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

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarterly period ended March 31, 2021

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from _____ to _____

Commission File Number: 001-38873

Akoya Biosciences, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**47-5586242**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
100 Campus Drive, 6th Floor Marlborough, Massachusetts	**01752**
(Address of principal executive offices)	(Zip Code)

(855) 896-8401
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 $0.00001 per share	AKYA	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, 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 Act). Yes ☐ No ☒

Number of shares of the registrant's common shares outstanding at April 30, 2021: 37,110,526

AKOYA BIOSCIENCES, INC.

TABLE OF CONTENTS

Akoya Biosciences, Inc.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements that are based on management's beliefs and assumptions and on information currently available to management. All statements contained in this report other than statements of historical fact are forward-looking statements, including statements regarding our ability to develop, commercialize and achieve market acceptance of our current and planned products and services, our research and development efforts, and other matters regarding our business strategies, use of capital, results of operations and financial position, and plans and objectives for future operations. In some cases, you can identify forward-looking statements by the words "may," "will," "could," "would," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "project," "potential," "continue," "ongoing" or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. These statements involve risks, uncertainties and other factors that may cause actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. These risks, uncertainties and other factors are described under "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and elsewhere in this report and in other documents we file with the Securities and Exchange Commission from time to time. We caution you that forward-looking statements are based on a combination of facts and factors currently known by us and our projections of the future, about which we cannot be certain. As a result, the forward-looking statements may not prove to be accurate. The forward-looking statements in this report represent our views as of the date of this report. We undertake no obligation to update any forward-looking statements for any reason, except as required by law.

Unless otherwise stated or the context otherwise indicates, references to "we," "us," "our" and similar references refer to Akoya Biosciences, Inc. and its consolidated subsidiaries.

AKOYA BIOSCIENCES, INC. AND SUBSIDIARY

CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

	March 31, 2021 (unaudited)	December 31, 2020
Assets		
Current assets		
Cash and cash equivalents	$ 11,691	$ 17,006
Accounts receivable, net	6,590	6,470
Inventories, net	4,718	4,263
Prepaid expenses and other current assets	1,035	957
Total current assets	24,034	28,696
Property and equipment, net	6,053	5,528
Restricted cash – long term	502	502
Demo inventory, net	1,828	1,494
Intangible assets, net	22,160	22,714
Goodwill	18,262	18,262
Other assets	1,642	464
Total assets	$ 74,481	$ 77,660
Liabilities and stockholders' deficit		
Current liabilities		
Accounts payable	$ 5,776	$ 5,074
Accrued expenses and other current liabilities	9,151	7,015
Current portion of capital lease obligations	277	197
Deferred revenue	4,116	3,844
Current portion of long-term debt	1,238	1,032
Total current liabilities	20,558	17,162
Deferred revenue, net of current portion	1,059	1,008
Long-term debt, net of current portion and debt discount	33,388	33,488
Deferred tax liability, net	160	170
Capital lease obligations, net of current portion	399	277
Warrant liability	2,360	490
Contingent consideration liability (Note 4), net of current portion	6,260	6,984
Total liabilities	64,184	59,579
Redeemable Convertible Preferred Stock:		
Series B Redeemable Convertible Preferred Stock, $0.00001 par value; 13,715,330 shares authorized, issued and outstanding at March 31, 2021 and December 31, 2020 (preference in liquidation of $11,680 and $11,500 at March 31, 2021 and December 31, 2020, respectively)	11,680	11,500
Series C Redeemable Convertible Preferred Stock, $0.00001 par value; 26,732,361 shares authorized, issued and outstanding at March 31, 2021 and December 31, 2020 (preference in liquidation of $30.617 and $30,107 at March 31, 2021 and December 31, 2020, respectively)	30,617	30,107
Series D Redeemable Convertible Preferred Stock, $0.00001 par value; 16,758,996 shares authorized; 16,390,217 shares issued and outstanding at March 31, 2021 and December 31, 2020 (preference in liquidation of $28,000 and $27,500 at March 31, 2021 and December 31, 2020, respectively)	28,000	27,500
Total redeemable convertible preferred stock	70,297	69,107
Stockholders' deficit:		
Series A Convertible Preferred Stock, $0.00001 par value; 5,013,333 shares authorized, issued and outstanding (preference in liquidation of $1,253) at March 31, 2020 and December 31, 2020	1,253	1,253
Class A Common Stock, $0.00001 par value; 62,220,020 shares authorized; 0 shares issued and outstanding at March 31, 2021 and December 31, 2020	—	—
Class B Common Stock, $0.00001 par value; 16,822,202 shares authorized; 2,835,099 and 2,563,765 issued and outstanding at March 31, 2021, and December 31, 2020, respectively	1	1
Additional paid in capital	—	—
Accumulated deficit	(61,254)	(52,280)
Total stockholders' deficit	(60,000)	(51,026)
Total liabilities, redeemable convertible preferred stock, and stockholders' deficit	$ 74,481	$ 77,660

See accompanying notes to consolidated financial statements.

AKOYA BIOSCIENCES, INC. AND SUBSIDIARY

CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

(in thousands except share & per share data)

	Three months ended	
	March 31, 2021	March 31, 2020
Revenue:		
Product revenue	$ 9,963	$ 8,929
Service and other revenue	2,249	2,092
Total revenue	12,212	11,021
Cost of goods sold:		
Cost of product revenue	$ 3,607	$ 3,466
Cost of service and other revenue	1,200	859
Total cost of goods sold	$ 4,807	$ 4,325
Gross profit	$ 7,405	$ 6,696
Operating expenses:		
Selling, general and administrative	8,179	6,349
Research and development	3,192	2,372
Change in fair value of contingent consideration	426	(1,561)
Depreciation and amortization	1,009	899
Total operating expenses	12,806	8,059
Loss from operations	(5,401)	(1,363)
Other income (expense):		
Interest expense, net	(751)	(637)
Change in fair value of warrant liability	(1,870)	—
Other expense, net	(66)	(105)
Loss before provision for income taxes	$ (8,088)	$ (2,105)
Benefit (provision) for income taxes	6	(38)
Net loss	(8,082)	(2,143)
Net loss per share attributable to common stockholders, basic and diluted	$ (3.54)	$ (1.59)
Weighted-average shares outstanding, basic and diluted	2,706,133	2,288,875

See accompanying notes to consolidated financial statements.

AKOYA BIOSCIENCES, INC. AND SUBSIDIARY

CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT (Unaudited)
(in thousands, except share and per share data)

	Series B Redeemable Convertible Preferred Stock		Series C Redeemable Convertible Preferred Stock		Series D Redeemable Convertible Preferred Stock		Series A Convertible Preferred Stock		Class B Common Stock		Additional Paid in Capital	Accumulated Deficit	Total Stockholders' deficit
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at December 31, 2020	**13,715,330**	**$ 11,500**	**26,732,361**	**$ 30,107**	**16,390,217**	**$ 27,500**	**5,013,333**	**$ 1,253**	**2,563,765**	**$ 1**	**$ —**	**$ (52,280)**	**$ (51,026)**
Exercise of stock options	—	—	—	—	—	—	—	—	271,334	—	44	—	44
Accrued dividends	—	180	—	510	—	500	—	—	—	—	(298)	(892)	(1,190)
Net loss	—	—	—	—	—	—	—	—	—	—	—	(8,082)	(8,082)
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	254	—	254
Balance at March 31, 2021	**13,715,330**	**$ 11,680**	**26,732,361**	**$ 30,617**	**16,390,217**	**$ 28,000**	**5,013,333**	**$ 1,253**	**2,835,099**	**$ 1**	**$ —**	**$ (61,254)**	**$ (60,000)**

	Series B Redeemable Convertible Preferred Stock		Series C Redeemable Convertible Preferred Stock		Series D Redeemable Convertible Preferred Stock		Series A Convertible Preferred Stock		Class B Common Stock		Additional Paid in Capital	Accumulated Deficit	Total Stockholders' deficit
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at December 31, 2019	**13,715,330**	**$ 10,780**	**26,732,361**	**$ 28,067**	**16,390,217**	**$ 25,500**	**5,013,333**	**$ 1,253**	**2,286,872**	**$ 1**	**$ —**	**$ (31,413)**	**$ (30,159)**
Exercise of stock options	—	—	—	—	—	—	—	—	5,495	—	2	—	2
Accrued dividends	—	180	—	510	—	500	—	—	—	—	(314)	(876)	(1,190)
Net loss	—	—	—	—	—	—	—	—	—	—	—	(2,143)	(2,143)
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	312	—	312
Balance at March 31,2020	**13,715,330**	**$ 10,960**	**26,732,361**	**$ 28,577**	**16,390,217**	**$ 26,000**	**5,013,333**	**$ 1,253**	**2,292,367**	**$ 1**	**$ —**	**$ (34,432)**	**$ (33,178)**

See accompanying notes to consolidated financial statements.

AKOYA BIOSCIENCES INC. AND SUBSIDIARY

CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)
(in thousands)

	Three months ended	
	March 31, 2021	March 31, 2020
Operating activities		
Net loss	$ (8,082)	$ (2,143)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,041	899
Non-cash interest expense	106	73
Stock-based compensation expense	254	312
Paid-in-kind interest	—	109
Deferred tax liability	(10)	27
Change in fair value of contingent consideration	426	(1,561)
Change in fair value of warrant liability	1,870	—
Changes in operating assets and liabilities:		
Accounts receivable, net	(120)	6,626
Prepaid expenses and other assets	(1,256)	955
Inventories, net	(430)	(907)
Accounts payable	702	(4,679)
Accrued expenses and other liabilities	772	(274)
Deferred revenue	323	(394)
Net cash used in operating activities	(4,404)	(957)
Investing activities		
Interest income reinvested in certificates of deposit	—	(39)
Purchases of property and equipment	(907)	(1,396)
Net cash used in investing activities	(907)	(1,435)
Financing activities		
Proceeds from stock option exercises	44	2
Principal payments on capital leases	(48)	(35)
Payments of contingent consideration	—	(2,627)
Net cash used in financing activities	(4)	(2,660)
Net decrease in cash, cash equivalents, and restricted cash	(5,315)	(5,052)
Cash, cash equivalents, and restricted cash at beginning of year	17,508	12,137
Cash, cash equivalents, and restricted cash at end of year	12,193	$ 7,085
Supplemental disclosures of cash flow information		
Cash paid for interest	$ 638	$ 457
Cash paid for income taxes	—	$ —
Supplemental disclosures of non-cash activities		
Purchases of property and equipment included in accounts payable and accrued expenses	$ 884	$ 791
Accretion of dividends on Series B, C, and D Preferred Stock	$ 1,190	$ 1,190

See accompanying notes to consolidated financial statements.

(1) The company and basis of presentation

Description of business

Akoya Biosciences, Inc. ("Akoya" or the "Company") is a life sciences technology company, founded on November 13, 2015 as a Delaware corporation with operations based in Marlborough, Massachusetts and Menlo Park, California, delivering spatial biology solutions focused on transforming discovery and clinical research. Spatial biology refers to an evolving technology that enables academic and biopharma scientists to detect and map the distribution of cell types and biomarkers across whole tissue samples at single cell resolution, enabling advancements in their understanding of disease progression and patient response to therapy. Through Akoya's CODEX and Phenoptics platforms, reagents, software and services, the Company offers end-to-end solutions to perform tissue analysis and spatial phenotyping across the full continuum, from discovery through translational and clinical research.

On September 28, 2018, the Company acquired the commercial Phenoptics division of PerkinElmer, Inc. ("PKI") for multiplex immunofluorescence, with the aim of providing consumers with a full suite of end-to-end solutions for high parameter tissue analysis. The Phenoptics technology offers pathology solutions for cancer immunology and immunotherapy research, including advanced multiplex immunochemistry staining kits, multispectral imaging and whole side scanning instruments, and image analysis software. The Company's combined portfolio of complementary technologies aims to fuel groundbreaking advancements in cancer immunology, immunotherapy, neurology and a wide range of other applications. The Company sells into three main regions across the world: North America, Asia-Pacific ("APAC"), and Europe-Middle East-Africa ("EMEA").

On April 8, 2021, the Board of Directors of the Company approved a 1-for-2.33 reverse stock split of its issued and outstanding common stock and a proportional adjustment to the existing conversion ratios for each series of the Company's convertible preferred stock, which was effected on April 9, 2021. The par value of the authorized stock was not adjusted as a result of the reverse stock split. Other than the par value, all issued and outstanding shares of common stock and related per share data shown in the accompanying financial statements and related notes have been retroactively revised to reflect the reverse stock split and adjustment of the Preferred Stock conversion ratios.

In April 2021, the Company completed the initial public offering of its common stock (the "IPO"). In the IPO, the Company issued and sold 7,567,000 shares of its common stock at a price to the public of $20.00 per share, including the exercise by the underwriters of their option to purchase an additional 987,000 shares. The Company received approximately $138.2 million in net proceeds, after deducting underwriting discounts and commissions and other offering expenses. Immediately prior to completing the IPO, on April 20, 2021 all preferred stock converted into 26,545,579 shares of common stock, and all outstanding shares of the Company's Class B common stock converted on a 1 for 1 basis into 2,563,765 shares of the Company's Class A common stock.

The consolidated financial statements, including share and per share amounts, do not give effect to the related conversion of preferred stock into shares of common stock.

Liquidity and going concern

At March 31, 2021, the Company has cash and cash equivalents of $11,691 and an accumulated deficit of $61,254. The future success of the Company is dependent on its ability to successfully commercialize its products, successfully launch future products, obtain additional capital and ultimately attain profitable operations. The Company has funded its operations primarily through its preferred stock issuances, debt financing arrangements, and the IPO.

The Company is subject to a number of risks similar to other newly commercial life sciences companies, including, but not limited to, development and market acceptance of the Company's product candidates, development by its competitors of new technological innovations, protection of proprietary technology, and raising additional capital.

After its acquisition of the Phenoptics division of PKI, the Company has incurred significant commercialization expenses related to product sales, marketing, manufacturing and distribution. The Company may seek to fund its operations through private equity or debt financings, as well as other sources. However, the Company may be unable to raise additional funds or enter into such other arrangements when needed, on favorable terms, or at all. The Company's failure to raise capital or enter into such other arrangements if and when needed would have a negative impact on the Company's business, results of operations, financial condition and the Company's ability to develop and commercialize existing and future products.

In October 2020, the Company entered into a new debt financing arrangement with Midcap Trust, providing for aggregate proceeds of $32,500. $5,000 is available to be drawn upon from March 31, 2021, through June 30, 2021.

The Company has incurred losses since its inception and has used cash from operations of $4,404 during the three months ended March 31, 2021. However, we believe that our existing cash and cash equivalents, together with the $5,000 in existing availability under the financing arrangement with Midcap Trust, which is available to be drawn between March 31, 2021 to June 30, 2021, along with the proceeds from the IPO will be adequate to satisfy our current operating plans for at least the next twelve months from the issuance of these financial statements.

The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of the uncertainties described above.

(2) Summary of significant accounting policies

Principles of consolidation

The Company's financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"). Any reference in these notes to applicable guidance is meant to refer to the authoritative United States generally accepted accounting principles as found in the Accounting Standards Codification ("ASC") and Accounting Standards Updates ("ASU") of the Financial Accounting Standards Board ("FASB"). The Company's consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, Akoya Biosciences UK Ltd. ("Akoya UK"). All intercompany balances and transactions have been eliminated in consolidation.

Unaudited interim financial information

The accompanying consolidated balance sheet as of March 31, 2021, and the consolidated statements of operations, the consolidated statements of redeemable convertible preferred stock and stockholders' deficit, and the consolidated statements of cash flows for the three months ended March 31, 2021 and 2020 are unaudited. The unaudited interim consolidated financial statements have been prepared on the same basis as the audited annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for the fair statement of the Company's financial position as of March 31, 2021, the results of its operations for the three months ended March 31, 2021 and 2020, and cash flows for the three months ended March 30, 2021 and 2020. The financial data and other information disclosed in these notes related to the three months ended March 31, 2021 and 2020 are also unaudited. The results for the three months ended March 31, 2021 are not necessarily indicative of results to be expected for the year ending December 31, 2021, any other interim periods, or any future year or period. The consolidated balance sheet as of December 31, 2020 included herein was derived from the audited consolidated financial statements as of that date. These unaudited consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the notes thereto for the year ended December 31, 2020 included in the Company's final prospectus dated April 15, 2021 for the IPO filed with the SEC on April 19, 2021 pursuant to Rule 424(b)(4) relating to our Registration Statement on Form S-1 (File No. 333-254760).

Foreign currency translation

The functional currency for the Akoya UK subsidiary is British Pound Sterling. The balance sheet is translated from the functional currency to the U.S. dollar, or the reporting currency, at the exchange rate as of the balance sheet date. Revenues, expenses, and cash flows are translated at average rates during each reporting period. The effects of foreign currency translation adjustments are charged directly to operations and are included in other expense and were determined to be immaterial for the three months ended March 31, 2021 and 2020.

Foreign exchange transaction gains and losses are included in other expense, net in the accompanying consolidated statements of operations and were determined to be immaterial for the three months ended March 31, 2021 and 2020.

Use of estimates

The preparation of the Company's consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. The Company utilizes certain estimates in the determination of the fair value of its stock options and warrant, the useful lives of property and equipment, revenue recognition, determining the fair value of intangible assets, accrued expenses, income tax accounting, the value of purchase consideration paid and identifiable assets acquired and assumed in acquisitions, contingent consideration, goodwill and intangible asset impairment review, and other contingencies. The Company bases its estimates on historical experience and other market-specific or other relevant assumptions that it believes to be reasonable under the circumstances. Actual results could differ from such estimates.

Segment information

Operating segments are defined as components of an enterprise about which separate discrete information is available for evaluation by the chief operating decision-maker in deciding how to allocate resources and assess performance. The Company's chief operating decision-maker, the Company's chief executive officer, views the Company's operations and manages its business as a single operating segment.

Concentrations of credit risk

Cash and cash equivalents are financial instruments that potentially subject the Company to concentrations of credit risk. The Company maintains its cash deposits, which at times may exceed federally insured limits, with large financial institutions and, accordingly, the Company believes their cash and cash equivalents are subject to minimal credit risk.

Cash and cash equivalents and restricted cash

The Company considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents.

The Company records cash and cash equivalents as restricted when it is unable to freely use such cash and cash equivalents for general operating purposes. As of March 31, 2021 and December 31, 2020, restricted cash is recorded as long term and consists of a security deposit in a financial institution that is restricted from use as collateral for our letter of credit associated with our office and laboratory space in Marlborough, MA (Note 12), as well as cash restricted from use for the Company's corporate credit card program.

Accounts receivable

The Company's accounts receivable consists of amounts due from sales to commercial customers. At each reporting period, management reviews all outstanding balances to determine if the facts and circumstances of each customer relationship indicate the need for a reserve. The Company does not require collateral and had an allowance for doubtful accounts of $80 and $103 at March 31, 2021 and December 31, 2020, respectively.

Inventory

Inventories are stated at the lower of cost or net realizable value. The Company determines the cost of its inventories, which includes amounts related to materials, direct labor and manufacturing overhead, on a first-in, first -out basis. The Company performs an assessment of the recoverability of capitalized inventory during each reporting period and writes down any excess and obsolete inventories to their realizable value in the period in which the impairment is first identified. Shipping and handling costs incurred for inventory purchases are capitalized and recorded upon sale within the cost of goods sold in the consolidated statements of operations. Inventory is primarily raw materials as the Company utilizes contract manufacturers to produce the final products, which are typically drop-shipped directly to customers.

Fair value measurements

Certain assets and liabilities are reported on a recurring basis at fair value. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. ASC 820, Fair Value Measurements ("ASC 820"), establishes a hierarchy of inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the 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 hierarchy defines three levels of valuation inputs:

Level 1 — Quoted unadjusted prices for identical instruments in active markets.

Level 2 — Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived valuations in which all observable inputs and significant value drivers are observable in active markets.

Level 3 — Model derived valuations in which one or more significant inputs or significant value drivers are unobservable, including assumptions developed by the Company.

The fair value hierarchy prioritizes valuation inputs based on the observable nature of those inputs. Assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and consider factors specific to the asset or liability (Note 4).

For certain financial instruments, including accounts receivable, prepaid expenses and other current assets, accounts payable, and accrued expenses, the carrying amounts approximate their fair values as of March 31, 2021 and December 31, 2020 because of their short- term nature. At March 31, 2020 and December 31, 2020 the carrying value of the Company's debt approximated fair value, which was determined using Level 3 inputs, using market quotes from brokers and is based on current rates offered for similar debt (Note 8).

Property and equipment

Property and equipment are recorded at cost and depreciated over their estimated useful lives using the straight-line method. Repairs and maintenance costs are expensed as incurred, whereas major improvements are capitalized as additions to property and equipment.

Demo inventory

Demo inventory is considered a hybrid between fixed asset and regular inventory as the Company occasionally sells the demo product to customers upon request. Potential customers and key opinion leaders use demo inventory in the field for a trial period and on occasion purchase the inventory within a few months of usage. Demo inventory that is not purchased by the potential customer or key opinion leader is returned to the Company. Demo inventory is recorded at cost and depreciated over their estimated useful lives using the straight-line method. Repairs and maintenance costs are expensed as incurred, whereas major improvements are capitalized as additions to demo inventory. Upon sale, Demo inventory, if and when sold, is recorded as product revenue and the remaining carrying value is booked through cost of goods sold.

Business combinations — intangible assets and contingent consideration

The Company bases the fair value of identifiable intangible assets acquired in a business combination on detailed valuations that use information and assumptions provided by management, which consider management's best estimates of inputs and assumptions that a market participant would use. The Company's intangible assets are amortized on a straight-line basis over their estimated useful lives ranging from 4 to 15 years.

Further, for those arrangements which arise from a business combination that involve potential future contingent consideration, the Company records on the date of acquisition a liability equal to the fair value of the estimated additional consideration the Company may be obligated to make in the future. The Company re-measures this liability each reporting period and records changes in the fair value through changes in fair value of contingent consideration within the Company's consolidated statements of operations. The Company records amounts currently due as it relates to contingent consideration within accrued expenses. Increases or decreases in the fair value of the contingent consideration liability can result from changes in discount rates, periods, timing and amount of projected revenue or timing or likelihood of achieving regulatory, revenue or commercialization-based milestones. The use of alternative valuation assumptions, including estimated revenue projections, growth rates, cash flows, discount rates, useful life or probability of achieving regulatory or revenue-based milestones could result in different purchase price allocations and recognized amortization expense and contingent consideration expense or benefit in current and future periods.

Impairment of long-lived assets and goodwill

The Company evaluates its long-lived assets, including demo inventory, for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If indications of impairment exist, projected future undiscounted cash flows associated with the asset or asset group are compared to the carrying amount to determine whether the asset's value is recoverable. During this analysis, the Company reevaluates the significant assumptions used in determining the original cost and estimated lives of long-lived assets. Although the assumptions may vary from asset to asset, they generally include operating results, changes in the use of the asset, cash flows and other indicators of value. The Company then determines whether the remaining useful life continues to be appropriate or whether there has been an impairment of long-lived assets based primarily upon whether expected future undiscounted cash flows are sufficient to support the assets' recovery. If the carrying value of the asset exceeds such projected undiscounted cash flows, the asset will be written down to its estimated fair value.

The Company tests goodwill for impairment annually and tests intangible assets for impairment whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable (i.e., upon occurrence of a triggering event). The Company performs its annual impairment review of goodwill at November 1 (and if and when triggering events occur between annual impairment tests). Upon completion of its quantitative assessment as of November 1, 2020, the Company has concluded that goodwill is not impaired. No events or changes in circumstances have indicated that the Company's intangible assets with useful lives are impaired as of March 31, 2021.

Revenue recognition

The Company follows ASC 606, Revenue from Contracts with Customers ("ASC 606").

The Company generates revenue from the sale and installation of instruments, related warranty services, reagents and software (both company -owned and with third parties). Pursuant to ASC 606, revenue is recognized when a customer obtains control of promised goods or services. The amount of revenue recognized reflects the consideration the Company expects to be entitled to receive in exchange for these goods and services.

To determine the appropriate amount of revenue to be recognized for arrangements determined to be within the scope of Topic 606, the Company performs the following five steps: (i) identification of the customer contract; (ii) identification of the performance obligations; (iii) measurement of the transaction price, including the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations; and (v) recognition of revenue when (or as) the Company satisfies each performance obligation. The Company only applies the five-step model to contracts when it is probable that the Company will collect consideration it is entitled to in exchange for the goods or services it transfers to the customer.

The Company evaluates all promised goods and services within a customer contract and determines which of those are separate performance obligations. This evaluation includes an assessment of whether the good or service is capable of being distinct and whether the good or service is separable from other promises in the contract. Promised goods or services are considered distinct when (i) the customer can benefit from the good or service on its own or together with other readily available resources and (ii) the promised good or service is separately identifiable from other promises in the contract.

Most of the Company's contracts with customers contain multiple performance obligations (i.e., sale of an instrument and warranty services). For these contracts, the Company accounts for individual performance obligations separately if they are distinct (i.e. capable of being distinct and separable from other promises in the contract). The transaction price is allocated to the separate performance obligations on a relative standalone selling price basis. Excluded from the transaction price are sales tax and other similar taxes which are presented on a net basis.

Product Revenue

Product revenue is generated by the sale of instruments and consumable reagents predominantly through the Company's direct sales force in the United States and in geographic regions outside the United States such as APAC and EMEA. The Company does not offer product return or exchange rights (other than those relating to defective goods under warranty) or price protection allowances to its customers. When an instrument is purchased by a customer, the Company recognizes revenue when the related performance obligation is satisfied (i.e. when the control of an instrument has passed to the customer). Revenue from the sale of consumables is recognized upon shipment to the customer. The Company's perpetual software licenses generally have significant stand-alone functionality to the customer upon delivery and are considered to be functional intellectual property (IP). The Company's perpetual software licenses are considered distinct performance obligations, and revenue allocated to the software license is typically recognized upon provision of the license/software code to the customer (i.e., when the software is available for access and download by the customer).

Service and Other Revenue

Product sales of instruments include a service-based warranty typically for one year following the installation of the purchased instrument, with an extended warranty for an additional year sold in many cases. These are separate performance obligations as they are service-based warranties and are recognized on a straight-line basis over the service delivery period. After completion of the service period, customers have an option to renew or extend the warranty services, typically for additional one-year periods in exchange for additional consideration. The extended warranties are also service-based warranties that represent separate purchasing decisions. The Company recognizes revenue allocated to the extended warranty performance obligation on a straight-line basis over the service delivery period. Revenue from separately charged installation services is recognized upon completion of the installation process. Additionally, the Company provides laboratory services, in which revenue is recognized as services are performed. For laboratory services, we generally use the cost-to-cost approach to measure the extent of progress towards completion of the performance obligation because we believe it best depicts the transfer of assets to the customer. Under the cost -to -cost measure approach, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues are recorded proportionally as costs are incurred. The Company records shipping and handling billed to customers as service and other revenue and the related costs in cost of service and other revenue in the consolidated statements of operations.

Disaggregation of Revenue

The Company disaggregates revenue from contracts with customers by type of products, and between service and other revenue, as it best depicts how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors. The following table disaggregates the Company's revenue by major source:

	Three months ended	
	March 31, 2021	**March 31, 2020**
Revenue		
Product revenue		
Instruments	$ 6,837	$ 6,650
Consumables	2,544	2,066
Standalone software products	582	213
Total product revenue	$ 9,963	$ 8,929
Service and other revenue	$ 2,249	$ 2,092
Total revenue	$ 12,212	$ 11,021

Significant Judgments

The Company's contracts with customers often include promises to transfer multiple products and services to a customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together requires significant judgment. Once the Company determines the performance obligations, the Company determines the transaction price, which includes estimating the amount of variable consideration, based on the most likely amount, to be included in the transaction price, if any. The Company then allocates the transaction price to each performance obligation in the contract based on a relative standalone selling price method. The corresponding revenue is recognized as the related performance obligations are satisfied as discussed in the revenue categories above.

Judgment is required to determine the standalone selling price for each distinct performance obligation. The Company determines standalone selling price based on the price at which the performance obligation in the contract (i.e. instrument, service warranty, installation) would be sold separately. As the first-year warranty for each instrument is embedded in the instrument price, the amount allocated to the first-year warranty has been determined based on the separately identifiable price of the Company's extended warranty offering when it is sold on a renewal basis.

If the standalone selling price is not observable through past transactions, the Company estimates the standalone selling price taking into account available information such as market conditions and the expected costs and margin related to the performance obligations. Contracts in which only one performance obligation is identified (i.e., consumables and standalone software products) do not require allocation of the transaction price.

Contract Assets and Liabilities

The Company did not record any contract assets at March 31, 2021 or December 31, 2020.

The Company's contract liabilities consist of upfront payments for service-based warranties on instrument sales. The Company classifies these contract liabilities in deferred revenue as current or noncurrent based on the timing of when the Company expects to service the warranty.

Cost to Obtain and Fulfill a Contract

Under ASC 606, the Company is required to capitalize certain costs to obtain customer contracts and costs to fulfill customer contracts. These costs are required to be amortized to expense on a systemic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates, compared to previously being expensed as incurred. As a practical expedient, the Company recognizes any incremental costs to obtain a contract as an expense when incurred if the amortization period of the asset is one year or less. Capitalizable costs to obtain contracts, such as commissions, and costs to fulfill customer contracts were determined to be immaterial for the three months ended March 31, 2021 and 2020.

Redeemable convertible preferred stock

The Company has classified redeemable convertible preferred stock as temporary equity on the accompanying consolidated balance sheets because it becomes redeemable due to the passage of time or could become redeemable due to certain change in control clauses that are outside of the Company's control. The redeemable convertible preferred stock is adjusted to the redemption value over time through the date of the earliest redemption date. These increases are recorded as charges against retained earnings, if any, and then to additional paid-in capital. Then, in the absence of additional paid-in capital, the accretion is charged to the accumulated deficit.

Research and development costs

Costs incurred in the research and development of the Company's product candidates are expensed as incurred. Research and development expenses consist of costs incurred in performing research and development activities, including activities associated with performing services under research revenue arrangements, costs associated with the manufacture of developing products and include salaries and benefits, stock compensation, research related facility and overhead costs, laboratory supplies, equipment and contract services.

Capitalized software development costs

Since the Company sells standalone licensed software products to its customers, the Company applies the software revenue recognition guidance related to accounting for the costs of such software to be sold, leased or otherwise marketed in accordance with ASC 985-20, *Costs of Software to be Sold, Leased, or Marketed*, or ASC 985-20. Such guidance requires capitalization of certain software development costs subsequent to the establishment of technological feasibility. The Company has determined that costs eligible for capitalization under ASC 985-20 during the three months ended March 31, 2021 and 2020 were immaterial.

The Company accounts for costs to develop or obtain internal-use software in accordance with ASC 350-40, *Internal-Use Software*, or ASC 350-40. The Company also accounts for costs of significant upgrades and enhancements resulting in additional functionality under ASC 350-40. These costs are primarily development costs related to our cloud-based Proxima software which will be accessed by customers on a subscription basis. Proxima is an open solution designed to meet both requirements by enabling the storage, sharing, analysis, and visualization of spatial phenotyping images and experimental results generated on our platforms. The Company determined Proxima was ready to be sold in 2021, and thus started amortizing the associated capitalized intangible asset as of January 1, 2021. Costs incurred for maintenance, training, and minor modifications or enhancements are expensed as incurred. Internal-use software is amortized on a straight-line basis over its estimated useful life. Management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets. Development costs related to internal-use software were $659 in 2020 and recorded as an intangible asset on our December 31, 2020 consolidated balance sheet. The Company estimated the useful life of such asset to be five years. The Company determined costs eligible for capitalization under ASC 350-40 during the three months ended March 31, 2021 were immaterial.

Comprehensive loss

Comprehensive loss is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. Comprehensive loss consists of net loss and other comprehensive loss, which includes certain changes in equity that are excluded from net loss. The Company's comprehensive loss equals reported net loss for all periods presented.

Deferred offering costs

The Company capitalizes certain legal, professional accounting and other third party fees that are directly associated with in-process equity financings as deferred offering costs until such financings are consummated. After consummation these costs are recorded in stockholders' equity (deficit) as a reduction of additional paid in capital generated as a result of the offering. Should the in-process equity financing be abandoned, the deferred offering costs will be expensed as a charge to operating expenses. As of March 31, 2021 and December 31, 2020, $1,439 and $269, respectively, of deferred offering costs were included in other assets in the accompanying consolidated balance sheets.

Stock-based compensation

The Company records stock-based compensation for options granted to employees and to members of the board of directors for their services on the board of directors based on the grant date fair value of awards issued, and the expense is recorded on a straight-line basis over the requisite service period, which is generally four years. The Company accounts for non-employee stock-based compensation arrangements based on the fair value of the consideration received or the equity instruments issued, whichever is more reliably measurable. The measurement date for non-employee awards is generally the date that the performance of services required for the non-employee award is complete. In accordance with authoritative guidance, the fair value of non-employee stock -based awards is estimated on the date of grant, and subsequently revalued at each reporting period over their vesting period using the Black-Scholes option-pricing model.

The Company uses the Black-Scholes-Merton option pricing model to determine the fair value of stock options. The use of the Black-Scholes-Merton option -pricing model requires management to make assumptions with respect to the expected term of the option, the expected volatility of the common stock consistent with the expected life of the option, risk -free interest rates and expected dividend yields of the common stock. The expected term was determined according to the simplified method, which is the average of the vesting tranche dates and the contractual term. Due to the lack of company-specific historical and implied volatility, the Company bases its estimate of expected volatility on the historical volatility of a group of similar companies that are publicly traded. For these analyses, companies with comparable characteristics are selected, including enterprise value and position within the industry, and with historical price information sufficient to meet the expected life of the stock-based awards. The Company computes the historical volatility data using the daily closing prices for the selected companies' shares during the equivalent period of the calculated expected term of its stock-based awards. The risk-free interest rate is determined by reference to the U.S. Treasury zero-coupon issues with remaining maturities similar to the expected term of the options. The Company has not paid, and does not anticipate paying, cash dividends on shares of common stock; therefore, the expected dividend yield is assumed to be zero. The Company has elected to account for forfeitures as they occur; any compensation cost previously recognized for an award that is forfeited because of a failure to satisfy a service or performance condition will be reversed in the period of the forfeiture. Refer to Note 10 for further details on the Company's stock-based compensation plan.

Warrant to purchase redeemable convertible preferred stock

The Company reviews the terms of all warrants issued in connection with the applicable accounting guidance and classifies warrants as a long-term liability on the consolidated balance sheets if the warrant may conditionally obligate the Company to transfer assets, including repurchase of the issuers' shares, at some point in the future. Warrants to purchase shares of redeemable convertible preferred stock meet these criteria and therefore require liability-classification.

Liability-classified warrants are subject to re-measurement at each balance sheet date, and any change in fair value is recognized as a component of other income (expense) in the consolidated statements of operations. The Company estimates the fair value of these warrants at issuance and each financial reporting date thereafter using the valuation model as discussed in Note 4.

Income taxes

The Company provides for income taxes using the liability method. The Company provides deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the Company's financial statement carrying amounts and the tax basis of assets and liabilities using enacted tax rates expected to be in effect in the years in which the differences are expected to reverse. Deferred tax assets and liabilities are recorded net as long term. A valuation allowance is provided to reduce the deferred tax assets to the amount that will more likely than not be realized.

The Company applies ASC 740 Income Taxes ("ASC 740") in accounting for uncertainty in income taxes. The Company has identified an uncertain tax position; however, this uncertain tax position has not created a liability as of March 31, 2021 and December 31, 2020 as the reserve has been applied against the asset. The Company will recognize interest and penalties related to uncertain tax positions, if any, in income tax expense.

Commitments and contingencies

Indemnification obligations

The Company has entered into indemnification agreements with its officers and directors that require the Company to indemnify such individuals for certain events or occurrences while each such officer or director is, or was, serving at the Company's request in such capacity. The maximum potential amount of future payments the Company could be required to make is, in many cases, unlimited. The Company has directors' and officers' liability insurance coverage that limits its exposure and enables the Company to recover a portion of any future amounts paid.

The Company leases office and laboratory space under operating leases. The Company has standard indemnification arrangements under the leases that require it to indemnify the landlords against all costs, expenses, fines, suits, claims, demands, liabilities, and actions directly resulting from any breach, violation or nonperformance of any covenant or condition of the Company's leases.

In the ordinary course of business, the Company enters into indemnification agreements with certain suppliers and business partners where the Company has certain indemnification obligations limited to the costs, expenses, fines, suits, claims, demands, liabilities and actions directly resulting from the Company's gross negligence or willful misconduct, and in certain instances, breaches, violations or nonperformance of covenants or conditions under the agreements.

As of March 31, 2021 and December 31, 2020, the Company had not experienced any material losses related to these indemnification obligations, and no material claims with respect thereto were outstanding. The Company does not expect significant claims related to these indemnification obligations and, consequently, concluded that the fair value of these obligations is negligible, and no related reserves were established.

The Company is subject to the possibility of loss contingencies arising in the ordinary course of business. Management considers the likelihood of loss related to an asset, or the incurrence of a liability, as well as its ability to reasonably estimate the amount of the loss, in determining loss contingencies. An estimated loss contingency is accrued when it is probable that an asset has been impaired, or a liability has been incurred and the amount of loss can be reasonably estimated. The Company regularly evaluates current information available to determine whether such accruals should be adjusted and whether new accruals are required. Refer to Note 12 for the details of the Company's contingencies.

Legal proceedings

From time to time, the Company may become involved in litigation relating to claims arising from the ordinary course of business. Management believes that there are no claims or actions pending against the Company currently, the ultimate disposition of which would have a material adverse effect on the Company's consolidated results of operation, financial condition or cash flows.

Net loss per share attributable to common stockholders

Basic and diluted net loss per common share outstanding is determined by dividing net loss, as adjusted for accretion and accrued dividends on redeemable convertible preferred stock, by the weighted average common shares outstanding during the period. Diluted net loss per share reflects the potential dilution that would occur if securities or other contracts to issue common stock were exercised or converted into common stock; however, potential common equivalent shares are excluded if their effect is anti-dilutive. In computing diluted net loss per share, the Company utilizes the treasury stock method.

The Company applies the two- class method to compute basic and diluted net loss or income per share when it has issued shares that meet the definition of participating securities. The two- class method determines net (loss) or income per share for each class of common and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires net (loss) income available to common stockholders for the period to be allocated between common and participating securities based upon their respective rights to share in the earnings as if all net (loss) income for the period had been distributed. The Company's convertible preferred stock participates in any dividends declared by the Company and are therefore considered to be participating securities. The participating securities are not required to participate in the losses of the Company, and therefore during periods of loss there is no allocation required under the two-class method.

Recent Accounting Standards

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. The Company is considered to be an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended (Jobs Act). The Jobs Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this extended transition period and, as a result, we will not be required to adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

Recently issued but not yet adopted accounting standards

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842) in order to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet for those leases classified as operating leases under previous generally accepted accounting principles. ASU 2016-02 requires a lessee to recognize a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term on the balance sheet. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018 (including interim periods within those periods) and early adoption is permitted. In August 2018, the FASB issued ASU 2018-11, Targeted Improvements to ASC 842, which provides a new transition option in which an entity initially applies ASU 2016-02 at the adoption date and recognizes a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. In June 2020, the FASB issued an extension in the effective date for all non-public companies. This extended the effective date to annual periods beginning after December 15, 2021 (i.e. calendar year periods beginning on January 1, 2022) and interim periods within fiscal years beginning after December 15, 2022. Early adoption is permitted. Prior period comparative balances will not be adjusted. The Company expects to use the new transition option and will expect to be also utilizing the package of practical expedients that allows it to not reassess: (1) whether any expired or existing contracts are or contain leases, (2) lease classification for any expired or existing leases, and (3) initial direct costs for any existing leases. The Company expects to use the short-term lease exception for leases with a term of twelve months or less. Additionally, the Company expects to use the practical expedient that allows it to treat each separate lease component of a contract and its associated non-lease components as a single lease component. The Company has not yet adopted ASU 2016-02 and is continuing to evaluate the impact of adoption on its consolidated financial statements and related disclosures.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments — Credit Losses (Topic 326) — Measurement of Credit Losses on Financial Instruments, which has been subsequently amended by ASU No. 2018-19, ASU No. 2019-04, ASU No. 2019-05, ASU No. 2019-10, ASU No. 2019-11 and ASU No. 2020-03 ("ASU 2016-13"). The provisions of ASU 2016-13 modify the impairment model to utilize an expected loss methodology in place of the currently used incurred loss methodology and require a consideration of a broader range of reasonable and supportable information to inform credit loss estimates. ASU 2016-13 is effective for the Company on January 1, 2023, with early adoption permitted. The Company is currently evaluating the potential impact that ASU 2016-13 may have on its consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU No. 2017-04, Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment, which simplifies the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test. Instead of determining a hypothetical purchase price allocation to measure goodwill impairment, the Company will compare the fair value of a reporting unit with its carrying amount. The update also includes a new requirement to disclose the amount of goodwill allocated to reporting units with zero or negative carrying amounts. This standard is effective for the Company for fiscal years beginning after December 15, 2021, and early adoption is permitted. The Company is in the process of evaluating the impact, if any, that this new guidance will have on the Company's consolidated financial statements.

(3) Significant risks and uncertainties including business and credit concentrations

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash equivalents and receivables. The Company's cash equivalents are held by large, credit worthy financial institutions. The Company invests its excess cash in certificates of deposits. The Company has established guidelines relative to credit ratings, diversification and maturities that seek to maintain safety and liquidity. Deposits in these banks may exceed the amounts of insurance provided on such deposits. To date, the Company has not experienced any losses on its deposits of cash and cash equivalents.

The Company controls credit risk through credit approvals, credit limits, and monitoring procedures. The Company performs periodic credit evaluations of its customers and generally does not require collateral. Accounts receivable are recorded net of an allowance for doubtful accounts. The allowance for doubtful accounts is based on management's assessment of the collectability of specific customer accounts and the aging of the related invoices and represents the Company's best estimate of probable credit losses in its existing accounts receivable. In 2019, PKI served as our distributor for Europe and parts of APAC, and thus represented a significant concentration of revenue and accounts receivable.

For the three months ended March 31, 2021, no customers accounted for more than 10% of revenue. For the three months ended March 31, 2020, PKI accounted for 26% of revenue. One customer accounted for 11% of accounts receivable at March 31, 2020. No customers accounted for greater than 10% of accounts receivable at December 31, 2020.

(4) Fair value of financial instruments

The Company measures the following financial liabilities at fair value on a recurring basis. There were no transfers between levels of the fair value hierarchy during any of the periods presented. The following tables set forth the Company's financial assets and liabilities carried at fair value categorized using the lowest level of input applicable to each financial instrument as of March 31, 2021 and December 31, 2020:

	Balance at March 31, 2021	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Liabilities:				
Warrant liability	$ 2,360	$ —	$ —	$ 2,360
Contingent consideration – Long term portion	$ 6,260	$ —	$ —	$ 6,260
	$ 8,620	$ —	$ —	$ 8,620

	Balance at December 31, 2020	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Liabilities:				
Warrant liability	$ 490	$ —	$ —	$ 490
Contingent consideration – Long term portion	$ 6,984	$ —	$ —	$ 6,984
	$ 7,474	$ —	$ —	$ 7,474

The Company's recurring fair value measurements using Level 3 inputs relate to the Company's contingent consideration liability and warrant liability. In those circumstances where an acquisition involves a contingent consideration arrangement, the Company recognizes a liability equal to the fair value of the contingent payments the Company expects to make as of the acquisition date. The Company re-measures this liability each reporting period and records changes in the fair value through changes in fair value of Contingent consideration on the Company's consolidated statements of operations. Increases or decreases in the fair value of the contingent consideration liability can result from changes in discount rates, periods, timing and amount of projected revenue.

The Company uses the Black-Scholes option pricing model to value the warrant liability for the Series D Preferred Stock warrant. The Black Scholes option pricing model is based on the estimated market value of the underlying redeemable convertible preferred stock at the valuation measurement date, the remaining contractual term of the warrant, risk-free interest rates, expected dividends, and expected volatility of the price of the underlying redeemable convertible preferred stock.

Changes in the fair value of the Company's long-term portion of the contingent consideration liability during the three months ended March 31, 2021 and 2020 were as follows:

Balance as of December 31, 2019	$ 8,139
Contingent consideration paid	(171)
Reclassification of FY 2020 payment to accrued expenses	(1,590)
Change in contingent consideration value	(1,474)
Balance as of March 31, 2020	$ 4,904

Balance as of December 31, 2020	$ 6,984
Reclassification of FY 2021 payment to accrued expenses	(1,150)
Change in contingent consideration value	426
Balance as of March 31, 2021	$ 6,260

The difference between the amount paid in 2020 and the amount included in accrued expenses at December 31, 2019 is $87 and is included in the change in fair value of contingent consideration in our March 31, 2020 consolidated statement of operations.

The recurring Level 3 fair value measurements of the Company's contingent consideration liability include the following significant unobservable inputs:

Contingent Consideration Liability	Fair Value as of March 31, 2021	Valuation Technique	Unobservable Inputs
Revenue-based Payments	$ 6,260	Discounted Cash Flow Analysis under the Income Approach	Revenue discount factor, discount rate

Changes in the fair value of the Company's warrant liability during the three months ended March 31, 2021 and 2020 were as follows:

Balance as of December 31, 2019	$ 192
Change in fair value of warrant liability	—
Balance as of March 31, 2020	$ 192

Balance as of December 31, 2020	$ 490
Change in fair value of warrant liability	1,870
Balance as of March 31, 2021	$ 2,360

The recurring Level 3 fair value measurements of the Company's warrant liability include the following significant unobservable inputs:

Warrant Liability	Fair Value as of March 31, 2021	Valuation Technique	Unobservable Inputs
Warrant to purchase 368,780 shares of Series D Preferred Stock	$ 2,360	Black Scholes option pricing model	Expected volatility, term, risk-free rate

(5) Property and equipment, net

Property and equipment consists of the following:

	Estimated Useful Life (Years)	March 31, 2021	December 31, 2020
Furniture and fixtures	7	$ 358	$ 358
Computers, laptop and peripherals	5	2,773	2,367
Laboratory equipment	5	4,309	3,806
Leasehold improvements	Shorter of the lease life or 7	1,261	1,261
Total property and equipment		8,701	7,792
Less: Accumulated depreciation		(2,648)	(2,264)
Property and equipment, net		$ 6,053	$ 5,528

Depreciation expense of $384 and $322 relating to property and equipment was charged to operations for the three months ended March 31, 2021 and 2020, respectively.

Demo inventory consists of the following:

	Estimated Life (Years)	March 31, 2021	December 31, 2020
Demo inventory – gross	3	$ 2,443	$ 2,010
Less: Accumulated depreciation		(615)	(516)
Demo inventory, net		$ 1,828	$ 1,494

Depreciation expense of $103 and $57 relating to demo equipment was charged to operations for the three months ended March 31, 2021 and 2020, respectively.

(6) Intangible assets and goodwill

Intangible assets as of March 31, 2021 are summarized as follows:

	Cost	Accumulated Amortization	Net	Useful Life (in years)
Customer relationships	$ 11,800	(1,971)	9,829	15
Developed technology	$ 8,300	(1,733)	6,567	12
Licenses	$ 63	(22)	41	15
Trade names and trademarks	$ 6,300	(1,315)	4,985	12
Capitalized software	$ 659	(33)	626	5
Non-compete agreements	$ 300	(188)	112	4
Total intangible assets	$ 27,422	(5,262)	22,160	

Intangible assets as of December 31, 2020 are summarized as follows:

	Cost	Accumulated Amortization	Net	Useful Life (in years)
Customer relationships	$ 11,800	(1,774)	10,026	15
Developed technology	$ 8,300	(1,560)	6,740	12
Licenses	$ 63	(20)	43	15
Trade names and trademarks	$ 6,300	(1,184)	5,116	12
Capitalized software	$ 659	—	659	5
Non-compete agreements	$ 300	(170)	130	4
Total intangible assets	$ 27,422	(4,708)	22,714	

Total amortization expense was $554 and $520 for the three months ended March 31, 2021 and 2020, respectively.

In November 2015, the Company entered into a license agreement with Stanford University (“Stanford”), pursuant to which Stanford granted the Company an exclusive, worldwide, sublicensable license under certain patent rights to make, use, import and commercialize products for diagnostic, industrial and research and development purposes. In accordance with the agreement, the Company capitalized non-refundable royalties paid to Stanford totaling $63, subject to straight-line amortization over a period of 15 years, or the term of the related agreement.

As of March 31, 2021, the amortization expense related to identifiable intangible assets in future periods is expected to be as follows:

2021 remaining	1,661
2022	2,195
2023	2,140
2024	2,140
2025	2,139
Thereafter	11,885

Total	$ 22,160

As of March 31, 2021 and December 31, 2020, the goodwill balance is $18,262.

(7) Accrued expenses and other current liabilities

Accrued expenses and other current liabilities consist of the following:

	March 31, 2021	December 31, 2020
Accrued payroll and compensation	$ 2,002	$ 2,225
Current portion of contingent consideration	2,740	1,590
Accrued inventory purchases	1,073	478
Other accrued expenses	3,336	2,722
Total accrued expenses and other current liabilities	$ 9,151	$ 7,015

(8) Debt and capital lease obligations

Term Loan Agreements

In September 2019, the Company entered into a Loan and Security Agreement with Innovatus Life Sciences Lending Fund I, LP (the "Lender"), under which the Lender agreed to make a term loan to the Company in an aggregate principal amount of $25,000 (the "Innovatus Term Loan"). Amounts borrowed under the Loan and Security Agreement have an initial maturity date of September 1, 2024 and accrue interest at a floating annual rate equal to the sum of (a) the greater of 5.25% or the prime rate and (b) 3.75%. For each of the first 24 months, the Company will be paying 7.25% as cash interest and deferring 1.75% of interest until October 1, 2022. Principal payments (including the amortization of the accrued interest) of $1,079 per month commence on October 1, 2022. A final payment fee of $750 is due upon the earlier to occur of the maturity date or prepayment of such borrowings. For the three months ended March 31, 2021 and 2020, the Company recorded $0 and $31, respectively, related to the amortization of the final payment fee associated with the Innovatus Term Loan.

In October 2020, the Company entered into a new debt financing arrangement with Midcap Trust (the "Term Loan"), for a $37,500 credit facility, consisting of a senior, secured term loan to refinance all existing indebtedness with Innovatus. The Company received $32,500 in aggregate proceeds as a result of the debt financing, and the remaining $5,000 is available to be drawn from March 31, 2021, through June 30, 2021. In connection with its entry into the Term Loan, in October 2020, the Company paid off the full balance of the Innovatus Term Loan of $26,882, including the principal, accrued interest, prepayment fee, and final fee.

The term of the Term Loan is interest only for 36 months followed by 24-months of straight-line amortization. Interest on the outstanding balance of the Term Loan shall be payable monthly in arrears at an annual rate of one-month LIBOR plus 6.35%, subject to a LIBOR floor of 1.50%. The interest rate was 7.85% at March 31, 2021. At the time of final payment under the Term Loan, the Company is required to pay Midcap a final payment fee of 5.00% of the amount borrowed under the Term Loan. If the Term Loan is prepaid prior to the end of the Term, the Company shall pay to Midcap a fee as compensation for the costs of being prepared to make funds available in an amount determined by multiplying the amount being prepaid by (i) three percent (3.00%) in the first year, two percent, (2.00%) in the second year and one percent (1.00%) in the third year and thereafter. A final payment fee of $1,625 is due upon the earlier to occur of the maturity date or prepayment of such borrowings. For the three ended March 31, 2021, the Company recorded $81 related to the amortization of the final payment fee associated with the Term Loan.

Paycheck Protection Program Loan

In April 2020, the Company received a $2,476 small business loan under the Payroll Protection Program, part of the Coronavirus Aid, Relief and Economic Security Act ("CARES ACT"). In December 2020, we applied for forgiveness of the full loan amount. Any such forgiveness of indebtedness, in accordance with the CARES Act, does not give rise to federal taxable income. If not forgiven, the note bears interest at a rate of 1.00% and payments are scheduled to begin the latter of March 2021, or upon response by the SBA regarding our forgiveness application.

The PPP, established as part of the Coronavirus Aid, Relief and Economic Security Act ("CARES Act"), provides for loans to qualifying businesses for amounts up to 2.5 times of the average monthly payroll expenses of the qualifying business. Such loan provides for customary events of default, including, among others, those relating to failure to make payment when due and breaches of representations. The Company may prepay the principal of the loan at any time without incurring any prepayment charges. The loan is subject to all the terms and conditions applicable under the PPP and is subject to review by the Small Business Association (the "SBA") for compliance with program requirements, including the Company's certification that the current economic uncertainty made the PPP loan request necessary to support ongoing operations.

In June 2020, the Payroll Protection Program Flexibility Act (“PPPFA”) was signed into law adjusting certain key terms of loans issued under the PPP. In accordance with the PPPFA, the initial deferral period may be extended from six to up to ten months and the loan maturity may be extended from two to five years. The PPPFA also provided for certain other changes, including the extent to which the loan may be forgiven.

The loan’s principal and accrued interest are forgivable to the extent that the proceeds are used for eligible purposes, subject to certain limitations, and that the Company maintains its payroll levels over a twenty-four-week period following the loan date. The loan forgiveness amount may be reduced if the Company terminates employees or reduces salaries during the twenty -four-week period. The Company believes that it has used the proceeds for eligible purposes consistent with the provisions of the PPPFA. However, there can be no assurance that any portion of the loan will be forgiven.

As the legal form of the loan is a debt obligation, the Company is accounting for it as debt under Accounting Standards Codification (ASC) 470, Debt and recorded a short-term debt obligation of $1,200, and a long-term debt obligation of $1,300 in the consolidated balance sheet as of March 31, 2021. If any amount of the loan is ultimately forgiven, income from the extinguishment of debt would be recognized as a gain on loan extinguishment in the consolidated statement of operations.

Debt consists of the following:

	March 31, 2021	December 31, 2020
Midcap Trust Term Loan	32,500	32,500
PPP Loan	2,476	2,476
Total debt	$ 34,976	$ 34,976
Unamortized debt discount	(489)	(515)
Accretion of final fee	139	59
Total debt, net	$ 34,626	$ 34,520
Less amount included as short-term	$ (1,238)	$ (1,032)
Long-term debt, net	$ 33,388	$ 33,488

As of March 31, 2021, future principal payments due under the Midcap Trust Term Loan and PPP Loan, excluding the $1,625 final payment fee, are as follows:

Year ended:	Midcap Trust Term Loan	PPP Loan
December 31, 2021	$ —	$ 1,032
December 31, 2022	$ —	$ 1,238
December 31, 2023	$ 2,708	$ 206
December 31, 2024	$ 16,250	$ —
December 31, 2025	$ 13,542	$ —
Total minimum principal payments	$ 32,500	$ 2,476

As a condition precedent to the Innovatus Term Loan, the Company also sold shares of Series D Preferred Stock at the same terms provided to the other investors as described in Note 9 for an aggregate amount of $2,000 to the Lender as part of the Series D Financing. Additionally, as a condition precedent to the Innovatus Term Loan, the Company agreed to receive at least $25,000 in net proceeds from the Series D Financing by December 2019, which the Company completed on September 27, 2019, as discussed below. In connection with the Loan and Security Agreement, the Company also issued the Lender a warrant to purchase 368,779 additional shares of Series D Preferred Stock (the “Series D Warrant”) at a purchase price of $ 1.53 per share. The expiration date of the warrant is September 27, 2029. The holder may at any time and from time to time exercise this Warrant, in whole or in part, and on any exercise of the Warrant, the Holder may elect to receive Shares equal to the value of the Warrant or portion. The initial warrant value of $192 was recorded as a debt discount and is being amortized over the term of the Innovatus Term Loan. See Note 4 for valuation of Warrant.

For the three months ended March 31, 2021, the Company entered into two leases for staining equipment computer equipment and furniture which are classified as capital lease obligations in the consolidated balance sheets as of March 31, 2021. In 2020, the Company entered into a lease for staining equipment which is classified as a capital lease in the consolidated balance sheets. As of March 31, 2021 and December 31, 2020 and 2019, the current portion of the lease obligations totaled $277 and $197, respectively, and the long-term portion totaled $399 and $277, respectively.

(9) Stockholder's equity

Common Stock

The Company has authorized 79,042,222 shares of Common Stock, $ 0.00001 par value per share, of which 62,220,020 shares are designated Class A common stock ("Class A Common Stock") and 16,822,202 shares are designated Class B common stock ("Class B Common Stock" or collectively the "Common Stock"). Each share of Class A Common Stock is entitled to one vote. The holders of Class B Common Stock are not entitled to vote. The holders of Common Stock are also entitled to receive dividends whenever funds are legally available and when declared by the board of directors, subject to the prior rights of holders of all classes of stock outstanding. As of March 31, 2021 and December 31, 2020 and 2019, a total of 2,835,099 and 2,563,765 shares of Class B Common Stock were issued and outstanding, respectively, and 5,457,669 and 4,932,952 shares of Class B Common Stock were reserved for issuance upon the exercise of outstanding stock options, respectively, under the Company's 2015 Equity Incentive Plan. As of March 31, 2021 and December 31, 2020, no shares of Class A Common Stock were issued and outstanding. Please refer to subsequent events at Note 16 as it relates to our common stock subsequent to the IPO.

Preferred Stock

The Company has authorized 62,220,020 shares of Preferred Stock, $0.00001 par value per share, of which 5,013,333 shares were designated Series A convertible preferred stock ("Series A Preferred Stock), 13,715,330 shares were designated Series B redeemable convertible preferred stock ("Series B Preferred Stock"), 26,732,361 shares were designated Series C redeemable convertible preferred stock ("Series C Preferred Stock"), and 16,758,996 shares were designated Series D redeemable convertible preferred stock ("Series D Preferred Stock, or collectively the "Preferred Stock").

In November 2015, the Company issued 5,013,333 shares of Series A Preferred Stock at a purchase price of $0.25 per share. The issuance resulted in cash proceeds of $1,253.

In July 2017, the Company issued 13,715,330 shares of Series B Preferred Stock at a purchase price of $0.6562 per share. The issuance resulted in cash proceeds of $8,943, net of issuance costs.

In September and November 2018, the Company issued 25,684,033 and 1,048,328 shares of Series C Preferred Stock, respectively, at a purchase price of $0.9539 per share. The issuances resulted in cash proceeds of $25,437, net of issuance costs.

On September 27, 2019, the Company issued 16,390,217 shares of Series D Preferred Stock at a purchase price of $1.5253 per share. The issuance resulted in cash proceeds of $24,824 net of issuance costs (the "Series D Financing").

As of March 31, 2021 and December 31, 2020, the Preferred Stock have the following rights, preferences and privileges:

Conversion rights

Each share of Preferred Stock is convertible at the option of the holder into Class A Common Stock shares at any time after the date of issuance. The number of Class A Common Stock shares to be issued in the event of a conversion is determined by dividing the original issue price of $0.25, $0.6562, $0.9539 and $1.5253 for Series A, B, C and D Preferred Stock, respectively, by the conversion price of $0.5825, $1,5289, $2.2226 and $3.5539 for Series A, B, C and D Preferred Stock, respectively.

The Preferred Stock automatically converts into shares of Class A Common Stock at the earlier of (i) the closing of an initial public offering of the Company's Common Stock at a price per share of at least $3.05 with gross proceeds to the Company of at least $50,000 or (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of two-thirds of the voting power of the then outstanding shares of Series D Preferred Stock, voting together as a separate class.

Redemption

After the fifth anniversaries of the Series B, C and D original issuance dates, respectively, shares of the respective class of Preferred Stock may be redeemed at a price equal to the original issue price per share, plus all dividends accrued but unpaid and all declared but unpaid other dividends (the "Redemption Price"), in two semi-annual installments commencing not more than 180 days after receipt by the Company of written notice from two-thirds of the voting power of then outstanding shares of each respective class requesting redemption. No explicit redemption rights exist for Series A Preferred Stock. Since the Series B, C, and D are redeemable upon a liquidation event, which is not considered to be within the Company's control, they have been classified in temporary equity on the accompanying consolidated balance sheets.

Dividends

Dividends accrue at a rate of 8% per annum on the original issuance price of Series B, C and D Preferred Stock (the "Accruing Dividends"). Accruing Dividends become due and payable if the Preferred Stock is redeemed by election of the majority holders of Series B, Series C or Series D Preferred Stock on or after the fifth anniversary of the applicable original issuance dates, or upon the occurrence of a liquidation event if the Series B, C or D Redemption Price, respectively, exceeds the aggregate of the Liquidation Preference plus Common Participation, as defined below, for that series of Preferred Stock. Except for the Accruing Dividends payable to holders of Series B, C and D Preferred Stock, holders of the Preferred Stock and Common Stock are entitled to receive dividends declared by the board of directors on an equal basis according to the number of shares of Common Stock and Common Stock into which the Preferred Stock is then convertible.

Liquidation Preference

Upon liquidation, dissolution or winding-up of the Company, or a merger, consolidation, lease or transfer of the Company (a "Deemed Liquidation Event"), shareholders of Series A, B, C and D Preferred Stock are entitled to receive a liquidation preference in priority to holders of common stock equal to $0.25, $0.6562, $0.9539, and $1.5253 per share, respectively, plus any declared but unpaid dividends (the "Liquidation Preference"). In any such event, Series D and C Preferred Stockholders would receive first priority in liquidation payments; Series B Preferred Stockholders would receive next priority after Series C Preferred Stockholders, and Series A Preferred Stockholders would receive next priority after Series B Preferred Stockholders. Any remaining amounts would be distributed to holders of Preferred Stock and Common Stock on a pro rata basis, with the shares of Preferred Stock treated as if they have been converted into shares of Common Stock (the "Common Participation").

In the event that the aggregate of the Liquidation Preference and Common Participation for Series B, C and D Preferred Stockholders, respectively, would fall short of the Liquidation Preference plus any accrued dividends not yet paid for that series of Preferred Stock, the assets would be distributed (i) first among Series D and C Preferred Stockholders in proportion to their aggregate Liquidation Preference amounts, plus any accrued but unpaid dividends until such amounts are paid in full; (ii) second, to Series B Preferred Stockholders in proportion to their aggregate Liquidation Preference amounts, plus any accrued but unpaid dividends until such amounts are paid in full; (iii) third, to Series A Preferred Stockholders and Common Stockholders pro rata based on the number of shares held by each holder, with the shares of Series A Preferred Stock treated as if they have been converted into shares of Common Stock.

Voting Rights

Holders of Series A, B, C and D Preferred Stock are entitled to vote as a single class with the holders of Class A Common Stock, and have one vote for each equivalent common share into which the preferred stock is convertible. Holders of the shares of Series D Preferred Stock, exclusively and as a separate class, are entitled to elect two directors of the Company, Series C Preferred Stock, exclusively and as a separate class, are entitled to elect three directors of the Company, and holders of the shares of Series B Preferred Stock, exclusively and as a separate class, are entitled to elect one director of the Company.

(10) Stock compensation plan

2015 Equity Incentive Plan

The Company's 2015 Equity Incentive Plan (the "2015 Plan") was established for granting stock incentive awards to directors, officers, employees and consultants to the Company. The 2015 Plan provided for the grant of incentive and non-qualified stock options, stock appreciation rights, restricted stock and restricted stock units as determined by the board of directors. Under the 2015 Plan, stock options are generally granted with exercise prices equal to or greater than the fair value of the common stock as determined by the board of directors, expire no later than 10 years from the date of grant, and vest over various periods not exceeding four years.

Stock Options

During the three months ended March 31, 2021 and 2020, the Company granted options to employees with an aggregate fair value of $9,322 and $327, respectively, which are being amortized into compensation expense over the requisite service period. The Company uses the Black-Scholes option pricing model to determine the fair value of stock options. The valuation model for stock compensation expense requires the Company to make assumptions and judgments about the variables used in the calculation including the expected term (weighted-average period of time that the options granted are expected to be outstanding), volatility of the Company's common stock and an assumed-risk-free interest rate.

The fair value of the shares of common stock underlying the stock options has historically been determined by the Board of Directors. Because there has been no public market for the Company's common stock, the Board of Directors has determined fair value of the common stock at the time of grant of the option by considering a number of objective and subjective factors including valuation of comparable companies, sales of convertible preferred stock to unrelated third parties, operating and financial performance, the lack of liquidity of capital stock, and general and industry specific economic outlook, amongst other factors. In determining the fair value of the common stock, the methodologies used to estimate the enterprise value were performed using methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants Accounting Practice Aid, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. The fair value of the underlying common stock will be determined by the Board of Directors, after consideration of a third-party valuation report, until the Company's common stock is listed on an established stock exchange or national market system.

Expected Volatility. Since the Company is a private entity with no historical data regarding the volatility of its common stock, the expected volatility used is based on volatility of a group of similar entities, referred to as "guideline" companies. In evaluating similarity, the Company considered factors such as industry, stage of life cycle and size.

Expected Term. The Company derived the expected term using the "simplified" method (the expected term is determined as the average of the time-to-vesting and the contractual life of the options), as the Company had limited historical information to develop expectations about future exercise patterns and post vesting employment termination behavior.

Risk-Free Interest Rate. The risk-free interest rate is based on U.S. Treasury zero-coupon issues with remaining terms similar to the expected term on the options.

Dividend Yield. The Company has never paid any dividends and does not plan to pay dividends in the foreseeable future, and, therefore, used an expected dividend yield of zero in the valuation model.

During the three months ended March 31, 2021, the Company granted options to purchase 1,343,700 shares of common stock at a weighted average fair value of $6.96 per share and a weighted average exercise price of $14.25 per share. During the three months ended March 31, 2020, the Company granted options to purchase 721,741 shares of common stock at a weighted average fair value of $0.47 per share and a weighted average exercise price of $0.53 per share. For the three months ended March 31, 2021 and 2020, the fair values were estimated using the Black-Scholes valuation model using the following weighted-average assumptions:

	Three months ended March 31, 2021	Three months ended March 31, 2020
Weighted-average risk-free interest rate	1.0%	1.1%
Expected dividend yield	0%	0%
Expected volatility	51.0%	45.1%
Expected term	6.1 years	4.9 years

Stock-based compensation related to the Company's stock-based awards was recorded as an expense and allocated as follows:

	Three months ended March 31,	
	2021	2020
Cost of goods sold	$ 16	$ 2
Selling, general and administrative	183	231
Research and development	55	79
Total stock-based compensation	$ 254	$ 312

As of March 31, 2021 and 2020, there was $9,051 and $451, respectively, of total unrecognized compensation cost related to non-vested stock options granted to employees under the 2015 Plan. The Company expects to recognize that cost over a remaining weighted-average period of 3.9 and 2.9 years as of March 31, 2021 and 2020, respectively.

Stock incentive awards to nonemployees were determined to be immaterial as of March 31, 2021 and December 31, 2020.

(11) Income taxes

During the three months ended March 31, 2021 and 2020, the Company recorded a tax benefit of $6 and a tax provision of $38, respectively. The year to date tax benefit and provision consist primarily of foreign income taxes and state taxes in the United States. The provision differs from the U.S. federal statutory rate of 21% primarily due to the full valuation allowance recorded against the U.S. deferred tax assets, including the current year to date losses. The Company maintains a valuation allowance against its U.S. deferred tax assets as the Company believes it is more likely than not the deferred tax assets will not be realized.

(12) Commitments and contingencies

Operating Leases

In November 2017, the Company entered into a month to month tenancy agreement for office and laboratory space in Menlo Park, CA. In connection with this agreement, the Company paid a security deposit totaling $56, which is recorded as a component of prepaid expenses and other current assets in the Consolidated Balance Sheet.

In July 2019, the Company entered into a seven-year office lease agreement for office and laboratory space in Marlborough, MA. In connection with this agreement, the Company paid a security deposit totaling $450 in the form of a letter of credit, which is recorded as restricted cash in the Consolidated Balance Sheet. Additionally, in July 2019, the Company signed a seven-year lease agreement for office and laboratory space in Menlo Park, CA. In connection with this agreement, the Company paid a security deposit totaling $181, which is recorded as a component of long-term assets in the Consolidated Balance Sheet; the lease commencement date was May 2020.

Contractual cash payments for the Marlborough and Menlo Park lease as of March 31, 2021 by fiscal year are as follows:

2021 remaining	$	906
2022	$	1,179
2023	$	1,219
2024	$	1,259
2025	$	1,300
Thereafter	$	1,399
Total	$	7,262

Total rent expense for the three months ended March 31, 2021 and 2020 was $319 and $273, respectively.

License Agreements

In November 2015, the Company entered into a license agreement with The Board of Trustees of the Leland Stanford Junior University (“Stanford”), pursuant to which Stanford granted the Company an exclusive, worldwide, sublicensable license under certain patent rights to make, use, import and commercialize products for diagnostic, industrial and research and development purposes. The Company agreed to pay annual license maintenance fees ranging from $20 to $50 for the royalty-bearing license to certain patents. The Company also issued a total of 91,559 shares of Class B common stock pursuant to the agreement in 2015, which were recorded at fair value at the date of issuance. The Company is required to pay royalties on net sales of products that are covered by patent rights under the agreement at a rate of 2.25%, subject to reductions and offsets in certain circumstances.

In September 2018, in connection with the acquisition of the QPS division of PKI, the Company entered into a License Agreement with PKI, pursuant to which PKI granted the Company an exclusive, nontransferable, sublicensable license under certain patent rights to make, use, import and commercialize QPS products and services. The Company is required to pay royalties on net sales of products and services that are covered by patent rights under the agreement at a rate ranging from 1.0% to 7.0%. The Company recorded approximately $2.5 and $1.8 of accrued royalties in connection with this agreement as of March 31, 2021 and December 31, 2020, respectively, payable in the first quarter of 2022 and 2021, respectively.

Research Agreements

In 2019 the Company entered into a research arrangement with an unrelated third party. Under this arrangement, we are obligated to pay such third party $0.5, $0.4, and $0.1 in 2021, 2022, and 2023, respectively.

(13) Net loss per share attributable to common stockholders

Potentially issuable shares of common stock include shares issuable upon the exercise of outstanding employee stock option awards. Awards granted with performance conditions are excluded from the shares used to compute diluted earnings per share until the performance conditions associated with the awards are met.

The following table sets forth the computation of basic and diluted earnings per common share:

	Three months ended March 31,	
	2021	**2020**
Net loss	$ (8,082)	$ (2,143)
Dividends accrued on redeemable convertible preferred stock	(1,190)	(1,190)
Accretion of redeemable convertible preferred stock	(296)	(296)
Adjusted net loss attributable to common stockholders	$ (9,568)	$ (3,629)
Weighted average common shares used in net loss per share attributable to common stockholders, basic and diluted	2,706,133	2,288,875
Basic and diluted net loss per common share outstanding	$ (3.54)	$ (1.59)

The Company's potential dilutive securities, which include stock options, convertible preferred stock, and warrant, have been excluded from the computation of diluted net loss per share attributable to common stockholders whenever the effect of including them would be to reduce the net loss per share. In periods where there is a net loss, the weighted average number of common shares outstanding used to calculate both basic and diluted net loss per share attributable to common stockholders is the same. The following potential common shares, presented based on amounts outstanding at each period end, were excluded from the calculation of diluted net loss per share attributable to common stockholders for the periods indicated because including them would have had an anti-dilutive effect:

	Three months ended March 31,	
	2021	**2020**
Series A Convertible Preferred Stock (as converted to common stock)	2,151,641	2,151,641
Series B Redeemable Convertible Preferred Stock (as converted to common stock)	5,886,405	5,886,405
Series C Redeemable Convertible Preferred Stock (as converted to common stock)	11,473,110	11,473,110
Series D Redeemable Convertible Preferred Stock (as converted to common stock)	7,034,423	7,034,423
Outstanding stock options	4,947,296	3,852,087
Performance-based stock options	21,459	28,163
Warrant to purchase Series D convertible preferred stock (as converted to common stock)	158,274	158,274
Total	31,672,608	30,584,103

(14) Segments

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or decision-making group, in deciding how to allocate resources and in assessing performance. The Company's chief operating decision maker is its Chief Executive Officer. The Company has one business activity and there are no segment managers who are held accountable for operations. Accordingly, the Company has a single reportable segment structure. The Company's principal operations and decision-making functions are located in the United States.

The following table provides the Company's revenues by geographical market based on the location where the services were provided or to which product was shipped:

	Three months ended March 31,	
	2021	2020
North America	$ 5,209	$ 4,865
APAC	3,690	3,856
EMEA	3,313	2,300
Total Revenue	$ 12,212	$ 11,021

	Three months ended March 31,	
	2021	2020
North America	43%	44%
APAC	30%	35%
EMEA	27%	21%
Total Revenue	100%	100%

North America includes the United States and related territories, as well as Canada. APAC also includes Australia. For the three months ended March 31, 2021 and 2020, we had one country with 18% and another country with 24% of total revenue, respectively.

As of March 31, 2021 and December 31, 2020, substantially all of the Company's long-lived assets are located in the United States of America.

(15) Related party transactions

During the three months ended March 31, 2021 and 2020, the Company incurred costs of goods sold of approximately $0.5 and $0.2, respectively, related to sales of consumables manufactured by Argonaut Manufacturing services. As of March 31, 2021 and December 31, 2020, $1.4 and $1.3, respectively, is included in inventory related to consumables manufactured by Argonaut Manufacturing services. As of March 31, 2021 and December 31, 2020 and 2019, the Company had $0.1 and $0.6 in accounts payable, respectively, due to Argonaut Manufacturing services. Argonaut Manufacturing services is a portfolio company of Telegraph Hill Partners, which holds greater than 5% of our total outstanding shares.

(16) Subsequent events

The Company has evaluated subsequent events from the Consolidated Balance Sheet date through May 19, 2021, which is the date the consolidated financial statements were issued.

(a) Increase in shares available for issuance under the 2015 Plan

In February 2021, the board of directors approved and in April 2021, its stockholders approved the number of shares of common stock authorized for issuance under the 2015 Plan to be increased from 4,947,214 shares to 6,020,175 shares (an increase by 1,072,961 shares).

(b) Reverse stock split and conversion of Class B common stock to Class A common stock

On April 8, 2021, the Board of Directors of the Company approved a 1-for-2.33 reverse stock split of its issued and outstanding common stock and a proportional adjustment to the existing conversion ratios for each series of the Company's convertible preferred stock, which was effected on April 9, 2021. All issued and outstanding shares of common stock and related per share amounts contained in the accompanying consolidated financial statements have been retroactively adjusted to reflect this reverse stock split for all periods presented. The par value of the authorized stock was not adjusted as a result of the reverse stock split. Other than the par value, all share and per share data shown in the accompanying financial statements and related notes have been retroactively revised to reflect the reverse stock split and adjustment of the Preferred Stock conversion ratios. On April 8, 2021, the Board of Directors approved the conversion of all outstanding shares of the Company's Class B common stock on a 1 for 1 basis into 2,563,765 shares of the Company's Class A common stock, which will be effected upon the completion of the proposed IPO.

(c) Approval of the 2021 Equity Incentive Plan

On March 24, 2021, the Company's board of directors and on April 8, 2021, its stockholders approved and adopted the 2021 Equity Incentive Award Plan (the "2021 Plan"). The 2021 Plan will become effective immediately prior to and contingent upon the closing of the IPO. Under the 2021 Plan, the Company may grant stock options, stock appreciation rights, restricted stock, restricted stock units, and other stock or cash-based awards to individuals who are then employees, officers, directors or consultants of the Company. A total of 1,727,953 shares of common stock were approved to be initially reserved for issuance under the 2021 Plan. The number of shares under the 2015 Plan subject to outstanding awards as of the effective date of the 2021 Plan that are subsequently canceled, forfeited or repurchased by the Company will be added to the shares reserved under the 2021 Plan. In addition, the number of shares of common stock available for issuance under the 2021 Plan will be automatically increased on the first day of each calendar year during the ten-year term of the 2021 Plan, beginning with January 1, 2022 and ending with January 1, 2030, by an amount equal to 5% of the outstanding number of shares of the Company's common stock on December 31st of the preceding calendar year or such lesser amount as determined by the Company's board of directors.

(d) Approval of the 2021 Employee Stock Purchase Plan

On March 24, 2021, the Company's board of directors and on April 8, 2021, its stockholders approved and adopted the 2021 Employee stock Purchase Plan (the "ESPP"). The ESPP will become effective on immediately prior to and contingent upon the closing of the IPO. The ESPP permits participants to

purchase common stock through payroll deductions of up to 15% of their eligible compensation. A total of 172,795 shares of common stock were approved to be initially reserved for issuance under the ESPP. In addition, the number of shares of common stock available for issuance under the ESPP will be automatically increased on the first day of each calendar year during the first ten-years of the term of the ESPP, beginning with January 1, 2022 and ending with January 1, 2030, by an amount equal to 0.5% of the outstanding number of shares of the Company's common stock on December 31st of the preceding calendar year or such lesser amount as determined by the Company's board of directors.

(e) Initial Public Offering

On April 20, 2021, the Company completed the initial public offering of its common stock (the "IPO"). In the IPO, the Company issued and sold 7,567,000 shares of its common stock at a price to the public of $20.00 per share, including the exercise by the underwriters of their option to purchase an additional 987,000 shares. In connection with the IPO, on April 20, 2021 all preferred stock converted into 26,545,579 shares of common stock, and all outstanding shares of our Class B common stock converted on a 1 for 1 basis into 2,563,765 shares of our common stock.

On April 20, 2021, in connection with the closing of the IPO, the Company's amended and restated certificate of incorporation, as filed with the Secretary of State of the State of Delaware, and the Company's amended and restated bylaws became effective.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of financial condition and results of operations together with our consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q and our audited consolidated financial statements and notes thereto and management's discussion and analysis of financial condition and results of operations for the fiscal year ended December 31, 2020 included in the final prospectus for our initial public offering dated as of April 15, 2021, and filed with the Securities and Exchange Commission pursuant to Rule 424(b) under the Securities Act of 1933, as amended, on April 19, 2021 (File No. 333-254760) (the "Prospectus"). Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those in our Form S-1 Registration Statement filed with the SEC on April 19, 2021 as referred to in the section titled "Risk Factors" under Part II, Item 1A below. Please also see the section titled "Special note regarding forward looking statements."

Overview

We are an innovative life sciences technology company delivering spatial biology solutions focused on transforming discovery and clinical research. Our mission is to deliver a revolutionary new class of spatially derived biomarkers that empower life sciences researchers to better understand disease and clinicians to improve patient outcomes. Spatial biology refers to a rapidly evolving technology that enables academic and biopharma scientists to detect and map the distribution of cell types and biomarkers across whole tissue samples at single cell resolution, enabling advancements in their understanding of disease progression and patient response to therapy. Through our CODEX and Phenoptics platforms, reagents, software and services, we offer end-to -end solutions to perform tissue analysis and spatial phenotyping across the full continuum, from discovery through translational and clinical research.

Our spatial biology solutions measure cells and proteins by providing biomarker data in its spatial context while preserving tissue integrity. Biomarkers are objective measures that capture what is happening in a cell or tissue at a given moment. Current genomic and proteomic methods, such as next-generation sequencing (NGS), single-cell analysis, flow cytometry and mass spectrometry, are providing meaningful data but require the destruction of the tissue sample for analysis. While valuable and broadly adopted, these approaches allow scientists to analyze the biomarkers and cells that comprise the tissue but do not provide the fundamental information about tissue structure, cellular interactions and the localized measurements of key biomarkers. Furthermore, current non-destructive tissue analysis and histological methods provide some limited spatial information, but only measure a minimal number of biomarkers at a time and require expert pathologist interpretation. Our platforms address these limitations by providing end-to-end solutions that enable researchers to quantitatively interrogate a large number of biomarkers and cell types across a tissue section at single cell resolution. The result is a detailed and computable map of the tissue sample that thoroughly captures the underlying tissue dynamics and interactions between key cell types and biomarkers, a process now referred to as spatial phenotyping. We believe that we are the only business with the breadth of platform capabilities that enable researchers to do a deep exploratory and discovery study, and then further advance and scale their study through translational and clinical phases, thereby helping to provide a broad scope of understanding of human biology, disease progression and response to therapy.

We offer two distinct platforms for spatial phenotyping, each designed to serve the unique needs of our customers in the discovery, translational and clinical markets. The first, CODEX, is an ultra-high parameter and cost-effective platform ideally suited for discovery research with the ability to identify more than 40 biomarkers in a tissue sample. The second, Phenoptics, is a high- throughput platform with the automation and robustness needed for translational and clinical applications. Both offer seamless and integrated workflow solutions for our customers, including important benefits such as flexible sample types, automated sample processing, scalability, comprehensive data analysis and software solutions and dedicated field and applications support. With these platforms, our customers are performing spatial phenotyping to further advance their understanding of diseases such as cancer, neurological and autoimmune disorders, and many other therapeutic areas.

For the three months ended March 31, 2021 and 2020, revenue from North America accounted for approximately 41% and 43% of our revenue, respectively.

As of March 31, 2021, we employed a commercial team of 72 employees, including many with significant industry and technical experience. We follow a direct sales model in North America and EMEA, while selling through third party distributors and dealers in APAC.

We focus a substantial portion of our resources on research and development, as well as on business development and sales and marketing. Our research and development efforts are geared towards developing new instruments and assay capabilities, as well as new reagent kits, to meet both our customers' needs and to address new markets. We intend to continue making significant investments in this area for the foreseeable future. We also intend to continue to make investments in building our sales team and marketing our products and services to potential customers.

We generally outsource all of our production manufacturing. Design work, prototyping and pilot manufacturing are performed in-house before outsourcing to third party contract manufacturers. Our outsourced production strategy is intended to drive cost leverage and scale, and avoid the high capital outlays and fixed costs related to constructing and operating a manufacturing facility. The contract manufacturers of our systems and reagent kits are located in the United States and Asia. Certain of our suppliers of components and materials are single source suppliers. We manufacture and assemble certain instrument components in-house.

As of the date of this Quarterly Report on Form 10-Q, we have financed our operations primarily from the issuance and sale of convertible preferred stock and borrowings under our long-term debt agreement, and our IPO. We have incurred net losses in each year since our inception in 2015. Our net losses were $8.1 million and $2.1 million for the three months ended March 31, 2021 and 2020, respectively. We expect to continue to incur significant expenses and operating losses for the foreseeable future. We expect our expenses will increase substantially in connection with our ongoing activities, as we:

- attract, hire and retain qualified personnel, including the expansion of our commercial capabilities and organizations;
- market and sell new and existing solutions and services;
- invest in processes and infrastructure to scale our business;
- support research and development to introduce new solutions;
- expand, protect and defend our intellectual property; and
- acquire complementary businesses or technologies to support the growth of our business.

Key factors affecting our results of operations and future performance

There are a number of factors that have impacted, and we believe will continue to impact, our business, results of operations and growth. Our ability to successfully address these factors is subject to various risks and uncertainties, including those described under the heading "*Risk Factors.*"

Expansion of our installed base

We are focused on increasing sales of our Codex and Phenoptics platforms to new and existing customers. Our financial performance has historically been driven by, and will continue to be impacted by, the volume of instrument sales. Additionally, instrument sales are a leading indicator of future recurring revenue from consumables and services. Our operating results and growth prospects will be dependent in part on our ability to increase our instrument installed base as we further penetrate existing markets and expand into, or offer new features and solutions that appeal to, new markets.

We believe our market is still evolving and relatively underpenetrated. As spatial biology is further validated through rapid acceleration of peer-reviewed publications and growing adoption by the life sciences research market, we believe we have an opportunity to significantly increase our installed base. In order to capitalize on this opportunity to drive adoption of our platforms across the entire market, we intend to expand our global sales and marketing organizations, increase the scale of our outbound marketing activities, invest in commercial channel infrastructure and deliver new, market-leading solutions to our customers. In addition, we regularly solicit feedback from our customers in order to enhance our solutions and their applications for life sciences research, which we believe will drive increased adoption of our platforms as they better serve our customers' needs.

Drive incremental pull through

We believe that expansion of our installed base to new and existing customers will drive an increase in our recurring reagent and instrument service revenue. In addition, as our research and development team identifies and launches new applications and biomarker targets, we expect to increase incremental pull through on our existing and new instrument installed base. Recurring revenue was 33% and 29% of total revenue for the years ended December 31, 2020 and 2019, respectively. Our recurring revenue as a percentage of total product and service revenue will vary based upon new device placements in the period. As our installed base expands, we expect recurring revenue on an absolute basis to increase and become an increasingly important contributor to our revenue.

Improve revenue mix and gross margin

Our revenue is primarily derived from sales of our platforms, consumables, software, and services. Our revenue mix will fluctuate from period-to-period, particularly revenue generated from instrument sales. As our installed base grows, we expect consumables and instrument service revenue to constitute a larger percentage of total revenue.

Our margins are higher for those instruments and consumables that we sell directly to customers compared to those sold through distributors. While we do not currently intend to terminate our distributor relationships, we plan to increase our direct sales capabilities in certain geographies which we believe will improve our gross margins.

Future instrument and consumable selling prices and gross margins may fluctuate due to a variety of factors, including the introduction by others of competing products and solutions. We aim to mitigate downward pressure on our average selling prices by increasing the value proposition offered by our instruments and consumables, primarily by expanding the applications for our devices and increasing the quantity and quality of data that can be obtained using our consumables.

COVID-19 Impact

In March 2020, COVID-19 was declared a global pandemic by the World Health Organization. In the following weeks, many states and counties across the United States responded by implementing a number of measures designed to prevent its spread, including stay-at -home or shelter-in- place orders, quarantines and closure of all non- essential businesses. The impact of this pandemic has been and will likely continue to be extensive in many aspects of society, which has resulted in and will likely continue to result in significant disruptions to the global economy, as well as businesses and capital markets around the world.

Impacts in 2020 and 2021 to our business as a result of COVID-19 include disruptions to our manufacturing operations and supply chain caused by facility closures, reductions in operating hours, staggered shifts and other social distancing efforts, decreased productivity and unavailability of materials or components, limitations on our employees' and customers' ability to travel, and delays in product installations, trainings or shipments to and from affected countries and within the United States. In light of the uncertain and rapidly evolving situation relating to the spread of COVID-19, we have taken precautionary measures intended to minimize the risk of the virus to our employees, our customers and the communities in which we operate, including temporarily closing our offices to visitors and limiting the number of employees in our offices to those that are deemed essential for manufacturing and research purposes, as well as virtualizing, postponing or canceling customer, employee and industry events.

Disruptions in our customers' operations have impacted and may continue to impact our business. For example, laboratory shutdowns and reduced capital spend by our customers have negatively impacted our instrument and reagent sales. We are focused on navigating the challenges presented by COVID-19, with a primary focus on preserving our liquidity and managing our cash flows by taking preemptive action to enhance our ability to meet our short-term liquidity needs. To address actual and expected reductions in revenue and cash flows, we reduced our discretionary spending.

We do not yet know the net impact that the COVID-19 pandemic may have on our business and cannot guarantee that it will not be materially negative. Although we continue to monitor the situation and may adjust our current policies as more information and public health guidance become available, the ongoing effects of the COVID -19 pandemic and/or the precautionary measures that we have adopted may create operational and other challenges, any of which could harm our business and results of operations. While we maintain an inventory of finished products and raw materials used in our products, a prolonged pandemic could lead to shortages in the raw materials necessary to manufacture our products. If we experience a prolonged disruption in our manufacturing, supply chains or commercial operations, or if demand for our products is significantly reduced as a result of the COVID-19 pandemic, we would expect to experience a material adverse impact on our business, financial condition, results of operations and prospects.

Historically, a significant portion of our field sales, customer training events and other application services have been conducted in person, and the rollout of our new products has historically been supported by our participation at industry conferences. Currently, as a result of the work and travel restrictions related to the COVID- 19 pandemic, and the precautionary measures that we have adopted, substantially all of our field sales and professional services activities are being conducted remotely, which has resulted in a decrease in our travel expenditures. However, we expect our travel expenditures to increase in the future, which could negatively impact our financial condition and results of operations. As of the date of this Quarterly Report on Form 10-Q, we do not yet know the extent of the negative impact of such restrictions and precautionary measures on our ability to attract new customers or retain and expand our relationships with existing customers over the near and long term. The length of time and full extent to which the COVID-19 pandemic may directly or indirectly impact our business, results of operations and financial condition will depend on future developments that are highly uncertain, subject to change and difficult to predict.

License Agreements

In November 2015, we entered into an exclusive (equity) agreement with Stanford, pursuant to which Stanford granted us an exclusive, worldwide, sublicensable (subject to certain requirements) license under certain patent rights to make, use, import and commercialize products for diagnostic, industrial and research and development purposes. We agreed to pay annual license maintenance fees ranging from $20 thousand to $50 thousand for the royalty-bearing license to certain patents. We also issued a total of 213,333 shares of Class B common stock pursuant to the agreement in 2015, which were recorded at fair value at the date of issuance. We are required to pay royalties on net sales of products that are covered by patent rights under the agreement at a rate of 2.25%, subject to reductions and offsets in certain circumstances, as well as a portion of any of our sublicensing income.

In September 2018, in connection with the acquisition of the Phenoptics technology from PKI, we entered into a license and royalty agreement with PKI, Cambridge Research & Instrumentation, Inc., and VisEn Medical Inc., pursuant to which such parties granted us an exclusive, nontransferable, sublicensable (subject to certain conditions) license under certain patent rights and know-how to make, use, import and commercialize Phenoptics products and services. We are required to pay royalties on net sales of products and services that are covered by patent rights under the agreement at a rate ranging from 1.0% to 7.0%.

Key Business Metrics

We regularly review the number of instrument placements and cumulative instrument placement as key metrics to evaluate our business, measure our performance, identify trends affecting our business, develop financial projections, and make strategic decisions. We believe that these metrics are representative of our current business; however, we anticipate these will change or may be substituted for additional or different metrics as our business grows.

During the three months ended March 31, 2021 and 2020, our instrument placements were as follows:

	Three Months Ended March 31,	
	2021	2020
Instrument Placements:	37	32

Our instruments are sold globally to leading biopharma companies and top research institutions and medical centers. Our quarterly instrument placements fluctuate considerably from period-to-period due to the type and size of our customers and their procurement and budgeting cycles. We expect continued fluctuations in our quarterly period-to-period number of instrument placements.

We believe our instrument placements are important metrics to measure our business because together they are driven by our ability to secure new customers and drive adoption of our Codex and Phenoptics platforms and provide insights into anticipated recurring revenue for consumables and instrument services.

Components of results of operations

Revenue

Product Revenue

We generate product revenue from the sale of our instruments, consumables and software products. Instrument sales accounted for 69% and 74% of our product revenue for the three months ended March 31, 2021 and 2020, respectively. Consumables revenue accounted for 26% and 23% of our product revenue for the three months ended March 31, 2021 and 2020, respectively.

Our current instrument offerings include our Codex platform and our Phenoptics platform. Our sales process with customers is often long and involves multiple levels of approvals. As a result, the revenue for our platforms can vary significantly from period-to- period and has been, and may continue to be, concentrated in a small number of customers in any given period.

We sell our instruments directly to customers and through distributors. Each of our instrument sales drives various streams of recurring revenue comprised of consumable product sales and instrument services.

Service and Other Revenue

We primarily generate service and other revenue from instrument service, which generally consists of sales of extended service contracts, in addition to installation and training, as well as from our laboratory services operation, where we provide sample testing services to customers utilizing our in-house lab operation.

We offer our customers extended warranty and service plans for our platforms. Our extended warranty and service plans are offered for periods beyond the standard one-year warranty that all customers receive. These extended warranty and service plans generally have fixed fees and terms ranging from one to four additional years. We recognize revenue from the sale of extended warranty and service plans over the respective coverage period, which approximates the service effort provided by us.

The Company records shipping and handling billed to customers as service and other revenue and the related costs in cost of service and other revenue in the consolidated statement of operations.

During the three months ended March 31, 2021 and 2020, respectively, our revenue was comprised of the following sources:

	Three months ended March 31,	
($ in thousands)	**2021**	**2020**
Revenue:		
Product revenue	$ 9,963	$ 8,929
Service and other revenue	2,249	2,092
Total revenue	$ 12,212	$ 11,021

We sell our products globally. We sell directly to end customers in North America and EMEA and we sell through third party distributors and dealers in the APAC region.

Cost of Goods Sold, Gross Profit and Gross Margin

Product cost of revenue primarily consists of costs for finished goods (both instruments and reagents) produced by our contract manufacturers, and associated freight, shipping and handling costs for products shipped to customers, salaries and other personnel costs, and other direct costs related to those sales recognized as product revenue in the period. Cost of goods sold for services and other primarily consists of salaries and other personnel costs, travel related to services provided, costs of servicing equipment at customer sites, and all personnel and related costs for our laboratory services operation.

We expect that our cost of goods sold will increase or decrease to the extent that our revenue increases and decreases and depending on the mix of revenue in any specific period.

Gross profit is calculated as revenue less cost of goods sold. Gross margin is gross profit expressed as a percentage of revenue. Our gross profit in future periods will depend on a variety of factors, including: market conditions that may impact our pricing, sales mix among instruments, sales mix changes among consumables, excess and obsolete inventories, costs we pay our contract manufacturers for their services, our cost structure for lab service operations relative to volume, and product warranty obligations. Our gross profit in future periods will also vary based upon our channel mix and may decrease based upon our distribution channels.

Gross profit was $7.4 million compared to $6.7 million for the three months ended March 31, 2021 and 2020, respectively.

Operating expenses

Research and development. Research and development costs primarily consist of salaries, benefits, engineering/design costs, laboratory supplies, and materials expenses for employees and third parties engaged in research and product development. We expense all research and development costs in the period in which they are incurred.

We plan to continue to invest in our research and development efforts, including hiring additional employees, to enhance existing products and develop new products. As a result, we expect that our research and development expenses will continue to increase in absolute dollars in future periods. We expect these expenses to vary from period to period as a percentage of revenue.

Selling, general and administrative. Our selling, general and administrative expenses primarily consist of salaries and benefits for employees in our executive, accounting and finance, legal expenses related to intellectual property, sales and marketing, operations, and human resource functions as well as professional services fees, such as consulting, audit, tax and legal fees, general corporate costs, commercial sales functions, marketing, travel expenses, facilities, IT, and allocated overhead expenses. We expect that our sales, general and administrative expenses will continue to increase in absolute dollars after our IPO, primarily due to increased headcount to support anticipated growth in the business and due to incremental costs associated with operating as a public company. Additionally, we expect an increase in absolute dollars as we expand our commercial sales, marketing and business development teams, increase our presence globally and increase marketing activities to drive awareness and adoption of our platform. We expect these expenses to vary from period to period as a percentage of revenue.

Change in fair value of contingent consideration. On September 28, 2018, the Company acquired substantially all the assets of the Quantitative Pathology Solutions (“QPS”) division of PKI. As part of the acquisition, on September 28, 2018, the Company entered into a License Agreement (the “Ancillary Agreements”) with PKI. Under the terms of the License Agreement, the Company agreed to pay PKI certain royalties as a percentage of future sales of products from the QPS division, in exchange for a perpetual license of the right to produce and sell QPS products. This contingent consideration is subject to remeasurement.

Depreciation and amortization. Depreciation and amortization expenses primarily consist of depreciation of property and equipment and amortization of acquired intangibles.

Other income (expense)

Interest expense. Interest expense consists primarily of interest related to borrowings under our debt obligations.

Change in fair value of warrant liability. In 2019, the Company issued a warrant to purchase 368,779 additional shares of Series D Preferred Stock at a purchase price of $1.53 per share. The Company uses the Black-Scholes option pricing model to value the warrant liability for the Series D Preferred Stock warrant. This liability is subject to remeasurement.

Other expense, net. Other expense, net consists primarily of franchise tax and foreign currency exchange gains and losses.

Benefit (provision) for income taxes

Our benefit (provision) for income taxes consists primarily of foreign taxes and state minimum taxes in the United States. As we expand the scale and scope of our international business activities, any changes in the United States and foreign taxation of such activities may increase our overall provision for income taxes in the future.

Results of operations

The results of operations presented below should be reviewed in conjunction with the consolidated financial statements and notes included elsewhere in the Quarterly Report on Form 10-Q. The following tables set forth our results of operations for the periods presented:

	Three months ended March 31,	
($ in thousands)	**2021**	**2020**
Product revenue	$ 9,963	$ 8,929
Service and other revenue	2,249	2,092
Total revenue	12,212	11,021
Cost of goods sold:		
Cost of product revenue	$ 3,607	$ 3,466
Cost of service and other revenue	1,200	859
Total cost of goods sold	4,807	4,325
Gross profit	7,405	6,696
Operating expenses:		
Selling, general and administrative	8,179	6,349
Research and development	3,192	2,372
Change in fair value of contingent consideration	426	(1,561)
Depreciation and amortization	1,009	899
Total operating expenses	12,806	8,059
Loss from operations	(5,401)	(1,363)
Other income (expense):		
Interest expense, net	(751)	(637)
Change in fair value of warrant liability	(1,870)	—
Other expense, net	(66)	(105)
Loss before provision for income taxes	(8,088)	(2,105)
Benefit (provision) for income taxes	6	(38)
Net loss	$ (8,082)	$ (2,143)

Comparison of the three months ended March 31, 2021 and 2020

Revenue

	Three months March 31,		Change	
($ in thousands, except percentages)	**2021**	**2020**	**Amount**	**%**
Product revenue	$ 9,963	$ 8,929	1,034	12%
Service and other revenue	2,249	2,092	157	8%
Total revenue	$ 12,212	$ 11,021	1,191	11%

Product revenue increased by $1.0 million, or 12%, for the three months ended March 31, 2021, compared to the three months ended March 31, 2020. The increase was primarily driven by a $0.5 million increase in consumable revenue resulting from a larger installed base as of 587 systems as of March 31, 2021, as compared to 458 systems as of March 31, 2020, a $0.3 million increase in standalone software products due to incremental third party software sales completed during the three months ended March 31, 2021, and to a lesser extent a $0.2 million increase in instrument revenue resulting from 37 new system placements during the three months ended March 31, 2021, compared to 32 new system placements for the three months ended March 31, 2020.

Service and other revenue increased by $0.2 million, or 8%, for the three months ended March 31, 2021, compared to the three months ended March 31, 2020. The growth was primarily due a $0.6 increase from instrument service during the three months ended March 31, 2021, primarily driven by the increase in our installed base and customers renewing their service and warranty contracts, offset by a $0.4 million decrease relating to our lab services operations.

Costs of Goods Sold, Gross Profit and Gross Margin

	Three months ended March 31,		Change	
($ in thousands, except percentages)	**2021**	**2020**	**Amount**	**%**
Cost of product revenue	$ 3,607	$ 3,466	$ 141	4%
Cost of service and other revenue	1,200	859	341	40%
Total cost of goods sold	$ 4,807	$ 4,325	$ 482	11%
Gross profit	$ 7,405	$ 6,696	$ 709	11%
Gross margin	61%	61%		

Cost of product revenue increased by $0.1 million, or 4%, for the three months ended March 31, 2021, compared to the three months ended March 31, 2020. The increase in cost of product revenue was primarily driven by costs associated with increased instrument and consumable sales, partially offset by a change of mix in instrument revenue as compared to consumables revenue, in which there was a larger increase in consumable revenue as compared to the increase in instrument revenue for the three months ended March 31, 2021 as compared to the three months ended March 31, 2020. Additionally, we saw margin efficiencies throughout 2020 through outsourcing manufacturing to new contract manufacturers, which as of March 31, 2020, were not fully realized. Cost of service and other revenue increased by $0.3 million, or 40%, for the three months ended March 31, 2021, compared to the three months ended March 31, 2020. The increase was primarily due to increases in cost related to increased extended warranty costs as the installed base matured and customers renewed their service contracts and more customers purchased extended warranty as the standard warranty expired.

Gross profit increased by $0.7 million, or 11%, and gross margin remained consistent for the three months ended March 31, 2021 as compared to the three months ended March 31, 2021, primarily due to a higher mix of consumables revenue driven by a higher install base, in addition to lower instrument cost of goods sold due to moving to a new third-party manufacturer and replace the third-party resources noted above.

Operating Expenses

Selling, General and Administrative

	Three months ended March 31,		Change	
($ in thousands, except percentages)	**2021**	**2020**	**Amount**	**%**
Selling, general and administrative	$ 8,179	$ 6,349	$ 1,830	29%

Selling, general and administrative expense increased by $1.8 million, or 29%, for the three months ended March 31, 2021, compared to the three months ended March 31, 2021. The increase was primarily due to a $1.8 million in personnel-related expenses due to an increase in headcount to support the growth in our overall operations in anticipation of our IPO.

Research and development

($ in thousands, except percentages)	Three months ended March 31, 2021	2020	Change Amount	%
Research and development	$ 3,192	$ 2,372	$ 820	35%

Research and development expense increased by $0.8 million, or 35%, for the three months ended March 31, 2021, compared to the year ended March 31, 2020. The increase was primarily due to a $0.4 million increase in personnel- related expenses, resulting from increased headcount as well as a $0.2 million increase in third-party consulting and lab supplies consumed as the Company has ramped up its efforts in anticipation of the IPO, as well as other immaterial increases.

Change in fair value of contingent consideration

($ in thousands, except percentages)	Three months ended March 31, 2021	2020	Change Amount	%
Change in fair value of contingent consideration	$ 426	$ (1,561)	$ 1,987	(127)%

Change in fair value of contingent consideration increased by $2.0 million, or (127)%, for the three months ended March 31, 2021, compared to the three months ended March 31, 2020 due to current period remeasurement.

Depreciation and amortization

($ in thousands, except percentages)	Three months ended March 31, 2021	2020	Change Amount	%
Depreciation and amortization	$ 1,009	$ 899	$ 110	12%

The $0.1 million increase in depreciation and amortization expense was primarily related to an increase in property and equipment as of March 31, in 2021 as compared to March 31, 2020.

Interest expense

($ in thousands, except percentages)	Three months ended March 31, 2021	2020	Change Amount	%
Interest expense	$ 751	$ 637	$ 114	18%

Interest expense increased by $0.1 million, or 18%, for the three months ended March 31, 2021, compared to the three months ended March 31, 2020. The increase was primarily due to increased debt levels as of March 31, 2021 as compared to March 31, 2020.

Change in fair value of warrant liability

($ in thousands, except percentages)	Three months ended March 31, 2021	2020	Change Amount	%
Change in fair value of warrant liability	$ 1,870	$ —	$ 1,870	100%

Change in fair value of warrant liability increased by $1.9 million, or 100%, for the three months ended March 31, 2021, compared to the three months ended March 31, 2020 due to current period remeasurement.

Other expense, net

($ in thousands, except percentages)	Three months ended March 31, 2021	2020	Change Amount	%
Other expense, net	$ (66)	$ (105)	$ 39	(37)%

Other expense, net increased by $39.0 thousand for the three months ended March 31, 2021, compared to the three months ended March 31, 2020.

Liquidity and Capital Resources

As of March 31, 2021, we had approximately $11.7 million in cash and cash equivalents which were primarily held in U.S. short-term bank deposit accounts.

Since our inception, we have experienced losses and negative cash flows from operations, and as of March 31, 2021, we had a consolidated net loss of $8.1 million and an accumulated deficit of $61.3 million. We have primarily relied on equity and debt financings to fund our operations to date.

We expect to incur additional operating losses in the foreseeable future as we continue to invest in the research and development of our product offerings, commercialize and launch platforms, and expand into new markets. Based on our current business plan, we believe the net proceeds from the IPO, together with our existing cash and cash equivalents and anticipated cash flows from operations will be sufficient to meet our working capital and capital expenditure needs over at least the next 12 months following the date of this Quarterly Report on Form 10-Q.

Our future capital requirements will depend on many factors, including, but not limited to our ability to successfully commercialize and launch products, and to achieve a level of sales adequate to support our cost structure. If we are unable to execute on our business plan and adequately fund operations, or if the business plan requires a level of spending in excess of cash resources, we will have to seek additional equity or debt financing. If additional financings are required from outside sources, we may not be able to raise it on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, financial condition, results of operations and prospects could be adversely affected.

Sources of Liquidity

Since our inception, we have financed our operations primarily from the issuance and sale of our convertible preferred stock and borrowings under long-term debt agreements. In April 2021, we completed our IPO, resulting in the receipt of aggregate proceeds of approximately $138.2 million, net of offering costs, underwriter discounts and commissions of $13.1 million.

Convertible preferred stock financings

Through March 31, 2021, we have raised a total of $60.5 million from the issuance and sale of convertible preferred stock, net of costs associated with such financings. Most recently, in 2019 we issued shares of Series D convertible preferred stock for gross proceeds of $25.0 million.

Payroll Protection Program loan

During April 2020, we received a $2.48 million small business loan under the Payroll Protection Program, part of the Coronavirus Aid, Relief and Economic Security Act, the CARES Act. We expect a portion of the loan to be forgiven under the provisions of the program. See “Risks Related to Our Business and Strategy — We received economic stimulus funding under the CARES Act.” If such funding is not forgiven and is required to be repaid pursuant to the terms of the CARES Act or related guidance, our business, results of operations, and financial condition may be materially and adversely affected.” The note bears interest at a rate of 1.00% and payments are scheduled to begin the latter of March 2021, or upon response by the Small Business Administration regarding our forgiveness application.

Midcap Financial Trust Loan

In October 2020, we entered into a new debt financing arrangement with Midcap Financial Trust, or Term Loan, for a $37.5 million credit facility, consisting of a senior, secured term loan to refinance all existing indebtedness with Innovatus. We realized $32.5 million in aggregate proceeds as a result of the debt financing, and the remaining $5.0 million not yet drawn on the Term Loan is available to be drawn from March 31, 2021, through June 30, 2021. The term of the Midcap loan is interest only for 36-months followed by 24-months of straight-line amortization with a final maturity date of October 27, 2025. Interest on the outstanding balance of the Term Loan shall be payable monthly in arrears at an annual rate of one-month LIBOR plus 6.35%, subject to a LIBOR floor of 1.50%.

The Term Loan is subject to a minimum revenue financial covenant measuring our last twelve months trailing revenue, tested on a monthly basis.

The Term Loan is collateralized by substantially all of our assets. The agreement contains customary negative covenants that limit our ability to, among other things, incur additional indebtedness, grant liens, make investments, repurchase stock, pay dividends, transfer assets and merge or consolidate with any other entity or to acquire all or substantially all the capital stock or property of another entity. The agreement also contains customary affirmative covenants, including requirements to, among other things, deliver audited financial statements. If we default under the Term Loan and if the default is not cured or waived, the lender could cause any amounts outstanding to be payable immediately. Under certain circumstances, the lender could also exercise its rights with respect to the collateral securing such loans. Moreover, any such default would limit our ability to obtain additional financing, which may have an adverse effect on our cash flow and liquidity.

We were in compliance with all covenants under the Term Loan as of March 31, 2021.

Cash flows

The following table summarizes our cash flows for the periods presented:

	Three months ended March 31,	
($ in thousands)	**2021**	**2020**
Net cash used in:		
Operating activities	$ (4,404)	$ (961)
Investing activities	(907)	(1,431)
Financing activities	(4)	(2,660)
Net decrease in cash, cash equivalents, and restricted cash	$ (5,315)	$ (5,052)

Operating activities

Net cash used in operating activities increased by $3.4 million to $4.4 million in the three months ended March 31, 2021 compared to $1.0 million in the three months ended March 31, 2020. This increase is attributable to a net loss of $8.1 million, offset by non-cash charges of $3.7 million. Non-cash charges primarily consisted of $1.9 million in change in fair value of warrant liability, $1.0 million of depreciation and amortization, $0.4 million in change in fair value of contingent consideration, $0.3 million of stock-based compensation, and $0.1 million of non-cash interest expense.

Investing activities

Net cash used in investing activities was $0.9 million in the three months ended March 31, 2021 compared to $1.4 million during the three months ended March 31, 2020. The decrease was primarily driven by purchases of property and equipment of $0.9 million.

Financing activities

Net cash used in financing activities was $4 thousand for the three months ended March 31, 2021 compared with $2.7 million for the three months ended March 31, 2020. During the three months ended March 31, 2021, we paid out $0 in contingent consideration as compared to $2.6 million during the three months ended March 31, 2020. Remaining changes were immaterial.

Concentration of credit risk

For the three months ended March 31, 2021, no customers accounted for more than 10% of our revenue. At March 31, 2021, no customers accounted for more than 10% of accounts receivable. For the three months ended March 31, 2020, PKI accounted for 26% of revenue as they served as sole distributor of our Phenoptics platform pursuant to the transition agreement following our acquisition of the technology, and we fulfilled the remaining orders with PKI primarily in the first quarter of 2020.

Qualitative and Quantitative Disclosures About Market Risk

Interest rate risk

Customer financing exposure. We are indirectly exposed to interest rate risk because many of our customers depend on debt financings to purchase our platforms and systems. An increase in interest rates could make it challenging for our customers to obtain the capital necessary to make such purchases on favorable terms, or at all. Such factors could reduce demand or lower the price we can charge for our platforms and systems, thereby reducing our net sales and gross profit.

Fixed rate debt. In October 2020, we entered into Term Loan with Midcap Financial Trust which is due in October 2025, and carries a fixed interest rate of 7.85% per annum. If we refinance the Term Loan or enter into new debt arrangements, interest rates could increase and thereby increase our financing costs and increase our net loss. A hypothetical 100 basis point change in interest rates would have resulted in a $0.0 million increase in interest expense for the three months ended March 31, 2021.

Bank deposit, money market and note receivable exposure. As of March 31, 2021, we had cash and cash equivalents, including restricted cash, of $12.2 million, which consisted primarily of bank deposits. The primary objective of our investment is to preserve principal and provide liquidity. These bank deposits generate interest income at variable rates below 1%. A hypothetical 100 basis point decrease in interest rates would have lowered our interest income by $0.0 million and increased our net loss by this amount.

Foreign currency risk

The majority of our revenue has been generated in the United States. As we expand our presence in international markets, to the extent we are required to enter into agreements denominated in a currency other than the U.S. dollar, our results of operations and cash flows may increasingly be subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to changes in foreign exchange rates. To date, we have not entered into any hedging arrangements with respect to foreign currency risk. As our international operations grow, we will continue to reassess our approach to manage our risk relating to fluctuations in currency rates.

Critical accounting policies and estimates

We have prepared our consolidated financial statements in accordance with GAAP. Our preparation of these consolidated financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities, revenue, expenses and related disclosures. We evaluate our estimates and judgments on an ongoing basis. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results could therefore differ materially from these estimates under different assumptions or conditions.

There have been no significant changes in our critical accounting policies and estimates as compared to the critical accounting policies and estimates disclosed in the section titled "Management's Discussion and Analysis of Financial Condition and Operations" included in the Prospectus filed with the SEC on April 19, 2021.

Recent accounting pronouncements

For information on recently issued accounting pronouncements, see Note 2 to our consolidated financial statements in this Quarterly Report on Form 10-Q.

JOBS Act accounting election

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have elected to avail ourselves of this extended transition period, and, as a result, we will not be required to adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies. We intend to rely on other exemptions provided by the JOBS Act, including without limitation, not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act of 2002.

Smaller reporting company status

We are also a "smaller reporting company," meaning that the market value of our stock held by non-affiliates is less than $700 million and our annual revenue is less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue is less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We are a smaller reporting company, as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended, for this reporting period and are not required to provide the information required under this item.

Item 4. Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15 under the Exchange Act as of the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of March 31, 2021. There was not any change in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) under the Exchange Act) during the quarter ended March 31, 2021 that has materially affected, or is 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. We are not currently a party to or aware of any proceedings that we believe will have, individually or in the aggregate, a material adverse effect on our business, financial condition or results of operations. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. Our risk factors are set forth in our Prospectus and incorporated herein by reference, and there have been no material changes to such risk factors. You should carefully consider the risks and uncertainties we describe in the Prospectus, together with all other information in this report, including our unaudited financial statements and related notes and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this report, before investing in our common stock. Any of the risk factors we describe in the Prospectus could adversely affect our business, financial condition, results of operations or prospects. The market price of our common stock could decline if one or more of these risks or uncertainties actually occur, causing you to lose all or part of your investment in our common stock. Additional risks that we currently do not know about or that we currently believe to be immaterial may also impair our business, financial condition, operating results and prospects.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Sales of Unregistered Securities

During the quarter ended March 31, 2021, we had the following unregistered securities transactions:

1. We granted stock options to purchase an aggregate of 1,343,700 shares of our common stock, with exercise prices ranging from $12.26 to $16.12 per share, to certain of our employees and directors in connection with services provided to us by such persons.
2. We issued an aggregate of 271,334 shares of our common stock to our employees and consultants upon their exercise of stock options, for aggregate cash consideration of approximately $0.0 million.

The issuances of the securities described above were exempt from registration pursuant to Section 4(a)(2) of the Securities Act as transactions by an issuer not involving a public offering or Rule 701 promulgated under the Securities Act as transactions pursuant to compensatory benefit plans. The shares of common stock issued upon the exercise of options are deemed to be restricted securities for purposes of the Securities Act.

Use of Proceeds from our IPO

On April 20, 2021, we completed our IPO. In the IPO, we issued and sold 7,567,000 shares of our common stock at a price to the public of $20.00 per share, including the exercise by the underwriters of their option to purchase an additional 987,000 shares. Net proceeds to us were $138.2 million after deducting aggregate underwriting discounts and commissions of $138.2 million and estimated offering expenses of $10.6 million. J.P. Morgan Securities LLC, Morgan Stanley & Co. LLC, Piper Sandler & Co. and Canaccord Genuity LLC acted as joint book-running managers for the offering. All of the shares of common stock issued and sold in the offering were registered under the Securities Act pursuant to a registration statement on Form S-1 (File No. 333-254760), which was declared effective by the SEC on April 15, 2021. Following the sale of these shares, the offering terminated. No payments were made by us to directors, officers or persons owning 10% or more of any class of our equity securities or to any of our affiliates. There has been no material change in the planned use of proceeds from our IPO as described in our Prospectus. As our IPO closed after the period covered by this report, none of the proceeds from our IPO were used during the period covered by this report.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

Exhibit Number	Exhibit Title	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation	S-1	333-254760	3.3	3/26/2021	
3.2	Amended and Restated Bylaws	S-1	333-254760	3.4	3/26/2021	
10.1+	Akoya Biosciences, Inc. 2015 Equity Incentive Plan, as amended, and form of stock option agreement thereunder	S-1	333-254760	10.1	3/26/2021	
10.2+	Akoya Biosciences, Inc. 2021 Equity Incentive Plan and form of stock option agreement thereunder	S-1/A	333-254760	10.2	4/12/2021	
10.3+	Akoya Biosciences, Inc. 2021 Employee Stock Purchase Plan	S-1/A	333-254760	10.3	4/12/2021	
10.4+	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers	S-1	333-254760	10.4	3/26/2021	
10.5+	Offer Letter, dated June 28, 2017, by and between the Registrant and Brian McKelligon	S-1	333-254760	10.5	3/26/2021	
10.6+	Letter Amendment, dated October 8, 2018, by and between the Registrant and Brian McKelligon	S-1	333-254760	10.6	3/26/2021	
10.7+	Offer Letter, dated January 28, 2019, by and between the Registrant and Joseph Driscoll	S-1	333-254760	10.7	3/26/2021	
10.8+	Offer Letter, dated July 14, 2020, by and between the Registrant and Niroshan Ramachandran	S-1	333-254760	10.8	3/26/2021	
10.9†	Exclusivity (Equity) Agreement, dated November 17, 2015, by and between the Registrant and The Board of Trustees of the Leland Stanford Junior University	S-1	333-254760	10.9	3/26/2021	
10.10†	Amendment No. 1 to the License Agreement, dated November 18, 2016, by and between the Registrant and The Board of Trustees of the Leland Stanford Junior University	S-1	333-254760	10.10	3/26/2021	
10.11†	License and Royalty Agreement, dated September 28, 2018, by and among the Registrant, PerkinElmer Health Sciences, Inc., Cambridge Research & Instrumentation, Inc. and VisEn Medical Inc.	S-1	333-254760	10.11	3/26/2021	
10.12†	Transition Services Agreement, dated September 28, 2018, by and between the Registrant and PerkinElmer Health Sciences, Inc., as amended by First Amendment to the Transition Services Agreement, dated September 27, 2019	S-1	333-254760	10.12	3/26/2021	
10.13†	Exclusive Patent License Agreement, dated June 26, 2018, by and between the Registrant and the University of Washington	S-1	333-254760	10.13	3/26/2021	
10.14	Credit and Security Agreement, dated October 27, 2020, by and between the Registrant and Midcap Financial Trust	S-1	333-254760	10.14	3/26/2021	
10.15	Amended and Restated Investors' Rights Agreement, dated September 27, 2019, by and among the Registrant and certain of its stockholders	S-1	333-254760	10.15	3/26/2021	
10.16+	Offer Letter, dated March 2, 2021, by and between Registrant and Frederic Pla	S-1/A	333-254760	10.16	4/12/2021	
31.1	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Principal Financial and Accounting Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1*	Certification of Principal Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
32.2*	Certification of Principal Financial and Accounting Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
101.INS	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					X

+ Management contract or compensatory plan or arrangement.

† Portions of this exhibit have been omitted pursuant to Item 601 of Regulation S-K promulgated under the Securities Act because the information is not material and would be competitively harmful if publicly disclosed.

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

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.

Akoya Biosciences, Inc.

Date: May 20, 2021

By: /s/ Brian McKelligon
Brian McKelligon
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 20, 2021

By: /s/ Joseph Driscoll
Joseph Driscoll
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATION OF THE CHIEF EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Brian McKelligon, certify that:

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

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

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

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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) 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

    c) 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: May 19, 2021

By: /s/ Brian McKelligon
Brian McKelligon
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF THE CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Joseph Driscoll, certify that:

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

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

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

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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) 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

    c) 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: May 19, 2021

By: /s/ Joseph Driscoll
Joseph Driscoll
Chief Financial Officer
(Principal Financial Officer and
Principal Accounting Officer)

Exhibit 32.1

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 Akoya Biosciences, Inc. (the "Company") on Form 10-Q for the quarterly period ended March 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: May 19, 2021

By: /s/ Brian McKelligon
Brian McKelligon
Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

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 Akoya Biosciences, Inc. (the "Company") on Form 10-Q for the quarterly period ended March 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: May 19, 2021

By: /s/ Joseph Driscoll
Joseph Driscoll
Chief Financial Officer
(Principal Financial Officer and
Principal Accounting Officer)