

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

FORM 10-Q

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

For the quarterly period ended March 31, 2022

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)

41 Seyon Street, Bldg. 1, Suite 100
Waltham, MA
(Address of Principal Executive Offices)

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

02453
(Zip Code)

(781) 250-0111
Registrant's Telephone Number, Including Area Code

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.01 per share	RGEN	The Nasdaq Global Select Market

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

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

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

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

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

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

The number of shares outstanding of the registrant’s common stock on April 25, 2022 was 55,433,161.

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PART I – FINANCIAL INFORMATION

ITEM 1. Financial Statements

REPLIGEN CORPORATION
CONSOLIDATED BALANCE SHEETS
(Unaudited, amounts in thousands, except share data)

	March 31, 2022	December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 584,640	\$ 603,814
Accounts receivable, net of reserves of \$1,364 and \$1,417 at March 31, 2022 and December 31, 2021, respectively	122,435	117,420
Inventories, net	213,775	184,494
Prepaid expenses and other current assets	23,939	25,949
Total current assets	944,789	931,677
Noncurrent assets:		
Property, plant and equipment, net	147,627	124,964
Intangible assets, net	329,928	337,274
Goodwill	859,488	860,362
Deferred tax assets	1,611	1,903
Operating lease right of use assets	99,750	101,559
Other noncurrent assets	631	615
Total noncurrent assets	1,439,035	1,426,677
Total assets	<u>\$ 2,383,824</u>	<u>\$ 2,358,354</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 38,280	\$ 36,203
Operating lease liability	9,882	8,303
Current contingent consideration	27,790	—
Accrued liabilities	65,114	75,498
Convertible senior notes, current portion, net	283,267	255,258
Total current liabilities	424,333	375,262
Noncurrent liabilities:		
Deferred tax liabilities	25,858	33,480
Noncurrent operating lease liability	100,435	102,492
Noncurrent contingent consideration	64,037	94,238
Other noncurrent liabilities	2,760	2,815
Total noncurrent liabilities	193,090	233,025
Total liabilities	617,423	608,287
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock, \$0.01 par value, 5,000,000 shares authorized, no shares issued or outstanding	—	—
Common stock, \$0.01 par value; 80,000,000 shares authorized; 55,429,046 shares at March 31, 2022 and 55,321,457 shares at December 31, 2021 issued and outstanding	554	553
Additional paid-in capital	1,529,144	1,572,340
Accumulated other comprehensive loss	(21,574)	(16,886)
Accumulated earnings	258,277	194,060
Total stockholders' equity	1,766,401	1,750,067
Total liabilities and stockholders' equity	<u>\$ 2,383,824</u>	<u>\$ 2,358,354</u>

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

REPLIGEN CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited, amounts in thousands, except per share data)

	Three Months Ended March 31,	
	2022	2021
Revenue:		
Products	\$ 206,363	\$ 142,737
Royalty and other revenue	37	100
Total revenue	<u>206,400</u>	<u>142,837</u>
Costs and operating expenses:		
Cost of product revenue	82,356	59,747
Research and development	12,155	7,612
Selling, general and administrative	54,300	39,095
Contingent consideration	(2,411)	—
Total costs and operating expenses	<u>146,400</u>	<u>106,454</u>
Income from operations	<u>60,000</u>	<u>36,383</u>
Other income (expenses):		
Investment income	77	52
Interest expense	(292)	(2,754)
Amortization of debt issuance costs	(452)	(352)
Other expenses	(402)	(224)
Other expenses, net	<u>(1,069)</u>	<u>(3,278)</u>
Income before income taxes	58,931	33,105
Income tax provision	11,967	3,655
Net income	<u>\$ 46,964</u>	<u>\$ 29,450</u>
Earnings per share:		
Basic	\$ 0.85	\$ 0.54
Diluted (Note 12)	<u>\$ 0.81</u>	<u>\$ 0.52</u>
Weighted average common shares outstanding:		
Basic	<u>55,353</u>	<u>54,805</u>
Diluted (Note 12)	<u>58,816</u>	<u>56,869</u>
Net income	\$ 46,964	\$ 29,450
Other comprehensive income (loss):		
Foreign currency translation adjustment	(4,688)	(9,579)
Comprehensive income	<u>\$ 42,276</u>	<u>\$ 19,871</u>

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

REPLIGEN CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited, amounts in thousands, except share data)

Three Months Ended March 31, 2022						
	Common Stock			Accumulated Other Comprehensive Loss	Retained Earnings	Total Stockholders' Equity
	Number of Shares	Par Value	Additional Paid-In Capital			
Balance at December 31, 2021	55,321,457	\$ 553	\$ 1,572,340	\$ (16,886)	\$ 194,060	\$ 1,750,067
Impact of the adoption of ASU 2020-06	—	—	(39,070)	—	17,253	(21,817)
Net income	—	—	—	—	46,964	46,964
Issuance of common stock for debt conversion	8	0	(2)	—	—	(2)
Exercise of stock options and vesting of stock units	170,990	2	295	—	—	297
Tax withholding on vesting of restricted stock units	(63,409)	(1)	(12,310)	—	—	(12,311)
Stock-based compensation expense	—	—	7,915	—	—	7,915
Translation adjustment	—	—	—	(4,688)	—	(4,688)
Other	—	—	(24)	—	—	(24)
Balance at March 31, 2022	<u>55,429,046</u>	<u>\$ 554</u>	<u>\$ 1,529,144</u>	<u>\$ (21,574)</u>	<u>\$ 258,277</u>	<u>\$ 1,766,401</u>

Three Months Ended March 31, 2021						
	Common Stock			Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Number of Shares	Par Value	Additional Paid-In Capital			
Balance at December 31, 2020	54,760,837	\$ 548	\$ 1,460,748	\$ 2,085	\$ 65,769	\$ 1,529,150
Net income	—	—	—	—	29,450	29,450
Issuance of common stock for debt conversion	3	0	1	—	—	1
Exercise of stock options and vesting of stock units	138,405	1	507	—	—	508
Stock-based compensation expense	—	—	6,541	—	—	6,541
True-up of costs related to the December 2020 issuance of common stock	—	—	145	—	—	145
Translation adjustment	—	—	—	(9,579)	—	(9,579)
Balance at March 31, 2021	<u>54,899,245</u>	<u>\$ 549</u>	<u>\$ 1,467,942</u>	<u>\$ (7,494)</u>	<u>\$ 95,219</u>	<u>\$ 1,556,216</u>

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

REPLIGEN CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, amounts in thousands)

	Three Months Ended March 31,	
	2022	2021
Cash flows from operating activities:		
Net income	\$ 46,964	\$ 29,450
Adjustments to reconcile net income to net cash provided by operating activities:		
Inventory step-up amortization	-	1,598
Depreciation and amortization	11,834	8,444
Amortization of debt discount and issuance costs	452	2,828
Stock-based compensation expense	7,915	6,541
Deferred income taxes, net	1,045	789
Contingent consideration	(2,411)	—
Other	73	6
Changes in operating assets and liabilities, excluding impact of acquisitions:		
Accounts receivable	(6,269)	(19,779)
Unbilled receivables	11	—
Inventories	(30,037)	(17,025)
Prepaid expenses and other assets	272	(2,414)
Other assets	1,310	538
Accounts payable	2,200	3,725
Accrued expenses	(9,999)	(4,906)
Long-term liabilities	(247)	(533)
Total cash provided by operating activities	23,113	9,262
Cash flows from investing activities:		
Acquisitions, net of cash acquired	—	71
Additions to capitalized software costs	(1,027)	(1,484)
Purchases of property, plant and equipment	(27,204)	(7,584)
Sale of property, plant and equipment	17	—
Total cash used in investing activities	(28,214)	(8,997)
Cash flows from financing activities:		
Proceeds from exercise of stock options	296	508
Payment of tax withholding obligation on vesting of restricted stock	(12,311)	—
Repayment of convertible senior notes	(6)	(1)
Total cash (used in) provided by financing activities	(12,021)	507
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(2,052)	(6,746)
Net decrease in cash, cash equivalents and restricted cash	(19,174)	(5,974)
Cash, cash equivalents and restricted cash, beginning of period	603,814	717,292
Cash and cash equivalents, end of period	\$ 584,640	\$ 711,318
Supplemental disclosure of non-cash investing and financing activities:		
Assets acquired under operating leases	\$ 1,119	\$ 3,182

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

REPLIGEN CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements included herein have been prepared by Repligen Corporation (the “Company”, “Repligen”, “our” or “we”) in accordance with generally accepted accounting principles in the United States (“GAAP”) and pursuant to the rules and regulations of the United States 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 GAAP. These 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, 2021, which was filed with the SEC on February 17, 2022 (“Form 10-K”).

The preparation of financial statements in conformity with 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. The business and economic uncertainty resulting from the novel coronavirus pandemic (“COVID-19”) pandemic has made such estimates more difficult to calculate. Accordingly, actual results could differ from those estimates.

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries, Repligen Sweden AB, Repligen GmbH, Spectrum® LifeSciences LLC and its subsidiaries (“Spectrum”), C Technologies, Inc., ARTeSYN Biosolutions Holdings Ireland Limited (“ARTeSYN”), Polymem S.A. (“Polymem”), Avitide LLC, Newton T&M Corp (“NTM”), Bio-Flex Solutions, L.L.C. (“BioFlex”) and Repligen Singapore Pte. Ltd. All significant intercompany accounts and transactions have been eliminated in consolidation.

The Company made no material changes in the application of its significant accounting policies that were disclosed in its Form 10-K. In the opinion of management, the accompanying unaudited 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. Certain prior year balances have been reclassified to conform to current year presentation.

Recent Accounting Standards Updates

We consider the applicability and impact of all Accounting Standards Updates (“ASUs” or “ASU”) on the Company’s consolidated financial statements. Updates not listed below were assessed and determined to be either not applicable or are expected to have minimal impact on the Company’s consolidated financial position or results of operations. Recently issued ASUs that we feel may be applicable to the Company are as follows:

Recently Issued Accounting Standards Updates – Adopted During the Period

Effective January 1, 2022, the Company adopted ASU 2020-06, “*Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity’s Own Equity (Subtopic 815-40)*” using the modified retrospective method of adoption. ASU 2020-06 simplifies the accounting for convertible debt instruments and convertible preferred stock by reducing the number of accounting models and the number of embedded conversion features that could be recognized separately from the primary contract. Consequently, a convertible instrument will be accounted for as a single liability measured at its amortized cost as long as no other features of such convertible instrument require bifurcation and recognition as derivatives. By removing those separation models, the interest rate of convertible debt instruments will typically be closer to the coupon interest rate when applying the guidance in Topic 835, “*Interest*.” We now account for our 0.375% convertible senior notes due July 15, 2024 (the “2019 Notes”) as a single liability measured at amortized cost. As a result, the adoption of ASU 2020-06 had a material impact on our consolidated financial statements, resulting in adjustments of \$39.1 million, \$17.3 million, and \$27.6 million to the opening balances of additional paid-in capital, retained earnings and convertible senior notes,

current portion, net, respectively, on our consolidated balance sheet as of January 1, 2022. Additionally, due to the adoption of ASU 2020-06, we reversed the remaining balance of the deferred tax liability of \$6.4 million, which was initially recorded in connection with the 2019 Notes. See Note 7, “*Convertible Senior Notes*,” for more information, including modified disclosures as required by ASU 2020-06 upon adoption.

2. Fair Value Measurements

The Company uses various valuation approaches in determining the fair value of its assets and liabilities. 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.
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.

Fair Value Measured on a Recurring Basis

Financial assets and financial liabilities measured at fair value on a recurring basis consist of the following as of March 31, 2022 and December 31, 2021 (amounts in thousands):

As of March 31, 2022				
	Level 1	Level 2	Level 3	Total
Assets:				
Money market accounts	\$ 435,969	\$ —	\$ —	\$ 435,969
Liabilities:				
Short-term contingent consideration	\$ —	\$ —	\$ 27,790	\$ 27,790
Long-term contingent consideration	\$ —	\$ —	\$ 64,037	\$ 64,037
As of December 31, 2021				
	Level 1	Level 2	Level 3	Total
Assets:				
Money market accounts	\$ 460,936	\$ —	\$ —	\$ 460,936
Liabilities:				
Long-term contingent consideration	\$ —	\$ —	\$ 94,238	\$ 94,238

Cash and cash equivalents

As of March 31, 2022 and December 31, 2021, cash and cash equivalents on the Company's consolidated balance sheets included \$436.0 million and \$460.9 million, respectively, in money market accounts. These funds are valued on a recurring basis using Level 1 inputs.

Contingent Consideration – Earnout

On September 20, 2021, the Company completed the acquisition of Avitide (the "Avitide Acquisition"), a privately-held affinity ligand discovery and development company headquartered in Lebanon, New Hampshire. The transaction consisted of upfront payments of \$150.0 million and up to an additional \$125.0 million (undiscounted) in contingent consideration earnout

payments made equally in cash and the Company's common stock over a three-year performance period beginning January 1, 2022 and ending December 31, 2024. Refer to Note 3, "Acquisitions" below for additional information.

A reconciliation of the change in the fair value of contingent consideration - earnout is included in the following table (amounts in thousands):

Balance as of December 31, 2021	\$	94,238
Contingent consideration		(2,411)
Balance as of March 31, 2022	\$	91,827

The recurring Level 3 fair value measurement of our contingent consideration earnout that we expect to be required to settle include the following significant unobservable inputs (amounts in thousands, except percentage data):

Contingent Consideration Earnout	Fair Value as of March 31, 2022	Valuation Technique	Unobservable Input	Range	Weighted Average ⁽¹⁾
Commercialization-based payments	\$ 28,870	Monte Carlo Simulation	Probability of Success	100%	100%
			Earnout Discount Rate	3.2%-4.2%	3.7%
Revenue and Volume-based payments	\$ 62,957	Monte Carlo Simulation	Volatility	26.4%	26.4%
			Revenue & Volume Discount Rate	7.9%	7.9%
			Earnout Discount Rate	3.2%-4.2%	3.7%

(1) Unobservable inputs were weighted by the relative fair value of the contingent consideration liability.

The Company estimates the fair value of the contingent consideration earnouts at each subsequent reporting period using a Monte Carlo simulation. Changes in the projected performance of the acquired business could result in a higher or lower contingent consideration obligation in the future.

There were no changes in revenue projections during the three months ended March 31, 2022 that would cause a material change in amounts reported as of March 31, 2022.

Fair Value Measured on a Nonrecurring Basis

During the three months ended March 31, 2022, there were no re-measurements to fair value of financial assets and liabilities that are measured at fair value on a nonrecurring basis.

Convertible Senior Notes

In July 2019, the Company issued \$287.5 million aggregate principal amount of the Company's 2019 Notes. Interest is payable semi-annually in arrears on January 15 and July 15 of each year. The 2019 Notes will mature on July 15, 2024, unless earlier converted or repurchased in accordance with their terms. At March 31, 2022 and December 31, 2021, the carrying value of the 2019 Notes was \$283.3 million and \$255.3 million, respectively, net of unamortized discount and issuance costs, and the fair value of the 2019 Notes was \$490.2 million and \$678.5 million, respectively. The fair value of the 2019 Notes is a Level 1 valuation and was determined based on the most recent trade activity of the 2019 Notes as of March 31, 2022. The 2019 Notes are discussed in more detail in Note 7, "Convertible Senior Notes" to this report.

3. Acquisitions

2021 Acquisitions

Bio-Flex Solutions L.L.C. and Newton T&M Corp.

On November 29, 2021, the Company entered into an Equity Purchase Agreement with BioFlex, NTM and each of Ralph Meola and Jason Nisler, to acquire 100% of the outstanding securities of BioFlex and NTM (collectively, the "NTM Acquisition"). The transaction closed on December 16, 2021.

NTM, which is headquartered in Newton, New Jersey, is the parent company of BioFlex and focuses on manufacturing of products, while BioFlex, also headquartered in Newton, New Jersey, commercializes branded products to biotech customers. The NTM Acquisition complements and expands the Company's filtration offering paths as the industry migrates to single-use flow paths solutions for monoclonal antibody ("mAb"), vaccine and cell and gene therapy ("C>") applications, with a focus on single-use fluid management components, including single-use clamps, adapters, end caps and hose assemblies. The NTM Acquisition streamlines and increases control over many components in the Company's single-use supply chain which ultimately should drive reduced lead-times for Repligen customers in the coming years.

Consideration Transferred

The NTM Acquisition was accounted for as a purchase of businesses under ASC 805, "*Business Combinations*" and the Company engaged a third-party valuation firm to assist with the valuation of the business acquired. Under the terms of the Equity Purchase Agreement, all outstanding shares of capital stock of BioFlex were acquired for consideration with a value totaling \$31.8 million, which includes \$3.0 million deposited into an escrow against which the Company may make claims for indemnification.

Under the acquisition method of accounting, the assets acquired and liabilities assumed of BioFlex 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 is estimated to be \$4.4 million, the fair value of the intangible assets acquired is estimated to be \$17.2 million, and the residual goodwill is estimated to be \$10.2 million. The estimated consideration and preliminary purchase price information has been prepared using a preliminary valuation. Acquisition-related costs are not included as a component of consideration transferred but are expensed in the periods in which costs are incurred. The Company has incurred \$1.2 million of transaction and integration costs associated with the NTM Acquisition from the date of acquisition to March 31, 2022, with \$0.9 million of transaction and integration costs incurred during the three months ended March 31, 2022. The transaction costs are included in operating expenses in the consolidated statements of comprehensive income for the period ended March 31, 2022.

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.

Fair Value of Net Assets Acquired

The preliminary allocation of purchase price is based on the fair value of assets acquired and liabilities assumed as of the acquisition date, based on the preliminary valuation. The purchase accounting for this acquisition is not finalized. As additional information becomes available, the Company may further revise its preliminary purchase price allocation during the remainder of the measurement period. Any such revisions or changes may have a material impact on our accounting treatment of the NTM Acquisition. The final allocation may include changes to: (1) inventory; (2) deferred tax assets, net; (3) allocations to intangible assets such as trademark and tradename, developed technology and customer relationships as well as goodwill; (4) final consideration paid related to working capital adjustments; and (5) other assets and liabilities.

The components and estimated allocation of the purchase price consist of the following (amounts in thousands):

Cash and cash equivalents	\$	2,870
Accounts receivable		1,408
Inventory		741
Prepaid expenses and other current assets		126
Property and equipment		34
Operating lease right of use asset		1,034
Customer relationships		13,240
Developed technology		3,540
Trademark and tradename		310
Non-competition agreements		60
Goodwill		10,184
Long term deferred tax asset		111
Accounts payable		(224)
Accrued liabilities		(578)
Operating lease liability		(1,030)
Operating lease liability, long-term		(3)
Fair value of net assets acquired	\$	31,823

During the first quarter of 2022, the Company recorded net working capital adjustments of approximately \$4,000 related to pre-acquisition liabilities, which is included in goodwill in the table above.

Acquired Goodwill

The goodwill of \$10.2 million represents future economic benefits expected to arise from anticipated synergies from the integration of BioFlex and NTM into the Company. These synergies include certain cost savings, operating efficiencies and other strategic benefits projected to be achieved as a result of the NTM Acquisition. Substantially all of the goodwill recorded is expected to be deductible for income tax purposes.

Intangible Assets

The following table sets forth the components of the identified intangible assets associated with the NTM Acquisition and their estimated useful lives:

	<u>Useful life</u>	<u>Fair Value</u> (Amounts in thousands)
Customer relationships	10 years	\$ 13,240
Developed technology	11 years	3,540
Trademark and tradename	15 years	310
Non-competition agreements	3 years	60
		<u>\$ 17,150</u>

Avitide, Inc.

On September 16, 2021, the Company entered into an Agreement and Plan of Merger and Reorganization ("Avitide Merger Agreement") with Avalon Merger Sub, Inc., a Delaware corporation and a wholly owned direct subsidiary of the Company, Avalon Merger Sub LLC, a Delaware limited liability company and a wholly owned direct subsidiary of the Company, Avitide, Inc. ("Avitide"), a Delaware corporation, and Shareholder Representative Services LLC, a Colorado limited liability company, solely in its capacity as the representative, agent and attorney-in-fact of Avitide's securityholders to purchase Avitide. The transaction closed on September 20, 2021 and on the terms set forth in the Avitide Merger Agreement.

Avitide, which is headquartered in Lebanon, New Hampshire, offers diverse libraries and leading technology in affinity ligand discovery and development resulting in best-in-class ligand discovery and development lead-times. The acquisition gives the Company a new platform for affinity resin development, including C>, and advances and expands the Company's proteins and chromatography franchise to address the unique purification needs of gene therapies and other emerging modalities.

Consideration Transferred

The Avitide Acquisition was accounted for as a purchase of a business under ASC 805, “*Business Combinations*” and the Company engaged a third-party valuation firm to assist with the valuation of the business acquired. Under the terms of the Avitide Merger Agreement, all outstanding shares of capital stock of Avitide were cancelled and converted into the right to receive merger consideration with a value totaling up to \$275.0 million, which consisted of upfront payments in aggregate of \$150.0 million (\$149.4 million, net of cash acquired) and up to an additional \$125.0 million (undiscounted) in contingent consideration earnout payments if certain performance targets are achieved. Total consideration paid also included \$0.8 million deposited into an escrow account against which the Company may make claims for indemnification. The Avitide Acquisition was funded through payment of \$75.0 million in cash, the issuance of 271,096 unregistered shares of the Company’s common stock totaling \$83.0 million and contingent consideration with fair value of approximately \$88.4 million.

Under the acquisition method of accounting, the assets acquired and liabilities assumed of Avitide 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 is estimated to be \$0.4 million, the fair value of the intangible assets acquired is estimated to be \$46.7 million, and the residual goodwill is estimated to be \$199.2 million. The estimated consideration and preliminary purchase price information has been prepared using a preliminary valuation. Acquisition-related costs are not included as a component of consideration transferred but are expensed in the periods in which costs are incurred. The Company has incurred \$3.2 million of transaction and integration costs associated with the Avitide Acquisition from the date of acquisition to March 31, 2022 with \$0.6 million of transaction and integration costs incurred during the three months ended March 31, 2022. The transaction costs are included in operating expenses in the consolidated statements of comprehensive income in this report. During the first quarter of 2022, due to the change in market inputs used to prepare the valuation of the contingent consideration obligation, the Company also recorded a contingent consideration adjustment of (\$2.4) million to the Company’s consolidated statement of comprehensive income. See Note 2, “*Fair Value Measurements*” for more information.

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.

Total consideration transferred is as follows (amounts in thousands):

Cash consideration	\$	74,962
Equity consideration		82,968
Contingent consideration - earnout		88,373
Fair value of net assets acquired	\$	246,303

Fair Value of Net Assets Acquired

The preliminary allocation of purchase price is based on the fair value of assets acquired and liabilities assumed as of the acquisition date, based on the preliminary valuation. As additional information becomes available, the Company may further revise its preliminary purchase price allocation during the remainder of the measurement period (which will not exceed 12 months from September 20, 2021). Any such revisions or changes may have a material impact on our accounting treatment of the Avitide Acquisition. The final allocation may include changes to long-term deferred liabilities and goodwill. Upon conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments will be recorded to our consolidated statement of comprehensive income.

The components and estimated allocation of the purchase price consist of the following (amounts in thousands):

Cash and cash equivalents	\$	572
Accounts receivable		228
Inventory		332
Prepaid expenses and other current assets		114
Property and equipment		1,862
Operating lease right of use asset		3,648
Customer relationships		24,580
Developed technology		20,650
Trademark and tradename		1,210
Non-competition agreements		210
Goodwill		199,245
Accounts payable		(215)
Accrued liabilities		(2,183)
Operating lease liability		(698)
Operating lease liability, long-term		(2,950)
Long term deferred tax liability		(244)
Other liabilities		(58)
Fair value of net assets acquired	\$	246,303

Acquired Goodwill

The goodwill of \$199.2 million represents future economic benefits expected to arise from anticipated synergies from the integration of Avitide. These synergies include certain cost savings, operating efficiencies and other strategic benefits projected to be achieved as a result of the Avitide Acquisition. Substantially all of the goodwill recorded is expected to be nondeductible for income tax purposes.

Intangible Assets

The following table sets forth the components of the identified intangible assets associated with the Avitide Acquisition and their estimated useful lives:

	<u>Useful life</u>	<u>Fair Value</u> (Amounts in thousands)
Customer relationships	13 years	\$ 24,580
Developed technology	15 years	20,650
Trademark and tradename	18 years	1,210
Non-competition agreements	3 years	210
		<u>\$ 46,650</u>

Polymem S.A.

On June 22, 2021, the Company entered into a Stock Purchase Agreement with Polymem S.A., a company organized under the laws of France, and Jean-Michel Espenan and Franc Saux, acting together jointly and severally as the representatives of the sellers for \$47.0 million. The transaction closed on July 1, 2021 (the “Polymem Acquisition”).

Polymem, which is headquartered in, Toulouse, France, is a manufacturer of hollow fiber membranes, membrane modules and systems for industrial and bioprocessing applications. Polymem products will complement and expand the Company’s portfolio of hollow fiber systems and consumables. The acquisition substantially increases Repligen’s membrane and module manufacturing capacity and establishes a world-class center of excellence in Europe to address the accelerating global demand for these innovative products.

Consideration Transferred

The Polymem Acquisition was accounted for as a purchase of a business under ASC 805, “*Business Combinations*” and the Company engaged a third-party valuation firm to assist with the valuation of the business acquired. Payment for the transaction was denominated in Euros but is reflected here in U.S. dollars for presentation purposes based on an exchange rate of 0.8437 as of July 1, 2021, the date of acquisition. Total consideration paid was approximately \$47.0 million, which included

approximately \$4.3 million deposited into an escrow account against which the Company may make claims for indemnification.

Under the acquisition method of accounting, the assets acquired and liabilities assumed of Polymem 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 is approximately \$2.2 million, the fair value of the intangible assets acquired is approximately \$9.1 million, and the residual goodwill is approximately \$35.7 million. Acquisition-related costs are not included as a component of consideration transferred but are expensed in the periods in which costs are incurred. The Company has incurred \$4.7 million of transaction and integration costs associated with the Polymem Acquisition from the date of acquisition to March 31, 2022, with \$1.6 million of transaction and integration costs incurred during the three months ended March 31, 2022. The transaction costs are included in operating expenses in the consolidated statements of comprehensive income for the period ended March 31, 2022.

Fair Value of Net Assets Acquired

The preliminary allocation of purchase price is based on the fair value of assets acquired and liabilities assumed as of the acquisition date, based on the preliminary valuation. As additional information becomes available, the Company may further revise its preliminary purchase price allocation during the remainder of the measurement period (which will not exceed 12 months from July 1, 2021). Any such revisions or changes may have a material impact on our accounting treatment of the Polymem Acquisition.

The components and estimated allocation of the purchase price consist of the following (amounts in thousands):

Cash and cash equivalents	\$	353
Net working capital (excluding cash and inventory step-up)		414
Inventory step-up		543
Operating lease right of use assets		1,424
Property and equipment		3,145
Other assets		41
Developed technology		8,274
Trademark and tradenames		510
Non-compete agreements		312
Goodwill		35,680
Operating lease liability		(1,253)
Long term deferred tax liability		(2,327)
Other long-term liabilities		(143)
Fair value of net assets acquired	\$	46,973

Acquired Goodwill

The goodwill of approximately \$35.7 million represents future economic benefits expected to arise from anticipated synergies from the integration of Polymem. These synergies include certain cost savings, operating efficiencies and other strategic benefits projected to be achieved as a result of the Polymem Acquisition. Substantially all of the goodwill recorded is expected to be nondeductible for income tax purposes.

Intangible Assets

The following table sets forth the components of the identified intangible assets associated with the Polymem Acquisition and their estimated useful lives:

	Useful life	Fair Value
		(Amounts in thousands)
Developed technology	13 years	\$ 8,274
Trademark and tradename	14 years	510
Non-competition agreements	5 years	312
		<u>\$ 9,096</u>

4. Revenue Recognition

The Company generates revenue 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. Under ASC 606, “*Revenue from Contracts with Customers*,” revenue is recognized when, or as, obligations under the terms of a contract are satisfied, which occurs when control of the promised products or services is transferred to customers.

Disaggregation of Revenue

Revenues for the three months ended March 31, 2022 and 2021 were as follows:

	Three Months Ended March 31,	
	2022	2021
	(Amounts in thousands)	
Product revenue	\$ 206,363	\$ 142,737
Royalty and other income	37	100
Total revenue	<u>\$ 206,400</u>	<u>\$ 142,837</u>

When disaggregating revenue, the Company considered all of the economic factors that may affect its revenues. Because all of its revenues are from bioprocessing customers, there are no differences in the nature, timing and uncertainty of the Company’s revenues and cash flows from any of its product lines. However, given that the Company’s revenues are generated in different geographic regions, factors such as regulatory and geopolitical factors within those regions could impact the nature, timing and uncertainty of the Company’s revenues and cash flows. In addition, a significant portion of the Company’s revenue is generated from a small number of customers; therefore, economic factors specific to these customers could impact the nature, timing and uncertainty of the Company’s revenues and cash flows.

Disaggregated revenue from contracts with customers by geographic region and revenue from significant customers can be found in Note 14, “*Segment Reporting*,” included in this report.

For more information regarding our product revenue, see Note 6, “*Revenue Recognition*” included in Part II, Item 8, “*Financial Statements and Supplementary Data*” to our Form 10-K.

Contract Balances from Contracts with Customers

The following table provides information about receivables and deferred revenue from contracts with customers as of March 31, 2022 (amounts in thousands):

	March 31, 2022	December 31, 2021
Balances from contracts with customers only:		
Accounts receivable	\$ 122,435	\$ 117,420
Deferred revenue (included in accrued liabilities in the consolidated balance sheets)	\$ 20,078	\$ 14,848
Revenue recognized during periods presented relating to:		
The beginning deferred revenue balance	\$ 9,063	\$ 13,708

The timing of revenue recognition, billings and cash collections results in the accounts receivable and deferred revenue balances on the Company’s consolidated balance sheets.

A contract asset is created when the Company satisfies a performance obligation by transferring a promised good to the customer. Contract assets may represent conditional or unconditional rights to consideration. The right is conditional and recorded as a contract asset if the Company must first satisfy another performance obligation in the contract before it is entitled to payment from the customer. Contract assets are transferred to billed receivables once the right becomes unconditional. If the Company has the unconditional right to receive consideration from the customer, the contract asset is accounted for as a billed receivable and presented separately from other contract assets. A right is unconditional if nothing other than the passage of time is required before payment of that consideration is due.

When consideration is received, or such consideration is unconditionally due, from a customer prior to transferring goods or services to the customer under the terms of a contract, a contract liability is recorded. Contract liabilities are recognized as revenue after control of the products or services is transferred to the customer and all revenue recognition criteria have been met.

5. Goodwill and Intangible Assets

Goodwill

Goodwill represents the difference between the purchase price and the estimated fair value of identifiable assets acquired and liabilities assumed. Goodwill acquired in a business combination and determined to have an indefinite useful life is not amortized, but instead is tested for impairment at least annually in accordance with ASC 350, “*Intangibles – Goodwill and Other*”. The following table represents the change in the carrying value of goodwill for the three months ended March 31, 2022 (amounts in thousands):

Balance as of December 31, 2021	\$	860,362
Measurement period adjustment - BioFlex		4
Cumulative translation adjustment		(878)
Balance as of March 31, 2022	\$	<u>859,488</u>

During each of the fourth quarters of 2021 and 2020, the Company completed its annual impairment assessments and concluded that goodwill was not impaired in any of those years. The Company has not identified any “triggering” events which indicate an impairment of goodwill in the three months ended March 31, 2022.

Intangible Assets

Intangible assets with a definitive life are amortized over their useful lives using the straight-line method, and the amortization expense is recorded within cost of product revenue and selling, general and administrative expenses in the Company’s statements of comprehensive income. Intangible assets and their related useful lives are reviewed at least annually to determine if any adverse conditions existed 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 the Company’s 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 March 31, 2022.

Indefinite-lived assets are reviewed for impairment at least annually. There has been no impairment of the Company’s intangible assets for the periods presented.

Intangible assets, net consisted of the following at March 31, 2022:

	March 31, 2022			
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Weighted Average Useful Life (in years)
	(Amounts in thousands)			
Finite-lived intangible assets:				
Technology - developed	\$ 145,894	\$ (23,742)	\$ 122,152	17
Patents	240	(240)	—	8
Customer relationships	254,074	(54,813)	199,261	15
Trademarks	7,693	(988)	6,705	19
Other intangibles	2,829	(1,719)	1,110	4
Total finite-lived intangible assets	410,730	(81,502)	329,228	16
Indefinite-lived intangible asset:				
Trademarks	700	—	700	—
Total intangible assets	\$ 411,430	\$ (81,502)	\$ 329,928	

Intangible assets consisted of the following at December 31, 2021:

	December 31, 2021			
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Weighted Average Useful Life (in years)
	(Amounts in thousands)			
Finite-lived intangible assets:				
Technology - developed	\$ 146,097	\$ (21,553)	\$ 124,544	17
Patents	240	(240)	—	8
Customer relationships	254,699	(50,719)	203,980	15
Trademarks	7,699	(877)	6,822	19
Other intangibles	2,839	(1,611)	1,228	4
Total finite-lived intangible assets	411,574	(75,000)	336,574	16
Indefinite-lived intangible asset:				
Trademarks	700	—	700	—
Total intangible assets	\$ 412,274	\$ (75,000)	\$ 337,274	

Amortization expense for finite-lived intangible assets was \$6.6 million and \$5.2 million for each of the three months ended March 31, 2022 and 2021, respectively. As of March 31, 2022, the Company expects to record the following amortization expense in future periods (amounts in thousands):

For the Years Ended December 31,	Estimated Amortization Expense
2022 (remaining nine months)	\$ 19,850
2023	26,350
2024	25,764
2025	25,425
2026	25,425
2027 and thereafter	206,414
Total	<u>\$ 329,228</u>

6. Consolidated Balance Sheet Detail

Inventories, net

Inventories, net consists of the following:

	March 31, 2022	December 31, 2021
	(Amounts in thousands)	
Raw materials	\$ 137,294	\$ 123,321
Work-in-process	8,294	8,119
Finished products	68,187	53,054
Total inventories, net	<u>\$ 213,775</u>	<u>\$ 184,494</u>

Property, Plant and Equipment

Property, plant and equipment consist of the following:

	March 31, 2022	December 31, 2021
	(Amounts in thousands)	
Land	\$ 952	\$ 1,023
Buildings	722	764
Leasehold improvements	56,745	52,505
Equipment	73,450	70,983
Furniture, fixtures and office equipment	10,472	9,137
Computer hardware and software	25,826	22,380
Construction in progress	54,344	38,446
Other	470	443
Total property, plant and equipment	<u>222,981</u>	<u>195,681</u>
Less - Accumulated depreciation	<u>(75,354)</u>	<u>(70,717)</u>
Total property, plant and equipment, net	<u>\$ 147,627</u>	<u>\$ 124,964</u>

Depreciation expenses totaled \$5.2 million and \$3.3 million for each of the three months ended March 31, 2022 and 2021, respectively.

Accrued Liabilities

Accrued liabilities consist of the following:

	March 31, 2022	December 31, 2021
	(Amounts in thousands)	
Employee compensation	\$ 23,579	\$ 42,147
Deferred revenue	20,078	14,848
Income taxes payable	5,908	4,984
Other	15,549	13,519
Total accrued liabilities	<u>\$ 65,114</u>	<u>\$ 75,498</u>

7. Convertible Senior Notes

0.375% Convertible Senior Notes due 2024

On July 19, 2019, the Company issued \$287.5 million aggregate principal pursuant to the 2019 Notes, which includes the underwriters' exercise in full of an option to purchase an additional \$37.5 million aggregate principal amount of 2019 Notes (the "Notes Offering"). The net proceeds of the Notes Offering, after deducting underwriting discounts and commissions and other related offering expenses payable by the Company, were approximately \$278.5 million. The 2019 Notes are senior, unsecured obligations of the Company, and bear interest at a rate of 0.375% per year. Interest is payable semi-annually in arrears on January 15 and July 15 of each year, beginning on January 15, 2020. The 2019 Notes will mature on July 15, 2024, unless earlier repurchased or converted in accordance with their terms.

During the first quarter of 2022, the closing price of the Company's common stock exceeded 130% of the conversion price of the 2019 Notes for more than 20 trading days of the last 30 consecutive trading days of the quarter. As a result, the 2019 Notes are convertible at the option of the holders of the 2019 Notes during the second quarter of 2022, the quarter immediately following the quarter when the conditions are met, as stated in the terms of the 2019 Notes. These conditions have been met since the fourth quarter of 2020. As a result, \$15,000 in aggregate principal amount of the 2019 Notes have been converted by the noteholders since the issuance of the 2019 Notes, including \$4,000 during the first quarter of 2022. The conversions resulted in the issuance of a nominal number of shares of the Company's common stock to the note holders. The Company continues to classify the carrying value of the 2019 Notes as current liabilities on the Company's consolidated balance sheet at March 31, 2022.

Prior to the adoption of ASU 2020-06, the Company accounted for the 2019 Notes as a liability and equity component where the carrying value of the liability component was valued based on a similar debt instrument. In accounting for the issuance of the 2019 Notes, the Company separated the 2019 Notes into liability and equity components. The carrying value of the liability component was calculated as the present value of its cash flows using a discount rate of 4.5% based on comparative convertible transactions for similar companies. The carrying value of the equity component representing the conversion option was determined by deducting the fair value of the liability component from the par value of the 2019 Notes as a whole. The excess of the principal amount of the liability component over its carrying value amount, referred to as the debt discount, was amortized to interest expense on our consolidated statements of comprehensive income over the five-year term of the 2019 Notes. The equity component was not re-measured as long as it continued to meet the conditions for equity classification. The equity component recorded at issuance related to the 2019 Notes was \$52.1 million, which was recorded in additional paid-in capital in our consolidated balance sheets.

In accounting for the transaction costs related to the issuance of the 2019 Notes, the Company allocated the total costs incurred to the liability and equity components of the 2019 Notes using the same proportions as the initial carrying value of the 2019 Notes. Transaction costs related to the liability component were \$7.4 million and are amortized to interest expense using the effective interest method over the five-year term of the 2019 Notes. Transaction costs attributable to the equity component were \$1.6 million and are netted with the equity component of the 2019 Notes in stockholders' equity of the Company's consolidated balance sheet. Additionally, the Company recorded a net deferred tax liability of \$11.4 million.

Effective January 1, 2022, the Company adopted ASU 2020-06. After adoption, the Company now accounts for the 2019 Notes as a single liability measured at amortized cost. As the equity component is no longer required to be split into a separate component, the Company recorded a net adjustment for the initial \$50.4 million that was allocated to additional paid-in capital and \$22.9 million of life-to-date interest expense recorded as amortization of debt discount. Additionally, the net deferred tax liability recorded for the 2019 Notes was reversed. The principal amount of the liability over its carrying amount is amortized to interest expense over the five-year term of the 2019 Notes. Since the 2019 Notes are classified as a single liability, there is no debt discount required to be amortized for the three months ended March 31, 2022.

The net carrying value of the liability component of the 2019 Notes is as follows:

	March 31, 2022	December 31, 2021
	(Amounts in thousands)	
0.375% convertible senior notes due 2024:		
Principal amount	\$ 287,485	\$ 287,489
Unamortized debt discount	—	(28,220)
Unamortized debt issuance costs	(4,218)	(4,011)
Net carrying amount	<u>\$ 283,267</u>	<u>\$ 255,258</u>

The following table sets forth total interest expense recognized related to the 2019 Notes:

	Three Months Ended March 31,	
	2022	2021
	(Amounts in thousands)	
Contractual interest expense	\$ 270	\$ 270
Amortization of debt issuance costs	452	352
Amortization of debt discount	—	2,478
Total	\$ 722	\$ 3,100
Effective interest rate of the liability component	0.3 %	1.2 %

At March 31, 2022 and December 31, 2021, the carrying value of the 2019 Notes was \$283.3 million and \$255.3 million, respectively, net of unamortized discount, and the fair value of the 2019 Notes was \$490.2 million and \$678.5 million, respectively. The fair value of the 2019 Notes was determined based on the most recent trade activity of the 2019 Notes at March 31, 2022 and December 31, 2021.

8. Stockholders' Equity

Stock Option and Incentive Plans

Under the Company's current 2018 Stock Option and Incentive Plan (the "2018 Plan"), the number of shares of the Company's common stock that are reserved and available for issuance is 2,778,000, plus the number of shares of common stock available for issuance under the Company's previous plans. The shares of common stock underlying any awards under the 2018 Plan and previous plans (together, the "Plans") that are forfeited, canceled or otherwise terminated (other than by exercise) are added back to the shares of stock available for issuance under the 2018 Plan. At March 31, 2022, 1,954,613 shares were available for future grants under the 2018 Plan.

Stock-Based Compensation

For the three months ended March 31, 2022 and 2021, the Company recorded stock-based compensation expense of \$7.9 million and \$6.5 million, respectively, for share-based awards granted under the Plans. The following table presents stock-based compensation expense in the Company's consolidated statements of comprehensive income:

	Three Months Ended March 31,	
	2022	2021
	(Amounts in thousands)	
Cost of product revenue	\$ 622	\$ 506
Research and development	799	716
Selling, general and administrative	6,494	5,319
Total stock-based compensation	\$ 7,915	\$ 6,541

The 2018 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. In the first quarter of 2018, to create a longer-term retention incentive, the Company's Compensation Committee granted long-term incentive compensation awards to its Chief Executive Officer which consisted of both stock options and restricted stock units ("RSUs") that are subject to time-based vesting over nine years. 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 March 31, 2022, options to purchase 650,059 shares and 591,377 stock units were outstanding under the Plans.

Stock Options

The Company uses the Black-Scholes option pricing model to calculate the fair value of stock option awards on the grant date and measures stock-based compensation costs for stock options 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. 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.

Information regarding option activity for the three months ended March 31, 2022 under the Plans is summarized below:

	Shares	Weighted average exercise price	Weighted- Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value (in Thousands)
Options outstanding at December 31, 2021	625,107	\$ 54.15	6.29	\$ 131,707
Granted	34,473	\$ 189.21		
Exercised	(9,521)	\$ 31.12		
Forfeited/expired/cancelled	—	\$ —		
Options outstanding at March 31, 2022	650,059	\$ 61.65	6.27	\$ 82,990
Options exercisable at March 31, 2022	376,069	\$ 42.55	5.61	\$ 54,931
Vested and expected to vest at March 31, 2022 ⁽¹⁾	631,360		6.26	\$ 80,798

- (1) Represents the number of vested options as of March 31, 2022 plus the number of unvested options expected to vest as of March 31, 2022 based on the unvested outstanding options at March 31, 2022 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 March 31, 2022, the last business day of the first quarter of 2022, of \$188.09 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 March 31, 2022. The aggregate intrinsic value of stock options exercised during the three months ended March 31, 2022 and 2021 was \$1.4 million and \$2.5 million, respectively.

The weighted average grant date fair value of options granted during the three months ended March 31, 2022 and 2021 was \$79.96 and \$92.35, respectively. The total fair value of stock options that vested during the three months ended March 31, 2022 and 2021 was \$2.0 million and \$1.9 million, respectively.

Stock Units

The fair value of stock units is calculated using the closing price of the Company's common stock on the date of grant. The Company recognizes expense on awards with service-based vesting over the employee's requisite service period on a straight-line basis. Prior to 2020, the Company issued performance stock units to certain employees which are tied to the achievement of certain company financial goal metrics and the passage of time. Since 2020, the Company has implemented formal programs that issue performance stock units to certain employees set to vest upon the achievement of individual goals and financial goals of the Company, as well as the passage of time. The Company recognizes expense on performance-based awards over the vesting period based on the probability that the performance metrics will be achieved. Information regarding stock unit activity, which includes activity for RSUs and performance stock units, for the three months ended March 31, 2022 under the Plans is summarized below:

	Shares	Weighted- Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value (in Thousands)
Unvested at December 31, 2021	606,685	3.07	\$ 160,674
Awarded	124,139		
Vested	(130,978)		
Forfeited/expired/cancelled	(8,469)		
Unvested at March 31, 2022	591,377	3.09	\$ 111,232
Vested and expected to vest at March 31, 2022 ⁽¹⁾	574,925	2.73	\$ 108,138

- (1) Represents the number of vested stock units as of March 31, 2022 plus the number of unvested stock units expected to vest as of March 31, 2022 based on the unvested outstanding stock units at March 31, 2022 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 March 31, 2022, the last business day of the first quarter of 2022, of \$188.09 per share, as stock units do not have an exercise price) that would have been received by the stock unit holders had all holders exercised on March 31, 2022. The aggregate intrinsic value of stock units vested during the three months ended March 31, 2022 and 2021 was \$30.2 million and \$27.1 million, respectively.

The weighted average grant date fair value of stock units granted during the three months ended March 31, 2022 and 2021 was \$196.36 and \$209.13, respectively. The total fair value of stock units that vested during the three months ended March 31, 2022 and 2021 was \$14.2 million and \$6.5 million, respectively.

As of March 31, 2022, there was \$77.4 million 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 3.14 years. The Company expects 1,786,096 unvested options and stock units to vest over the next five years.

9. Commitments and Contingencies

In June 2018, the Company secured an agreement with Navigo Proteins (“Navigo”) for the exclusive co-development of multiple affinity ligands for which the Company holds commercialization rights. The Company is manufacturing and supplying the first of these ligands, NGL-Impact®, exclusively to Purolite Life Sciences, an Ecolab Inc. company (“Purolite”), who is pairing the Company’s high-performance ligand with Purolite’s agarose jetting base bead technology used in their Jetted A50 Protein A resin product. The Company also signed a long-term supply agreement with Purolite for NGL-Impact and other potential additional affinity ligands that may advance from the Company’s Navigo collaboration. In September 2020, the Company and Navigo successfully completed co-development of an affinity ligand targeting the SARS-CoV-2 spike protein, to be utilized in the purification of COVID-19 vaccines. The Company has proceeded with scaling up and manufacturing this ligand and the development and validation of the related affinity chromatography resin, which is marketed by the Company. In September 2021, the Company and Navigo successfully completed co-development of a novel affinity ligand that addresses aggravation issues associated with pH sensitive antibodies and Fc-fusion proteins. The Company is manufacturing and supplying this ligand, NGL-Impact® HipH, to Purolite for use in a platform use resin product. The Navigo and Purolite agreements are supportive of the Company’s strategy to secure and reinforce the Company’s proteins business. The Company made royalty payments to Navigo of \$0.4 million and \$0.3 million for the three months ended March 31, 2022 and 2021, respectively.

10. Accumulated Other Comprehensive Loss

The following shows the changes in the components of accumulated other comprehensive loss for the three months ended March 31, 2022 which consisted of only foreign currency translation adjustments for the periods shown (amounts in thousands):

	<u>Foreign Currency Translation Adjustment</u>
Balance at December 31, 2021	\$ (16,886)
Other comprehensive loss	(4,688)
Balance at March 31, 2022	<u>\$ (21,574)</u>

11. Income Taxes

For the three months ended March 31, 2022 and 2021, we recorded an income tax provision of \$12.0 million and \$3.7 million, respectively. The Company’s effective tax rate for the three months ended March 31, 2022 was 20.3% compared to 11.0% for

the corresponding period in 2021. The increase in the effective tax rates was primarily due to higher income before taxes and lower windfall benefits recognized on stock option exercises and the vesting of stock units.

12. Earnings Per Share

The Company reports earnings per share ("EPS") in accordance with ASC 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 RSUs, performance stock units and the incremental common shares issuable upon the exercise of stock options. In periods when the Company has a net loss, stock awards are excluded from the calculation of earnings per share as their inclusion would have an antidilutive effect.

A reconciliation of basic and diluted weighted average shares outstanding is as follows:

	Three Months Ended March 31,	
	2022	2021
(Amounts in thousands, except per share data)		
Numerator:		
Net income	\$ 46,964	\$ 29,450
Effect of dilutive securities:		
Charges associated with convertible debt instruments, net of tax	387	—
Numerator for diluted earnings per share - net income available to common stockholders after the effect of dilutive securities	\$ 47,351	\$ 29,450
Denominator:		
Weighted average shares used in computing net income per share - basic	55,353	54,805
Effect of dilutive shares:		
Options and stock units	726	964
Convertible Senior Notes	2,726	1,092
Dilutive effect of unvested performance stock units	11	8
Dilutive potential common shares	3,463	2,064
Denominator for diluted earnings per share - adjusted weighted average shares used in computing net income per share - diluted	58,816	56,869
Earnings per share:		
Basic	\$ 0.85	\$ 0.54
Diluted	\$ 0.81	\$ 0.52

At March 31, 2022, there were outstanding options to purchase 650,059 shares of the Company's common stock at a weighted average exercise price of \$61.65 per share and 591,377 shares of common stock issuable upon the vesting of stock units, which include RSUs and performance stock units. For the three months ended March 31, 2022, 137,247 shares of the Company's common stock 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.

In July 2019, the Company issued \$287.5 million aggregate principal amount of the 2019 Notes. As provided by the terms of the indenture underlying the 2019 Notes, prior to March 4, 2022, conversion of the 2019 Notes could have been settled in cash, shares of the Company's common stock or a combination thereof, at the Company's election. On March 4, 2022, we entered into the Second Supplemental Indenture for the 2019 Notes, which irrevocably elected to settle the conversion of the 2019 Notes using a combination of cash and shares of the Company's common stock, settling the par value of the 2019 Notes in cash and any excess conversion premium in shares.

As provided by the terms of the Second Supplemental Indenture underlying the 2019 Notes, the Company irrevocably elected to settle the conversion obligation for the 2019 Notes in a combination of cash and shares of the Company's common stock.

This means the Company will settle the par value of the 2019 Notes in cash and any excess conversion premium in shares. As mentioned in Note 7, "Convertible Senior Notes," the Company adopted ASU 2020-06 effective January 1, 2022. Under ASU 2020-06, the Company is required to reflect the dilutive effect of the convertible securities by application of the "if-converted" method, which means the denominator of the EPS calculation would include the total number of shares assuming the 2019 Notes had been fully converted at the beginning of the period. Prior to March 4, 2022, the Company had the choice to settle the conversion of the 2019 Notes in cash, stock or a combination of the two. Therefore, from January 1, 2022 (the date the Company adopted ASU 2020-06) to March 4, 2022, the Company included 3,474,429 shares in the denominator of the EPS calculation, applying the if converted method. Subsequent to March 4, 2022, after the Second Supplemental Indenture became effective, the Company irrevocably elected to settle the conversion obligation for the 2019 Notes in a combination of cash and shares of the Company's common stock, and from March 5, 2022 forward, only the excess premium will be settled with shares. Under the if-converted method of calculating dilutive shares, the Company was also required to exclude amortization of debt issuance costs and interest charges applicable to the convertible debt from the numerator of the dilutive EPS calculation for the period from January 1, 2022 to March 4, 2022, as if the interest on convertible debt was never recognized for that period. For the three months ended March 31, 2022, the Company excluded interest charges of \$0.4 million (net of tax) from the numerator.

Prior to the adoption of ASU 2020-06, the Company applied the provisions of ASC 260, "Earnings Per Share", Subsection 10-45-44, to determine the diluted weighted average shares outstanding as it related to the conversion spread on its convertible notes. Accordingly, the par value of the 2019 Notes was not included in the calculation of diluted income per share, but the dilutive effect of the conversion premium was considered in the calculation of diluted net income per share using the treasury stock method. The dilutive impact of the 2019 Notes was based on the difference between the Company's current period average stock price and the conversion price of the 2019 Notes, provided there was a premium. Pursuant to this accounting standard, there was no dilution from the accreted principal of the 2019 Notes. For the three months ended March 31, 2021, the dilutive effect of the conversion premium included in the calculation of diluted earnings was 1,091,776 shares.

13. Related Party Transactions

Certain facilities leased by Spectrum are owned by Roy Eddleman, the former owner of Spectrum. As of March 31, 2022, Mr. Eddleman owned greater than 5% of the Company's outstanding shares and the Company considers him to be a related party. The lease amounts paid to this shareholder prior to the public offering were negotiated in connection with the acquisition of Spectrum. The Company incurred rent expense totaling \$0.2 million for each of the three month periods ended March 31, 2022 and 2021.

14. Segment Reporting

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

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

	Three Months Ended March 31,	
	2022	2021
Revenue by customers' geographic locations:		
North America	40 %	42 %
Europe	43 %	39 %
APAC/Other	17 %	19 %
Total revenue	100 %	100 %

Concentrations of Credit Risk and Significant Customers

Financial instruments that subject the Company to significant concentrations of credit risk primarily consist of cash and cash equivalents, marketable securities and accounts receivable. Per the Company's investment policy, cash equivalents and marketable securities are invested in financial instruments with high credit ratings and credit exposure to any one issue, issuer (with the exception of U.S. Treasury obligations) and type of instrument is limited. At March 31, 2022 and December 31, 2021, the Company had no investments associated with foreign exchange contracts, options contracts or other foreign hedging arrangements.

Concentration of credit risk with respect to accounts receivable is limited to customers to whom the Company makes significant sales. While a reserve for the potential write-off of accounts receivable is maintained, the Company has not written off any significant accounts to date. To control credit risk, the Company performs regular credit evaluations of its customers' financial condition.

Revenue from sales to Pfizer Inc. generated \$21.1 million, or 10% of the Company's total revenue for the three months ended March 31, 2022. There was no revenue from customers that represented 10% or more of the Company's total revenue for the three months ended March 31, 2021.

No accounts receivable balance from a specific customer represented 10% or more of the Company's total trade accounts receivable at March 31, 2022. Significant accounts receivable balances representing 10% or more of the Company's total trade accounts receivable and royalties came from our accounts receivable balance outstanding with Pfizer Inc at December 31, 2021. The Company's accounts receivable and other receivable balances with Pfizer at December 31, 2021 was 14% of our total accounts receivable and other receivable balance.

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

Overview

Repligen and its subsidiaries, collectively doing business as Repligen Corporation ("Repligen", "we", "our", or the "Company") is a global life sciences company that develops and commercializes highly innovative bioprocessing technologies and systems that increase efficiencies and flexibility in the process of manufacturing biological drugs.

As the overall market for biologics continues to grow and expand, our customers – primarily large biopharmaceutical companies and contract development and manufacturing organizations – face critical production cost, capacity, quality and time pressures. Built to address these concerns, our products are helping to set new standards for the way biologics are manufactured. We are committed to inspiring advances in bioprocessing as a trusted partner in the production of critical biologic drugs – including monoclonal antibodies ("mAb"), recombinant proteins, vaccines and cell and gene therapies ("C>") – that are improving human health worldwide. For more information regarding our business, products and acquisitions, see Part I, Item 1, "*Business*" included in our 2021 Annual Report on Form 10-K ("Form 10-K"), which was filed with the Securities and Exchange Commission ("SEC") on February 17, 2022.

We currently operate as one bioprocessing business, with a comprehensive suite of products to serve both upstream and downstream processes in biological drug manufacturing. Building on over 40 years of industry expertise, we have developed a broad and diversified product portfolio that reflects our passion for innovation and the customer-first culture that drives our entire organization. We continue to capitalize on opportunities to maximize the value of our product platform through both organic growth initiatives (internal innovation and commercial leverage) and targeted acquisitions.

2021 Acquisitions

Bio-Flex Solutions LLC and Newton T&M Corp.

On November 29, 2021, the Company entered into an Equity Purchase Agreement with Bio-Flex Solutions, L.L.C. ("BioFlex"), Newton T&M Corp ("NTM") and each of Ralph Meola and Jason Nisler, to acquire 100% of the outstanding securities of BioFlex and NTM (collectively, the "NTM Acquisition"). The transaction closed on December 16, 2021.

NTM, which is headquartered in Newton, New Jersey, is the parent company of BioFlex and focuses on manufacturing of products, while BioFlex, also headquartered in Newton, New Jersey, commercializes branded products to biotech customers. The NTM Acquisition complements and expands our filtration offering paths as the industry migrates to single-use flow paths solutions for mAb, vaccine and cell and gene therapy ("C>") applications, with a focus on single-use fluid management components, including single-use clamps, adapters, end caps and hose assemblies. The NTM Acquisition streamlines and increases control over many components in our single-use supply chain which ultimately should drive reduced lead-times for our customers in the coming years.

Acquisition of Avitide, Inc.

On September 16, 2021, we entered into an Agreement and Plan of Merger and Reorganization ("Avitide Merger Agreement") with Avalon Merger Sub, Inc., a Delaware corporation and a wholly owned direct subsidiary of the Company, Avalon Merger Sub LLC, a Delaware limited liability company and a wholly owned direct subsidiary, and Shareholder Representative Services LLC, a Colorado limited liability company, solely in its capacity as the representative, agent and attorney-in-fact of Avitide's securityholders to purchase Avitide. The transaction closed on September 20, 2021 and on the terms set forth in the Avitide Merger Agreement (the "Avitide Acquisition").

Avitide, which is headquartered in Lebanon, New Hampshire, offers diverse libraries and leading technology in affinity ligand discovery and development resulting in best-in-class ligand discovery and development lead-times. The acquisition gives us a new platform for affinity resin development, including C>, and advances and expands our proteins franchise to address the unique purification needs of gene therapies and other emerging modalities.

Acquisition of Polymem S.A.

On June 22, 2021, we entered into a Stock Purchase Agreement with Polymem S.A. (“Polymem”), a company organized under the laws of France, and Jean-Michel Espenan and Franc Saux, acting together jointly and severally as the representatives of the sellers, which subsequently closed on July 1, 2021.

Polymem, which is headquartered in Toulouse, France, is a manufacturer of hollow fiber membranes, membrane modules and systems for industrial and bioprocessing applications. Polymem products will complement and expand Repligen’s portfolio of hollow fiber systems and consumables. The acquisition substantially increases our membrane and module manufacturing capacity and establishes a world-class center of excellence in Europe to address the accelerating global demand for these innovative 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 a description of our critical accounting policies that affect our more significant judgments and estimates used in the preparation of our consolidated financial statements, refer to Management’s Discussion and Analysis of Financial Condition and Results of Operations and our significant accounting policies in Note 2 to the consolidated financial statements included in our Form 10-K.

Results of Operations

The following discussion of the financial condition and results of operations should be read in conjunction with the accompanying consolidated financial statements and the related footnotes thereto.

Revenues

Total revenue for the three months ended March 31, 2022 and 2021 were as follows:

	Three Months Ended March 31,		Increase/(Decrease)	
	2022	2021	\$ Change	% Change
	(Amounts in thousands, except for percentage data)			
Revenue:				
Products	\$ 206,363	\$ 142,737	\$ 63,626	44.6 %
Royalty and other	37	100	(63)	(63.0 %)
Total revenue	<u>\$ 206,400</u>	<u>\$ 142,837</u>	<u>\$ 63,563</u>	44.5 %

Product revenues

Since 2016, we have been increasingly focused on selling our products directly to customers in the pharmaceutical industry and to our contract manufacturers. These direct sales represented approximately 87% and 80% of our product revenue for each of the three months ended March 31, 2022 and 2021, respectively. We expect that direct sales will continue to account for an increasing percentage of our product revenues, as the largest customer of our OEM products diversified its supply chain in 2020. Sales of our bioprocessing products can be impacted by the timing of large-scale production orders and the regulatory approvals for such antibodies, which may result in significant quarterly fluctuations.

Revenues from our filtration franchise include the sales of our XCell ATF® systems and consumables; Spectrum filtration systems, including KrosFlo®; SIUS® filtration products and systems; the fluid management assemblies and components offered by Engineered Molding Technology LLC, Non-Metallic Solutions, Inc. ARTeSYN Biosolutions Holdings Ireland Limited (“ARTeSYN”) and BioFlex, the latter of which was acquired on December 16, 2021; the hollow fiber membrane technology offered by Polymem, which we acquired on July 1, 2021; and our ARTeSYN filtration systems. Revenue from our chromatography products includes the sale of our OPUS pre-packed chromatography columns, ELISA test kits and chromatography systems from Spectrum and ARTeSYN. Revenue from proteins products includes the sale of our Protein A ligands and cell culture growth factors, and sales of affinity products, including adeno-associated virus resins offered by Avitide, which we acquired on September 20, 2021. Revenue from our process analytics products includes the sale of our

SoloVPE[®], FlowVPE[®] and FlowVPX[®] systems, consumables and service. Other revenue primarily consists of revenue from the sale of our operating room products to hospitals as well as freight revenue.

During the three months ended March 31, 2022, product revenue increased by \$63.6 million, or 44.6% as compared to the same period of 2021, due to exceptionally robust demand for our filtration, chromatography and process analytics products. There is continued adoption of our products by key bioprocessing customers across all key product lines. Since the second quarter of 2020, we have experienced accelerated demand across all of our franchises due to the critical needs of customers working on the novel coronavirus pandemic (“COVID-19”) vaccines. However, fluctuations in vaccination rates will drive future demand of our products from these customers and the recognition of revenue related to COVID-19. In addition, we have recently seen an increased demand for C> and monoclonal antibody manufacturing. There was also an approximately \$6 million increase in revenue due to our 2021 acquisitions which were acquired in the second half of 2021.

Royalty revenues

Royalty revenues in the three months ended March 31, 2022 and 2021 relate to royalties received from a third-party systems manufacturer associated with our OPUS PD chromatography columns. Royalty revenues are variable and are dependent on sales generated by our partner.

Costs of product revenue and operating expenses

Total costs and operating expenses for the three months ended March 31, 2022 and 2021 were comprised of the following:

	Three Months Ended March 31,		Increase/(Decrease)	
	2022	2021	\$ Change	% Change
	(Amounts in thousands, except for percentage data)			
Cost of product revenue	\$ 82,356	\$ 59,747	\$ 22,609	37.8 %
Research and development	12,155	7,612	4,543	59.7 %
Selling, general and administrative	54,300	39,095	15,205	38.9 %
Contingent consideration	(2,411)	—	(2,411)	100.0 %
Total costs and operating expenses	<u>\$ 146,400</u>	<u>\$ 106,454</u>	<u>\$ 39,946</u>	<u>37.5 %</u>

Cost of product revenue

Cost of product revenue increased 37.8% in the three months ended March 31, 2022, compared to the same period of 2021, due primarily to the increase in product revenue mentioned above and costs associated with higher product volume. In addition, in order to support our rapid growth and increased demand for our products, we continue to invest in our manufacturing infrastructure through increased manufacturing headcount and increased occupancy costs. Our depreciation expense increased during the three months ended March 31, 2022, as manufacturing equipment was placed in service during the second half of 2021. The impact on cost of product revenue from our three 2021 acquisitions was \$4.8 million, which has also contributed to the increase in cost of product revenue as there were no comparable costs for these acquisitions in the first quarter of 2021.

Gross margin was 60.1% and 58.2% in the three months ended March 31, 2022 and 2021, respectively. The increase in gross margin in the three months ended March 31, 2022, as compared to the same period of 2021, is due primarily to the increase in revenue mentioned above, and favorable product mix, partially offset by an increase in employee-related costs from a rise in manufacturing headcount, an increase in occupancy costs due to added capacity in 2021 and an increase in depreciation expense mentioned above. The gross margin for the three months ended March 31, 2021 also includes \$1.6 million of amortization of inventory step-up associated with the ARTeSYN Aquisition in December 2020. Gross margins may fluctuate in future quarters based on expected production volume and product mix.

Research and development expenses

Research and development (“R&D”) expenses are related to bioprocessing products, which include personnel, supplies and other research expenses. Due to the size of the Company and the fact that these various programs share personnel and fixed

costs, we do not track all of our expenses or allocate any fixed costs by program, and therefore, have not provided historical costs incurred by project.

R&D expenses increased \$4.5 million, or 59.7%, during the three months ended March 31, 2022, compared to the same period of 2021. The increase during the period is primarily due to spending on new product development and investments newly acquired businesses during the period, for which there were no comparable costs in the first quarter of 2021. The increase during the period is also due in part to the increase in employee related costs, as the number of R&D employees has increased since March 31, 2021.

R&D expense also includes investments made to expand our proteins product offering through our development agreement with Navigo Proteins GmbH (“Navigo”). We invested \$0.4 million for the three months ended March 31, 2022, as compared to \$0.3 million in 2021, in the form of milestone payments to Navigo.

We expect our R&D expenses for the remainder of 2022 to gradually increase to support new product development.

Selling, general and administrative expenses

Selling, general and administrative (“SG&A”) expenses include the costs associated with selling our commercial products and costs required to support our marketing efforts, including legal, accounting, patent, shareholder services, amortization of intangible assets and other administrative functions.

During the three months ended March 31, 2022, SG&A costs increased by \$15.2 million, or 38.9%, as compared to the same period of 2021. The increase is partially due to the continued expansion of our customer-facing activities to drive sales of our bioprocessing products, and the continued buildout of our administrative infrastructure, primarily through increased headcount, to support expected future growth. Employee-related costs increased during the three months ended March 31, 2022, as compared to the same period in 2021, resulting from the 55% increase in general and administrative headcount period over the period and a 42% increase in selling and marketing headcount period over period. These costs include stock-based compensation, which increased \$1.2 million for the three months ended March 31, 2022, as compared to the same period of 2021. In addition, SG&A costs increased for the three months ended March 31, 2022 due to the addition of Polymem, Avitide and BioFlex during the second half of 2021 for which there are no comparable costs in the three months ended March 31, 2021.

Contingent consideration expense

Contingent consideration expense represents the change in fair value of the contingent consideration obligation included in current and noncurrent contingent consideration on the consolidated balance sheets as of the end of each period. Re-measurement of the contingent consideration obligation is done each quarter and the carrying value of the obligation is adjusted to the current fair value through our consolidated statement of comprehensive income. We recorded an adjustment to the fair value of the contingent consideration obligation for the three months ended March 31, 2022 of (\$2.4) million.

Other expenses, net

The table below provides detail regarding our other expenses, net:

	Three Months Ended March 31,		Increase/(Decrease)	
	2022	2021	\$ Change	% Change
	(Amounts in thousands, except for percentage data)			
Investment income	\$ 77	\$ 52	\$ 25	48.1 %
Interest expense	(292)	(2,754)	2,462	(89.4 %)
Amortization of debt issuance costs	(452)	(352)	(100)	28.4 %
Other expenses	(402)	(224)	(178)	79.5 %
Total other expense, net	<u>\$ (1,069)</u>	<u>\$ (3,278)</u>	<u>\$ 2,209</u>	<u>(67.4 %)</u>

Investment income

Investment income includes income earned on invested cash balances. Our investment income remained relatively stable for three months ended March 31, 2022, compared to the same period of 2021. We expect investment income to vary based on changes in the amount of funds invested and fluctuation of interest rates.

Interest expense

Interest expense in the three months ended March 31, 2022 and 2021 is primarily from our 0.375% Convertible Senior Notes due 2024 (the "2019 Notes"), which were issued in July 2019. Interest expense for the three months ended March 31, 2022 includes the contractual coupon interest on the 2019 Notes. For the three months ended March 31, 2021, interest expense includes the amortization of the debt discount as well as the contractual coupon interest. As a result of our adoption of ASU 2020-06, "Debt - Debt with Conversion Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40)," effective January 1, 2022, the equity portion of the debt conversion feature recorded upon the issuance of the 2019 Notes, or the debt discount, was reversed along with the total amortization taken on that discount. Since there was no debt discount, no amortization was taken in the three months ended March 31, 2022.

Amortization of debt issuance costs

In accounting for the transaction costs related to the issuance of the 2019 Notes, the Company allocated the total costs incurred to the liability and equity components of the 2019 Notes based on their relative values. Transaction costs attributable to the liability component are amortized to amortization of debt issuance costs on the consolidated statements of comprehensive income. Amortization of debt issuance costs increased during the three months ended March 31, 2022, as compared to the same period of 2021. This is a result of the decrease in the balance of debt issuance costs that are being amortized. As these costs decrease, the carrying value of the debt increases and interest calculated based on the carrying value increases as well.

Other expenses

The change in other expenses, net during the three months ended March 31, 2022, compared to the same period of 2021, is primarily attributable to realized foreign currency losses related to amounts due from non-Swedish krona-based customers and vendors.

Income tax provision

Income tax provision for the three months ended March 31, 2022 and 2021 was as follows:

	Three Months Ended March 31,		Increase/(Decrease)	
	2022	2021	\$ Change	% Change
	(Amounts in thousands, except for percentage data)			
Income tax provision	\$ 11,967	\$ 3,655	\$ 8,312	227.4 %
Effective tax rate	20.3 %	11.0 %		

For the three months ended March 31, 2022, we recorded an income tax provision of \$12.0 million. The effective tax rate was 20.3% for the three months ended March 31, 2022 and is based upon the estimated income for the year ending December 31, 2022 and the composition of income in different jurisdictions. The increase in effective tax rates was primarily due to higher income before income taxes and lower windfall benefits recognized on stock option exercises and the vesting of stock units. Our effective tax rate for the three months ended March 31, 2022 was lower than the U.S. statutory rate of 21% primarily due to windfall benefits on stock option exercises and the vesting of stock units. For the three months ended March 31, 2021, we recorded an income tax provision of \$3.7 million. The effective tax rate was 11.0% for the three months ended March 31, 2021 and is based upon the estimated income for the year ending December 31, 2021 and the composition of income in different jurisdictions. Our effective tax rate for the three months ended March 31, 2021 was lower than the U.S. statutory rate of 21% primarily due to business tax credits and windfall benefits on stock option exercises and the vesting of stock units.

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. These financial measures exclude the items detailed below

and, therefore, have not been calculated in accordance with GAAP. 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.

Non-GAAP adjusted income from operations

Non-GAAP adjusted income from operations is measured by taking income from operations as reported in accordance with GAAP and excluding inventory step-up charges, acquisition and integration costs, contingent consideration fair value adjustments, and intangible amortization booked through our consolidated statements of comprehensive income. The following is a reconciliation of income from operations in accordance with GAAP to non-GAAP adjusted income from operations for the three months ended March 31, 2022 and 2021:

	Three Months Ended March 31,	
	2022	2021
	(Amounts in thousands)	
GAAP income from operations	\$ 60,000	\$ 36,383
Non-GAAP adjustments to income from operations:		
Inventory step-up charges	—	1,598
Acquisition and integration costs	3,189	2,551
Contingent consideration	(2,411)	—
Intangible amortization	6,593	5,162
Non-GAAP adjusted income from operations	<u>\$ 67,371</u>	<u>\$ 45,694</u>

Non-GAAP adjusted net income

Non-GAAP adjusted net income is measured by taking net income as reported in accordance with GAAP and excluding acquisition and integration costs, intangible amortization, inventory step-up charges, loss on conversion of debt, non-cash interest expense, amortization of debt issuance costs, contingent consideration fair value adjustments and the tax effects of these items. The following are reconciliations of net income in accordance with GAAP to non-GAAP adjusted net income for the three months ended March 31, 2022 and 2021:

	Three Months Ended March 31,			
	2022		2021	
	Amount	Fully Diluted Earnings per Share*	Amount	Fully Diluted Earnings per Share*
	(Amounts in thousands, except per share data)			
GAAP net income	\$ 46,964	\$ 0.81	\$ 29,450	\$ 0.52
Non-GAAP adjustments to net income:				
Inventory step-up charges	—	—	1,598	0.03
Acquisition and integration costs	3,189	0.05	2,551	0.04
Contingent consideration	(2,411)	(0.04)	—	—
Intangible amortization	6,593	0.11	5,162	0.09
Loss on conversion of debt	—	—	1	0.00
Amortization of debt issuance costs ⁽¹⁾	452	0.00	352	0.01
Non-cash interest expense ⁽¹⁾	—	—	2,476	0.04
Tax effect of non-GAAP charges	(1,042)	(0.02)	(2,822)	(0.05)
Non-GAAP adjusted net income	<u>\$ 53,745</u>	<u>\$ 0.92</u>	<u>\$ 38,768</u>	<u>\$ 0.68</u>

(1) See Note 12, "Earnings Per Share," for more information on the effects of adopting ASU 2020-06, "Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40)," which we adopted effective January 1, 2022, to these financial statement line items.

* 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, acquisition and integration costs, inventory step-up charges, loss on conversion of debt and contingent consideration fair value adjustments booked through our consolidated statements of comprehensive income. The following is a reconciliation of net income in accordance with GAAP to adjusted EBITDA for the three months ended March 31, 2022 and 2021:

	Three Months Ended March 31,	
	2022	2021
	(Amounts in thousands)	
GAAP net income	\$ 46,964	\$ 29,450
Non-GAAP EBITDA adjustments to net income:		
Investment income	(77)	(52)
Interest expense	292	278
Non-cash interest expense ⁽¹⁾	—	2,476
Amortization of debt issuance costs	452	352
Income tax provision	11,967	3,655
Depreciation	5,213	3,255
Intangible amortization	6,621	5,189
EBITDA	\$ 71,432	\$ 44,603
Other non-GAAP adjustments:		
Inventory step-up charges	—	1,598
Acquisition and integration costs	3,189	2,551
Contingent consideration	(2,411)	—
Loss on conversion of debt	—	1
Adjusted EBITDA	\$ 72,210	\$ 48,753

(1) See Note 12, "Earnings Per Share," for more information on the effects of adopting ASU 2020-06, which we adopted effective January 1, 2022.

Liquidity and Capital Resources

We have financed our operations primarily through revenues derived from product sales, the issuance of the 2019 Notes in July 2019 and the issuance of common stock in our December 2020, July 2019 and May 2019 public offerings. Our revenue for the foreseeable future will primarily be limited to our bioprocessing product revenue.

At March 31, 2022, we had cash and cash equivalents of \$584.6 million compared to cash and cash equivalents of \$603.8 million at December 31, 2021.

During the first quarter of 2022, the closing price of the Company's common stock exceeded 130% of the conversion price of the 2019 Notes for more than 20 trading days of the last 30 consecutive trading days of the quarter. As a result, the 2019 Notes are convertible at the option of the holders of the 2019 Notes during the second quarter of 2022, the quarter immediately following the quarter when the conditions are met, as stated in the terms of the 2019 Notes. These conditions have been met since the fourth quarter of 2020. As a result, \$15,000 in aggregate principal amount of the 2019 Notes have been converted by the noteholders since the issuance of the 2019 Notes, including \$4,000 during the first quarter of 2022. The conversions resulted in the issuance of a nominal number of shares of the Company's common stock to the noteholders. The Company continues to classify the carrying value of the 2019 Notes as current liabilities on the Company's consolidated balance sheet at March 31, 2022.

Cash flows

	Three Months Ended March 31,		Increase/(Decrease) \$ Change
	2022	2021	
	(Amounts in thousands)		
Operating activities	\$ 23,113	\$ 9,262	\$ 13,851
Investing activities	(28,214)	(8,997)	(19,217)
Financing activities	(12,021)	507	(12,528)
Effect of exchange rate changes on cash and cash equivalents	(2,052)	(6,746)	4,694
Net decrease in cash and cash equivalents	\$ (19,174)	\$ (5,974)	\$ (13,200)

Operating activities

For the three months ended March 31, 2022, our operating activities provided cash of \$23.1 million reflecting net income of \$47.0 million and non-cash charges totaling \$18.9 million primarily related to depreciation, amortization, inventory step-up amortization, contingent consideration adjustments, deferred income taxes and stock-based compensation charges. An increase in accounts receivable consumed \$6.3 million of cash and was primarily driven by the 44.5% year-to-date increase in revenues. An increase in inventory manufactured of \$30.0 million supports expected increases in future revenue. A decrease in accrued liabilities of \$10.0 million relates to the payout of employee bonus and a decrease in our estimated income tax provision during the first quarter of 2022.

For the three months ended March 31, 2021, our operating activities provided cash of \$9.3 million reflecting net income of \$29.5 million and non-cash charges totaling \$20.2 million primarily related to depreciation, amortization, deferred income taxes, amortization of debt discount and issuance costs, and stock-based compensation charges. An increase in accounts receivable, consumed \$19.8 million of cash and was primarily driven by the 87.7% year-to-date increase in revenues. An increase in inventory manufactured of \$17.0 million supports expected increases in future revenue. An increase in accounts payable of \$3.7 million was primarily due to increased inventory purchases to support customer orders. These are offset by \$4.9 million decrease in accrued liabilities primarily related to payment of employee bonuses during the three months ended March 31, 2021 and related to a decrease in deferred revenue related to products shipped during the first quarter of 2021. The remaining net cash used in operating activities resulted from unfavorable changes in various other working capital accounts.

Investing activities

Our investing activities consumed \$28.2 million of cash during the three months ended March 31, 2022 mainly due to capital expenditures as we continue to increase our manufacturing capacity worldwide. Of these expenditures, \$1.0 million represented capitalized costs related to our internal-use software.

Financing activities

Our financing activities consumed \$12.0 million of cash for the three months ended March 31, 2022, which included cash disbursed in relation to shares withheld to cover employee income tax due upon the vesting and release of restricted stock units of \$12.3 million. This was partially offset by proceeds received from stock option exercises during the period of \$0.3 million.

Working capital decreased by \$36.0 million to \$520.5 million at March 31, 2022 from \$556.4 million at December 31, 2021 due to the various changes noted above.

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;
- our ability to acquire additional bioprocessing products;
- the scope of and progress made in our R&D activities;
- contingent consideration earnout payments resulting from our acquisitions;

- the extent of any share repurchase activity; and
- the success of any proposed financing efforts.

Absent acquisitions of additional products, product candidates or intellectual property, we believe our current cash balances are adequate to meet our cash needs for at least the next 24 months from the date of this filing. We expect operating expenses for the rest of the year to increase as we continue to expand our bioprocessing business. We expect to incur continued spending related to the development and expansion of our bioprocessing product lines and expansion of 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, and continued investment in our intellectual property portfolio.

We plan to continue to invest in our bioprocessing business and in key R&D activities associated with the development of new bioprocessing products. We actively evaluate various strategic transactions on an ongoing basis, including acquiring complementary products, technologies or businesses that would complement our existing portfolio. 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. If our available cash balances and anticipated cash flow from operations are insufficient to satisfy our liquidity requirements, including because of any such acquisition-related financing needs or lower demand for our products, we may seek to sell common or preferred equity or convertible debt securities, enter into a credit facility or another form of third-party funding, or seek other debt funding. The sale of equity and convertible debt securities may result in dilution to our shareholders, and those securities may have rights senior to those of our common shares. If we raise additional funds through the issuance of preferred stock, convertible debt securities or other debt financing, these securities or other debt could contain covenants that would restrict our operations. Any other third-party funding arrangement could require us to relinquish valuable rights. We may require additional capital beyond our currently anticipated amounts. Additional capital may not be available on reasonable terms, if at all.

Net Operating Loss Carryforwards

At December 31, 2021, the Company had federal net operating loss carryforwards of \$46.2 million, state net operating loss carryforwards of \$4.0 million, and foreign net operating loss carryforwards of \$6.1 million. Federal net operating loss carryforwards of \$19.1 million will expire at various dates through 2037. The other \$27.1 million of the federal net operating loss carryforwards have unlimited carryforward periods. The total state net operating loss carryforwards will expire at various dates through 2041, while the foreign net operating loss carryforwards do not expire. We had business tax credits carryforwards of \$2.7 million available to reduce future federal and state income taxes, if any. The business tax credits carryforwards will continue to expire at various dates through December 2041. Net operating loss carryforwards and available tax credits are subject to review and possible adjustment by the Internal Revenue Service, state and foreign jurisdictions and may be limited in the event of certain changes in the ownership interest of significant shareholders.

Effects of Inflation

Our assets are primarily monetary, consisting of cash, cash equivalents and marketable securities. Because of their liquidity, these assets are not directly affected by inflation. Since we intend to retain and continue to use our equipment, furniture and fixtures and leasehold improvements, we believe that the incremental inflation related to replacement costs of such items will not materially affect our operations. However, the rate of inflation affects our expenses, such as those for employee compensation and contract services, which could increase our level of expenses and the rate at which we use our resources.

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, product candidate research, development and regulatory approval, SG&A expenditures, intellectual property, development and manufacturing plans, availability of materials and product and adequacy of capital resources, our financing plans, and the projected continued impact of, and response to, COVID-19 constitute forward-looking statements. These forward-looking statements are based on current expectations, estimates, forecasts and projections about the industry and markets in which the Company operates, and management's beliefs and assumptions. The Company undertakes no obligation to publicly update or revise the statements in light of future developments. In addition, other written and oral statements that constitute forward-looking statements may be made by the Company or on the Company's behalf. Words such as "expect," "seek," "anticipate," "intend," "plan," "believe," "could," "estimate," "may," "target," "project," or variations of such words and similar expressions are intended to identify 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 following: the impact of COVID-19 on demand for our products and on our business or financial results; the success of current and future collaborative or supply relationships, including our agreements with Cytiva, MilliporeSigma and Purolite; 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 U.S. 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 manufacturing capabilities and our dependence on third-party manufacturers and value-added resellers; the effect of COVID-19, including mitigation efforts and economic effects, on our business operations and the operations of our customers and suppliers; 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 integrate Polymem, Avitide and BioFlex businesses successfully into our business and achieve the expected benefits of the acquisitions; 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 our recently acquired businesses; 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 SEC including under the sections entitled "Risk Factors" in our Form 10-K.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

We have historically held investments in commercial paper, U.S. Government and agency securities as well as corporate bonds and other debt 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. We do not have any such investments as of March 31, 2022. As a result, a hypothetical 100 basis point increase in interest rates would have no effect on our cash position as of March 31, 2022.

We generally place our marketable security investments in high quality credit instruments, as specified in our investment policy guidelines. We believe that the conservative nature of our investments mitigates our interest rate exposure, and our investment policy limits the amount of our credit exposure to any one issue, issuer (with the exception of U.S. agency obligations) and type of instrument. We do not expect any material losses from our marketable security investments and therefore believe that our potential interest rate exposure is limited.

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 krona, 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 krona, 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 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 at the reasonable assurance level.

Changes in Internal Control

In connection with our initiative to integrate and enhance our global information technology systems and business processes, we continued the phased implementation of a new enterprise resource planning ("ERP") system. The Company is implementing the ERP system in phases through 2024. The fourth phase of implementation was completed during the first quarter of 2022. In addition, we completed the implementation of a lease accounting system, LeaseQuery, during the first quarter of 2022. The implementation of the ERP and LeaseQuery systems is expected to, among other things, automate a number of accounting and reporting processes and activities, thereby decreasing the amount of manual processes previously required. As a result of these implementations, we modified certain existing internal controls over financial reporting as well as implemented new controls and procedures related to the new ERP system and LeaseQuery system during the three months ended March 31, 2022. 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 March 31, 2022 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 Part I, Item 1A of our Form 10-K for the period ended December 31, 2021 and in subsequent filings, 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 Form 10-K for the period ended December 31, 2021.

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

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

(a) Exhibits

Exhibit Number	Document Description
3.1	<u>Restated Certificate of Incorporation, dated June 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).</u>
3.2	<u>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).</u>
3.3	<u>Third Amended and Restated Bylaws (filed as Exhibit 3.1 to Repligen Corporation's Current Report on Form 8-K filed on January 28, 2021 and incorporated herein by reference).</u>
4.1	<u>Second Supplemental Indenture, dated as of March 4, 2022, by and between Repligen Corporation and Wilmington Trust, National Association, as trustee (filed as Exhibit 4.1 to Repligen Corporation's Current Report on Form 8-K filed on March 8, 2022 and incorporated herein by reference).</u>
31.1 +	<u>Rule 13a-14(a)/15d-14(a) Certification.</u>
31.2 +	<u>Rule 13a-14(a)/15d-14(a) Certification.</u>
32.1 *	<u>Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
101.INS+	XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH+	Inline XBRL Taxonomy Extension Schema Document.
101.CAL+	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF+	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB+	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE+	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104+	Cover Page Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101.*).

+ 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: April 27, 2022

By: /s/ TONY J. HUNT
Tony J. Hunt
President and Chief Executive Officer
(Principal executive officer)
Repligen Corporation

Date: April 27, 2022

By: /s/ JON SNODGRES
Jon Snodgres
Chief Financial Officer
(Principal financial officer)
Repligen Corporation

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO RULE 13a-14(a) / RULE 15d-14(a) OF THE SECURITIES
EXCHANGE ACT OF 1934, AS AMENDED**

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: April 27, 2022

/s/ TONY J. HUNT

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

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO RULE 13a-14(a) / RULE 15d-14(a) OF THE SECURITIES
EXCHANGE ACT OF 1934, AS AMENDED**

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: April 27, 2022

/s/ JON SNODGRES

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 March 31, 2022 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: April 27, 2022

By:

/s/ TONY J. HUNT

Tony J. Hunt

**Chief Executive Officer and President
(Principal executive officer)**

Date: April 27, 2022

By:

/s/ JON SNODGRES

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.