirements, we may not be able to secure such financing, or obtain such financing on favorable terms because of the volatile nature of the biotechnology marketplace.

Off-Balance Sheet Arrangements

We do not have any special purpose entities or off-balance sheet financing arrangements as of September 30, 2017.

Cautionary Statement Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). The forward-looking statements in this Quarterly Report on Form 10-Q do not constitute guarantees of future performance. Investors are cautioned that statements in this Quarterly Report on Form 10-Q which are not strictly historical statements, including, without limitation, express or implied statements or guidance regarding current or future financial performance and position, potential impairment of future earnings, management’s strategy, plans and objectives for future operations or acquisitions, product development and sales, litigation strategy, product candidate research, development and regulatory approval, selling, general and administrative expenditures, intellectual property, development and manufacturing plans, availability of materials and product and adequacy of capital resources and financing plans constitute forward-looking statements. Such forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated, including, without limitation, risks associated with: the success of current and future collaborative or supply relationships, including our agreements with BioMarin, GE Healthcare and MilliporeSigma, our ability to successfully grow our bioprocessing business, including as a result of acquisitions, commercialization or partnership opportunities, and our ability to develop and commercialize products, our ability to obtain required regulatory approvals, our compliance with all Food and Drug Administration regulations, our ability to obtain, maintain and protect intellectual property rights for our products, the risk of litigation regarding our patent and other intellectual property rights, the risk of litigation with collaborative partners, our limited sales and marketing experience and capabilities, our limited manufacturing capabilities and our dependence on third-party manufacturers and value-added resellers, our ability to hire and retain skilled personnel, the market acceptance of our products, reduced demand for our products that adversely impacts our future revenues, cash flows, results of operations and financial condition, our ability to compete with larger, better financed life sciences companies, our history of losses and expectation of incurring losses, our ability to generate future revenues, our ability to successfully integrate Refine, Atoll, TangenX and Spectrum, our ability to raise additional capital to fund potential acquisitions, our volatile stock price, and the effects of our anti-takeover provisions. Further information on potential risk factors that could affect our financial results are included in the filings made by us from time to time with the Securities and Exchange Commission including under the section entitled “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2016 and in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest rate risk

We have historically invested funds in U.S. Government and agency securities. As a result, we have been exposed to potential loss from market risks that may occur as a result of changes in interest rates, changes in credit quality of the issuer or otherwise. As of September 30, 2017, we do not have any such investments; however, we may seek to invest funds in similar investment vehicles in the future, as specified in our investment policy guidelines. Our investment policy limits the amount of our credit exposure to any one issuer, (with the exception of U.S. agency obligations) and type of instrument.

Foreign exchange risk

The reporting currency of the Company is U.S. dollars, and the functional currency of each of our foreign subsidiaries is its respective local currency. Our foreign currency exposures include the Swedish kronor, Euro, British pound, Chinese yuan, Japanese yen, Singapore dollar, South Korean won and Indian rupee; of these, the primary foreign currency exposures are the Swedish kronor, Euro and British pound. Exchange gains or losses resulting from the translation between the transactional currency and the functional currency are included in net income. Fluctuations in exchange rates may adversely affect our results of operations, financial position and cash flows. We currently do not seek to hedge this exposure to fluctuations in exchange rates.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

The Company's management, with the participation of the principal executive officer and the principal financial officer, has evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act") as of the end of the period covered by this report. Based on such evaluation, the principal executive officer and principal financial officer have concluded that, as of the end of such period, the Company's disclosure controls and procedures were effective in ensuring that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, on a timely basis, and is accumulated and communicated to the Company's management, including the Company's principal executive officer and the Company's principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control

We acquired Spectrum LifeSciences, LLC ("Spectrum") on August 1, 2017. The financial results of Spectrum are included in our unaudited condensed consolidated financial statements as of September 30, 2017 and for the quarter then ended. The Spectrum business represented approximately 57% of our total assets as of September 30, 2017 and approximately \$7.6 million of revenue and (\$2.0) million of net loss, respectively, for the quarter then ended. As this acquisition occurred in the third quarter of 2017, the scope of our assessment of our internal control over financial reporting does not include Spectrum. This exclusion is in accordance with the SEC's general guidance that an assessment of a recently acquired business may be omitted from our scope in the year of acquisition.

Additionally, on December 14, 2016, we completed our acquisition of TangenX Technology Corporation ("TangenX"). On June 30, 2017 we legally merged TangenX into Repligen Corporation. We continue to integrate TangenX into our control environment, internal control process and procedures to conform to those of Repligen.

Other than the foregoing, there have been no changes in our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Securities Exchange Act Rule 13a-15 or Rule 15d-15 that occurred in the three months ended September 30, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, we may be subject to legal proceedings and claims in the ordinary course of business. We are not currently aware of any such proceedings or claims that we believe will have, individually or in the aggregate, a material adverse effect on our business, financial condition or results of operations.

ITEM 1A. RISK FACTORS

The matters discussed in this Quarterly Report on Form 10-Q include forward-looking statements that involve risks or uncertainties. These statements are neither promises nor guarantees, but are based on various assumptions by management regarding future circumstances, over many of which Repligen has little or no control. A number of important risks and uncertainties, including those identified under the caption “Risk Factors” in Item 1A in our Annual Report on Form 10-K for the year ended December 31, 2016 and subsequent filings as well as risks and uncertainties discussed elsewhere in this Quarterly Report on Form 10-Q, could cause our actual results to differ materially from those in the forward-looking statements. There are no material changes to the Risk Factors described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 and our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Pursuant to the Agreement and Plan of Merger and Reorganization described in Note 2 to Condensed Consolidated Financial Statements, on August 1, 2017, the Company issued 6,153,995 unregistered shares of the Company’s common stock valued at \$247.6 million as part of the consideration for the Company’s acquisition of Spectrum. The issuance is not registered under the Securities Act of 1933, as amended (the “Securities Act”), in reliance upon the exemption from registration provided by Rule 506(b) of Regulation D.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

(a) Exhibits

Exhibit Number	Document Description
3.1	Restated Certificate of Incorporation, dated September 30, 1992 and amended September 17, 1999 (filed as Exhibit 3.1 to Repligen Corporation’s Quarterly Report on Form 10-Q for the quarter ended September 30, 1999 and incorporated herein by reference).
3.2	Certificate of Amendment to the Certificate of Incorporation of Repligen Corporation, effective as of May 16, 2014 (filed as Exhibit 3.1 to Repligen Corporation’s Current Report on Form 8-K filed on May 19, 2014 and incorporated herein by reference).
3.3	Second Amended and Restated Bylaws (filed as Exhibit 3.1 to Repligen Corporation’s Current Report on Form 8-K filed on May 23, 2017 and incorporated herein by reference).

[Table of Contents](#)

<u>Exhibit Number</u>	<u>Document Description</u>
31.1 +	Rule 13a-14(a)/15d-14(a) Certification.
31.2 +	Rule 13a-14(a)/15d-14(a) Certification.
32.1 *	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101+	The following materials from Repligen Corporation on Form 10-Q for the quarterly period ended September 30, 2017, formatted in Extensible Business Reporting Language (xBRL): (i) Condensed Consolidated Statements of Comprehensive Income (Loss), (ii) Condensed Consolidated Balance Sheets, (iii) Condensed Consolidated Statements of Cash Flows, and (iv) Notes to Condensed Consolidated Financial Statements, tagged as blocks of text.

+ Filed herewith.
* Furnished herewith.

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.

REPLIGEN CORPORATION

Date: November 9, 2017

By: /s/ TONY J. HUNT

Tony J. Hunt
President and Chief Executive Officer
(Principal executive officer)
Repligen Corporation

Date: November 9, 2017

By: _____ /s/ J ON S NODGRES

Jon Snodgres
Chief Financial Officer
(Principal financial officer)
Repligen Corporation

CERTIFICATION

I, Tony J. Hunt, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Repligen Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; 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 9, 2017

/s/ TONY J. HUNT

Tony J. Hunt
President and Chief Executive Officer
(Principal executive officer)

CERTIFICATION

I, Jon Snodgres, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Repligen Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; 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 9, 2017

/s/ J ON S NODGRES

Jon Snodgres
Chief Financial Officer
(Principal financial officer)

**CERTIFICATION 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 Repligen Corporation (the “Company”) on Form 10-Q for the period ending September 30, 2017 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), the undersigned officers of the Company hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge, that:

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

Date: November 9, 2017

By: /s/ T ONY J. H UNT

Tony J. Hunt
Chief Executive Officer and President
(Principal executive officer)

Date: November 9, 2017

By: /s/ J ON S NODGRES

Jon Snodgres
Chief Financial Officer
(Principal financial officer)

* This certification shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.