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 June 30, 2022

or

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

Commission File Number: 001-40344

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 July 29, 2022: 37,892,282

AKOYA BIOSCIENCES, INC.

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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 (the "SEC") 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 subsidiary.

AKOYA BIOSCIENCES, INC. AND SUBSIDIARY

CONSOLIDATED BALANCE SHEETS

(in thousands, except share and per share data)

	June 30, 2022 (unaudited)	December 31, 2021
Assets		
Current assets		
Cash and cash equivalents	$ 46,881	$ 113,079
Marketable securities	40,725	—
Accounts receivable, net	10,472	9,444
Inventories, net	13,218	9,014
Prepaid expenses and other current assets	8,598	9,277
Total current assets	119,894	140,814
Property and equipment, net	9,390	7,487
Restricted cash	302	302
Demo inventory, net	2,035	2,548
Intangible assets, net	20,799	21,150
Goodwill	18,262	18,262
Operating lease right of use assets, net	11,687	—
Financing lease right of use assets, net	1,546	—
Other assets	348	344
Total assets	$ 184,263	$ 190,907
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 13,372	$ 9,435
Accrued expenses and other current liabilities	11,503	13,491
Current portion of operating lease liabilities	3,015	—
Current portion of financing lease liabilities	578	—
Current portion of capital lease liabilities	—	272
Deferred revenue	5,315	4,484
Total current liabilities	33,783	27,682
Deferred revenue, net of current portion	1,554	1,330
Long-term debt, net of debt discount	42,565	32,471
Deferred tax liability, net	125	26
Capital lease liabilities, net of current portion	—	197
Operating lease liabilities, net of current portion	9,066	—
Financing lease liabilities, net of current portion	721	—
Contingent consideration liability (Note 4), net of current portion	5,599	7,850
Total liabilities	93,413	69,556
Stockholders' equity:		
Preferred Stock, $0.00001 par value; 10,000,000 shares authorized; 0 shares issued and outstanding at June 30, 2022 and December 31, 2021	—	—
Common Stock, $0.00001 par value; 500,000,000 shares authorized at June 30, 2022 and December 31, 2021; 37,766,655 and 37,424,101 shares issued and outstanding at June 30, 2022 and December 31, 2021, respectively	2	2
Additional paid in capital	220,941	217,456
Accumulated deficit	(130,001)	(96,107)
Other comprehensive loss	(92)	—
Total stockholders' equity	90,850	121,351
Total liabilities and stockholders' equity	$ 184,263	$ 190,907

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		Six months ended	
	June 30, 2022	June 30, 2021	June 30, 2022	June 30, 2021
Revenue:				
Product revenue	$ 14,161	$ 10,719	$ 27,504	$ 20,682
Service and other revenue	3,733	2,352	7,284	4,601
Total revenue	17,894	13,071	34,788	25,283
Cost of goods sold:				
Cost of product revenue	$ 5,198	$ 3,180	$ 9,278	$ 6,787
Cost of service and other revenue	2,355	1,757	5,073	2,957
Total cost of goods sold	$ 7,553	$ 4,937	$ 14,351	$ 9,744
Gross profit	$ 10,341	$ 8,134	$ 20,437	$ 15,539
Operating expenses:				
Selling, general and administrative	20,590	10,066	38,783	18,245
Research and development	5,598	2,947	11,312	6,139
Change in fair value of contingent consideration	(1,156)	400	(956)	826
Depreciation and amortization	1,617	1,099	3,160	2,108
Total operating expenses	26,649	14,512	52,299	27,318
Loss from operations	(16,308)	(6,378)	(31,862)	(11,779)
Other income (expense):				
Interest expense, net	(849)	(757)	(1,598)	(1,508)
Change in fair value of warrant liability	—	(858)	—	(2,728)
Gain on extinguishment of debt	—	2,476	—	2,476
Other expense, net	(232)	(52)	(306)	(118)
Loss before benefit (provision) for income taxes	(17,389)	(5,569)	(33,766)	(13,657)
Benefit (provision) for income taxes	(106)	6	(128)	12
Net loss	$ (17,495)	$ (5,563)	$ (33,894)	$ (13,645)
Dividends accrued on redeemable convertible preferred stock	—	(245)	—	(1,435)
Accretion of redeemable convertible preferred stock	—	(296)	—	(296)
Adjusted net loss attributable to common stockholders	(17,495)	(6,104)	(33,894)	(15,376)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.47)	$ (0.20)	$ (0.90)	$ (0.94)
Weighted-average shares outstanding, basic and diluted	37,612,331	29,974,811	37,538,821	16,415,800

See accompanying notes to consolidated financial statements.

AKOYA BIOSCIENCES, INC. AND SUBSIDIARY

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS (Unaudited)
(in thousands)

	Three months ended		Six months ended	
	June 30, 2022	June 30, 2021	June 30, 2022	June 30, 2021
Net loss	$ (17,495)	$ (5,563)	$ (33,894)	$ (13,645)
Other comprehensive loss:				
Unrealized loss on marketable securities	(92)	—	(92)	—
Total other comprehensive loss	(92)	—	(92)	—
Comprehensive loss	$ (17,587)	$ (5,563)	$ (33,986)	$ (13,645)

See accompanying notes to consolidated financial statements.

AKOYA BIOSCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT) (Unaudited)
(in thousands, except 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 A Common Stock		Class B Common Stock		Additional Paid in Capital	Accumulated Deficit	Accumulated other comprehensive loss	Total Stockholders' equity (deficit)
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Balance at December 31, 2021	—	$ —	—	$ —	—	$ —	—	$ —	37,424,101	$ 2	—	$ —	$ 217,456	$ (96,107)	$ —	$ 121,351
Exercise of stock options	—	—	—	—	—	—	—	—	78,257	—	—	—	55	—	—	55
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	—	(16,399)	—	(16,399)
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	—	—	1,545	—	—	1,545
Balance at March 31, 2022	—	$ —	—	$ —	—	$ —	—	$ —	37,502,358	$ 2	—	$ —	$ 219,056	$ (112,506)	$ —	$ 106,552
Exercise of stock options	—	—	—	—	—	—	—	—	264,297	—	—	—	164	—	—	164
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	—	(17,495)	—	(17,495)
Other comprehensive loss	—	—	—	—	—	—	—	—	—	—	—	—	—	—	(92)	(92)
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	—	—	1,721	—	—	1,721
Balance at June 30, 2022	—	$ —	—	$ —	—	$ —	—	$ —	37,766,655	$ 2	—	$ —	$ 220,941	$ (130,001)	$ (92)	$ 90,850

See accompanying notes to consolidated financial statements.

AKOYA BIOSCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT) (Unaudited)
(in thousands, except 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 A Common Stock		Class B Common Stock		Additional Paid in Capital	Accumulated Deficit	Total Stockholders equity (defici
	Shares	Amount	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**
Conversion of Class B shares	—	—	—	—	—	—	—	—	2,835,099	1	(2,835,099)	(1)	—	—	—
Exercise of stock options	—	—	—	—	—	—	—	—	189,175	—	—	—	99	—	99
Accrued dividends	—	37	—	105	—	103	—	—	—	—	—	—	(245)	—	(245
Initial public offering of common stock	—	—	—	—	—	—	—	—	7,567,000	—	—	—	138,553	—	138,553
Conversion of preferred stock into common stock in connection with the IPO	(13,715,330)	(11,717)	(26,732,361)	(30,722)	(16,390,217)	(28,103)	(5,013,333)	(1,253)	26,545,579	1	—	—	71,794	—	70,542
Reclassification of warrant liability to equity	—	—	—	—	—	—	—	—	—	—	—	—	3,219	—	3,219
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	—	(5,563)	(5,563
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	—	—	1,216	—	1,216
Balance at June 30, 2021	**—**	**$ —**	**—**	**$ —**	**—**	**$ —**	**—**	**$ —**	**37,136,853**	**$ 2**	**—**	**$ —**	**$ 214,636**	**$ (66,817)**	**$ 147,821**

See accompanying notes to consolidated financial statements.

AKOYA BIOSCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)
(in thousands)

	Six months ended	
	June 30, 2022	June 30, 2021
Operating activities		
Net loss	$ (33,894)	$ (13,645)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	3,309	2,174
Non-cash interest expense	226	212
Stock-based compensation expense	3,266	1,470
Deferred taxes	99	(16)
Change in fair value of contingent consideration	(956)	826
Net accretion of marketable securities	(43)	—
Change in fair value of warrant liability	—	2,728
Gain on extinguishment of debt	—	(2,476)
Changes in operating assets and liabilities:		
Accounts receivable, net	(1,028)	(1,688)
Prepaid expenses and other assets	(12,749)	(6,043)
Inventories, net	(4,131)	(2,539)
Accounts payable	3,937	(176)
Accrued expenses and other liabilities	9,591	1,923
Deferred revenue	1,055	431
Net cash used in operating activities	(31,318)	(16,819)
Investing activities		
Purchases of property and equipment	(2,702)	(1,854)
Purchase of marketable securities	(40,774)	—
Net cash used in investing activities	(43,476)	(1,854)
Financing activities		
Proceeds from initial public offering, net of underwriting discounts and commissions	—	138,553
Proceeds from stock option exercises	219	143
Proceeds from debt	10,000	—
Payments of debt issuance costs	(100)	—
Principal payments on capital leases	—	(176)
Principal payments on financing leases	(316)	—
Payments of contingent consideration	(1,207)	(1,590)
Net cash provided by financing activities	8,596	136,930
Net (decrease) increase in cash, cash equivalents, and restricted cash	(66,198)	118,257
Cash, cash equivalents, and restricted cash at beginning of year	113,381	17,508
Cash, cash equivalents, and restricted cash at end of year	$ 47,183	$ 135,765
Supplemental disclosures of cash flow information		
Cash paid for interest	$ 1,290	$ 1,290
Cash paid for income taxes	$ —	$ —
Supplemental disclosures of non-cash activities		
Purchases of property and equipment included in accounts payable and accrued expenses	$ 1,815	$ 811
Accretion of dividends on Series B, C, and D Preferred Stock	$ —	$ 1,435
Conversion of convertible preferred stock into common stock upon completion of initial public offering	$ —	$ 71,795
Reclassification of warrant liability to equity	$ —	$ 3,219

See accompanying notes to consolidated financial statements.

AKOYA BIOSCIENCES, INC. AND SUBSIDIARY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Amounts in thousands, except share and per share data)

(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 PhenoCycler™ (formerly CODEX®) and PhenoImager™ (formerly 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 QPS 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 QPS 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 (the “Board”) 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 $138.6 million in net proceeds, after deducting underwriting discounts and commissions and other offering expenses.

Immediately prior to completing the IPO, 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 2,835,099 shares of the Company’s Class A 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. Refer to Note 9 for further details.

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 June 30, 2022, the consolidated statements of operations, the consolidated statements of comprehensive loss, and the consolidated statements of redeemable convertible preferred stock and stockholders’ equity (deficit) for the three and six months ended June 30, 2022 and 2021, and the consolidated statements of cash flows for the six months ended June 30, 2022 and 2021 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 June 30, 2022, the results of its operations for the three and six months ended June 30, 2022 and 2021, and cash flows for the six months ended June 30, 2022 and 2021. The financial data and other information disclosed in these notes related to the three and six months ended June 30, 2022 and 2021 are also unaudited. The results for the three and six months ended June 30, 2022 are not necessarily indicative of results to be expected for the year ending December 31, 2022, any other interim periods, or any future year or period. The consolidated balance sheet as of December 31, 2021 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, 2021 included in the Annual Report on Form 10-K filed with the SEC on March 15, 2022.

Liquidity and going concern

At June 30, 2022, the Company had cash, cash equivalents, and marketable securities of $87,606 and an accumulated deficit of $130,001. 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.

The Company has incurred losses since its inception and has used cash from operations of $31,318 during the six months ended June 30, 2022. However, the Company believes that its existing cash, cash equivalents, and marketable securities 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

Significant accounting policies

The Company's significant accounting policies are disclosed in its Annual Report on Form 10-K for the year ended December 31, 2021 filed with the Securities and Exchange Commission and have not materially changed during the six months ended June 30, 2022, with the exception of the adoption of the FASB's ASU 2016-02, *Leases* (Topic 842) in the first quarter of 2022. Refer below to "Recently adopted accounting standards" for further information.

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. 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, the Company generally uses the cost-to-cost approach to measure the extent of progress towards completion of the performance obligation because the Company believes 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.

In June 2022, the Company entered into a Companion Diagnostic Agreement with Acrivon Therapeutics, Inc. (the “Acrivon Agreement”) to co-develop, validate, and commercialize Acrivon’s OncoSignature® test. The Company will be paid through an upfront payment and at the achievement of certain developmental, commercial, and FDA milestones during the development, that could aggregate to low double digit million dollars.

The Acrivon Agreement is in the scope of ASC 606, *Revenue from Contracts with Customers* and includes one performance obligation since the underlying elements are inputs to a single development service and are not distinct within the context of the contract. Accordingly, the Company will recognize revenue over time for the transaction price in an amount proportional to the expenses incurred and the total estimated expenses to satisfy its performance obligation. Due to the uncertainty in the achievement of certain developmental, commercial, and FDA milestones, the variable consideration associated with certain future milestone payments has been fully constrained from the transaction price until such time that the Company concludes that it is probable that a significant reversal of previously recognized revenue will not occur.

The costs incurred by the Company under this arrangement are included as research and development expenses in the Company’s Consolidated Statements of Operations as these costs are related to the development of new services and technology to be owned and offered by the Company.

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		Six months ended	
	June 30, 2022	**June 30, 2021**	**June 30, 2022**	**June 30, 2021**
Revenue				
Product revenue				
Instruments	$ 9,463	$ 6,259	$ 17,984	$ 13,096
Consumables	4,495	4,309	9,123	6,853
Standalone software products	203	151	397	733
Total product revenue	$ 14,161	$ 10,719	$ 27,504	$ 20,682
Service and other revenue	$ 3,733	$ 2,352	$ 7,284	$ 4,601
Total revenue	$ 17,894	$ 13,071	$ 34,788	$ 25,283

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 June 30, 2022 or December 31, 2021.

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 six months ended June 30, 2022 and 2021.

Stock-based compensation

The Company records stock-based compensation for awards granted to employees, non-employees, and to members of the Board for their services on the Board 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 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.

For restricted stock units ("RSUs") issued under the Company's stock-based compensation plans, the fair value of each grant is calculated based on the Company's stock price on the date of grant.

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 plans.

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.

Comprehensive loss

Components of comprehensive loss, including net loss, are reported in the financial statements in the period in which they are recognized. Other comprehensive income or loss is defined as the change in equity during a period from transactions and other events and circumstances from non-owner sources. Net loss and other comprehensive loss are reported net of any related tax effect to arrive at comprehensive loss. Comprehensive loss includes net loss as well as other changes in stockholders' equity that result from transactions and economic events other than those with stockholders which for the three and six months ended June 30, 2022 consist of unrealized loss on marketable securities.

Marketable securities

Marketable securities represent holdings of available-for-sale marketable debt securities in accordance with the Company's investment policy. Short-term marketable securities mature within one year from the balance sheet date while long-term marketable securities mature after one year. Investments in marketable securities are recorded at fair value, with any unrealized gains and losses reported within accumulated other comprehensive income as a separate component of stockholders' equity until realized or until a determination is made that an other-than-temporary decline in market value has occurred. The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization and accretion are reflected as a component of other expense. Interest on securities sold is determined based on the specific identification method and reflected as interest income. Any realized gains or losses on the sale of investment are reflected as realized (loss) gain on investments.

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. The Company has elected to avail itself of this extended transition period and, as a result, the Company 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 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. 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.

On January 1, 2022, the Company adopted ASU No. 2016-02, *Leases* (Topic 842), (ASC 842), using the optional transition method allowing entities to recognize a cumulative effect adjustment to the opening balance sheet without restating comparative prior periods presented. ASC 842 requires a lessee to recognize assets and liabilities on the balance sheet for most leases and changes many key definitions, including the definition of a lease. Lessees will continue to differentiate between finance leases and operating, and classification will impact expense recognition.

The Company elected the following practical expedients for all lease asset classes, which must be elected as a package and applied consistently to all of its leases at the transition date: i) the Company did not reassess whether any expired or existing contracts are or contain leases; ii) the Company did not reassess the lease classification for any expired or existing leases; and iii) the Company did not reassess initial direct costs for any existing leases. Refer to Note 17 "Leases" for the adoption impact to our consolidated balance sheet.

Recently issued but not yet adopted accounting standards

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. ASU 2017-04 is effective for the Company on January 1, 2023, with early adoption permitted. The Company is currently evaluating the potential impact that ASU 2017-04 may have on its consolidated financial statements and related disclosures.

(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, marketable securities, and receivables. The Company's cash equivalents are held by large, credit worthy financial institutions. Marketable securities consist of short-term investments. 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. The Company had an allowance for doubtful accounts of $45 and $45 at June 30, 2022 and December 31, 2021, respectively.

For the three months ended June 30, 2022, one customer accounted for 13% of revenue. For the six months ended June 30, 2022, no customers accounted for more than 10% of revenue. For the three months ended June 30, 2021, one customer accounted for 12% of revenue. For the six months ended June 30, 2021, no customers accounted for more than 10% of revenue. As of June 30, 2022, one customer accounted for 18% of accounts receivable. As of December 31, 2021, no customers accounted for more than 10% of accounts receivable.

(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 June 30, 2022 and December 31, 2021:

	Balance at June 30, 2022	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash and cash equivalents	$ 46,881	$ 42,673	$ 4,208	$ —
U.S. Treasury securities	40,725	—	40,725	—
Total Assets	$ 87,606	$ 42,673	$ 44,933	$ —
Liabilities:				
Contingent consideration – Long term portion	$ 5,599	$ —	$ —	$ 5,599
Total Liabilities	$ 5,599	$ —	$ —	$ 5,599

	Balance at December 31, 2021	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Liabilities:				
Contingent consideration – Long term portion	$ 7,850	$ —	$ —	$ 7,850
Total Liabilities	$ 7,850	$ —	$ —	$ 7,850

The following is a summary of cash, cash equivalents and marketable securities:

	June 30, 2022			
	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Cash and cash equivalents	$ 46,882	$ —	$ (1)	$ 46,881
Marketable securities:		—	—	
U.S. Treasury securities due in one year or less	40,816	—	(91)	40,725
Total marketable securities	40,816	—	(91)	40,725
Total cash, cash equivalents, and marketable securities	$ 87,698	$ —	$ (92)	$ 87,606

The Company held 17 debt securities at June 30, 2022 classified as marketable securities with original maturity dates greater than three months that were in an unrealized loss position for less than twelve months. The fair value of these securities was $40,725. The Company held 2 debt securities at June 30, 2022 classified as cash and cash equivalents with original maturity dates less than three months that were in an unrealized loss position. The fair value of these securities was $3,994. The Company evaluated its securities for other-than-temporary impairments based on quantitative and qualitative factors. The Company considered the decline in market value for these securities to be primarily attributable to current economic and market conditions. It is not more likely than not that the Company will be required to sell these securities, and the Company does not intend to sell these securities before the recovery of their amortized cost basis. Based on its analysis, the Company does not consider these investments to be other-than-temporarily impaired as of June 30, 2022.

The Company had no material realized gains or losses on our available-for-sale securities for the three and six months ended June 30, 2022. There were no other-than-temporary impairments recognized for the three and six months ended June 30, 2022.

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.

In September 2019, the Company entered into a Loan and Security Agreement with Innovatus Life Sciences Lending Fund I, LP ("Innovatus"), under which Innovatus agreed to make a term loan to the Company in an aggregate principal amount of $25,000 (the "Innovatus Term Loan"). 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, 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 full value of the warrant or a portion of its full value. Prior to the IPO, since the underlying Series D redeemable convertible preferred stock was classified outside of permanent equity, the preferred stock warrant was classified as other long-term liabilities in the accompanying balance sheet. The preferred stock warrant liability was recorded at fair value utilizing the Black-Scholes model. 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. The Company adjusted the carrying value of the preferred stock warrant to its estimated fair value at each reporting date, with any related increase or decrease in the fair value recorded as an increase or decrease to other income (expense) in the statements of operations. In connection with the IPO, the preferred stock warrant was converted to a warrant to purchase shares of the Company's common stock, pursuant to its preexisting terms. As such, the Company assessed the classification of the common stock warrant and determined it met the criteria to be classified within stockholders' equity. Accordingly, the fair value of the warrant liability was reclassified to stockholders' equity.

Changes in the fair value of the Company's long-term portion of the contingent consideration liability during the six months ended June 30, 2022 and 2021 were as follows:

Balance as of December 31, 2021	$ 7,850
Reclassification of FY 2022 payment to accrued expenses	(1,295)
Change in contingent consideration value	(956)
Balance as of June 30, 2022	$ 5,599
Balance as of December 31, 2020	$ 6,984
Reclassification of FY 2021 payment to accrued expenses	(1,183)
Change in contingent consideration value	826
Balance as of June 30, 2021	$ 6,627

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 June 30, 2022	Valuation Technique	Unobservable Inputs
Revenue-based Payments	$ 5,599	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 six months ended June 30, 2021 were as follows:

Balance as of December 31, 2020	$ 490
Change in fair value of warrant liability	2,728
Reclassification of warrant liability to stockholders' equity	(3,218)
Balance as of June 30, 2021	$ —

(5) Property and equipment, net

Property and equipment consists of the following:

	Estimated Useful Life (Years)	June 30, 2022	December 31, 2021
Furniture and fixtures	7	$ 1,756	$ 488
Computers, laptop and peripherals	5	4,173	3,590
Laboratory equipment	5	6,262	5,906
Leasehold improvements	Shorter of the lease life or 7	2,041	1,571
Total property and equipment		14,232	11,555
Less: Accumulated depreciation		(4,842)	(4,068)
Property and equipment, net		$ 9,390	$ 7,487

Depreciation expense of $548 and $982 relating to property and equipment was charged to operations for the three and six months ended June 30, 2022, respectively. Depreciation expense of $430 and $814 relating to property and equipment was charged to operations for the three and six months ended June 30, 2021, respectively. Depreciation expense of $39 and $115 relating to property and equipment was charged to cost of sales for the three and six months ended June 30, 2022, respectively. Depreciation expense of $0 relating to property and equipment was charged to cost of sales for the three and six months ended June 30, 2021.

Demo inventory consists of the following:

	Estimated Life (Years)	June 30, 2022	December 31, 2021
Demo inventory – gross	3	$ 3,835	$ 3,733
Less: Accumulated depreciation		(1,800)	(1,185)
Demo inventory, net		$ 2,035	$ 2,548

Depreciation expense of $293 and $645 relating to demo equipment was charged to operations for the three and six months ended June 30, 2022, respectively. Depreciation expense of $148 and $253 relating to demo equipment was charged to operations for the three and six months ended June 30, 2021, respectively.

(6) Intangible assets and goodwill

Intangible assets as of June 30, 2022 are summarized as follows:

	Cost	Accumulated Amortization	Net	Useful Life (in years)
Customer relationships	$ 11,800	$ (2,954)	$ 8,846	15
Developed technology	8,300	(2,598)	5,702	12
Licenses	213	(27)	186	15
Trade names and trademarks	6,300	(2,136)	4,164	12
Capitalized software	2,025	(142)	1,883	5
Non-compete agreements	300	(282)	18	4
Total intangible assets	$ 28,938	$ (8,139)	$ 20,799	

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

	Cost	Accumulated Amortization	Net	Useful Life (in years)
Customer relationships	$ 11,800	$ (2,561)	$ 9,239	15
Developed technology	8,300	(2,252)	6,048	12
Licenses	63	(25)	38	15
Trade names and trademarks	6,300	(1,722)	4,578	12
Capitalized software	1,259	(68)	1,191	5
Non-compete agreements	300	(244)	56	4
Total intangible assets	$ 28,022	$ (6,872)	$ 21,150	

Total amortization expense charged to operations for the three and six months ended June 30, 2022 was $649 and $1,267, respectively. Total amortization expense charged to cost of sales for the three and six months ended June 30, 2022 was $0. Total amortization expense charged to operations for the three and six months ended June 30, 2021 was $521 and $1,041, respectively. Total amortization expense charged to cost of sales for the three and six months ended June 30, 2021 was $33 and $66, respectively.

As of June 30, 2022, the amortization expense related to identifiable intangible assets in future periods is expected to be as follows:

2022 remaining	$ 1,302
2023	2,596
2024	2,713
2025	2,713
2026	2,682
Thereafter	8,793
Total	$ 20,799

As of June 30, 2022 and December 31, 2021, the goodwill balance is $18,262.

(7) Accrued expenses and other current liabilities

Accrued expenses and other current liabilities consist of the following:

	June 30, 2022	December 31, 2021
Payroll and compensation	$ 4,589	$ 6,502
Current portion of contingent consideration	1,295	1,207
Inventory purchases	149	1,877
Other accrued expenses	5,470	3,905
Total accrued expenses and other current liabilities	$ 11,503	$ 13,491

(8) Debt

Term Loan Agreements

In October 2020, the Company entered into a debt financing arrangement with Midcap Financial Trust (the “Midcap Trust Term Loan”), for a $37,500 credit facility, consisting of a senior, secured term loan. The Company received $32,500 in aggregate proceeds as a result of the debt financing. The term of the Midcap Trust Term Loan is interest only for 36 months followed by 24 months of straight-line amortization. Interest on the outstanding balance of the Midcap Trust 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%. At the time of final payment under the Midcap Trust Term Loan, the Company is required to pay Midcap Financial Trust a final payment fee of 5.00% of the amount borrowed under the Midcap Trust Term Loan. If the Midcap Trust Term Loan is prepaid prior to the end of the term, the Company shall pay to Midcap Financial Trust 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.

On March 21, 2022, the Company entered into Amendment No. 1 to the Midcap Trust Term Loan, which amended certain provisions to permit certain additional debt and capital leases.

On June 1, 2022, the Company entered into Amendment No. 2 (“Amendment No. 2”) to the Midcap Trust Term Loan, which permitted the draw of a second tranche of $10,000, which was drawn on June 1, 2022. Additionally, the amendment provides the Company with a new third tranche pursuant to which the Company may draw $10,000 any time after September 30, 2022 until September 30, 2023. The amendment also delayed the amortization start dates for the outstanding loan amounts from November 1, 2023 until April 1, 2025, at which point the Company will repay the principal amounts in seven equal monthly installments until the maturity date. Finally, Amendment No. 2 amended the interest rate payable on the term loan to apply an interest rate equal to the Secured Overnight Financing Rate (“SOFR”) rate (with a floor of 1.61448%) plus 6.35%. Substantially all other terms and conditions, and covenants of the credit agreement remain unchanged. In connection with Amendment No. 2, the Company agreed to pay a $75 commitment fee as well as a 0.25% fee upon the funding of each of the second tranche and third tranche amounts. The Company accounted for Amendment No. 2 as a modification pursuant to ASC 470-50.

The interest rate was 7.96% at June 30, 2022. A final payment fee of $2,125 is due upon the earlier to occur of the maturity date or prepayment of such borrowings. For the three and six months ended June 30, 2022, the Company recorded $80 and $173, respectively, related to the amortization of the final payment fee associated with the Midcap Trust Term Loan. For the three and six months ended June 30, 2021, the Company recorded $80 and $161, respectively, related to the amortization of the final payment fee associated with the Midcap Trust Term Loan.

Debt consists of the following:

	June 30, 2022	December 31, 2021
Midcap Trust Term Loan	$ 42,500	$ 32,500
Unamortized debt discount	(492)	(413)
Accretion of final fee	557	384
Long-term debt, net	$ 42,565	$ 32,471

As of June 30, 2022, future principal payments due under the Midcap Trust Term Loan, excluding the $2,125 final payment fee, are as follows:

Year Ended:	Midcap Trust Term Loan
December 31, 2022	$ —
December 31, 2023	—
December 31, 2024	—
December 31, 2025	42,500
Total minimum principal payments	$ 42,500

(9) Stockholder's equity (deficit)

The Company's Amended and Restated Certificate of Incorporation authorizes it to issue 500,000,000 shares of common stock, $0.00001 par value per share, and 10,000,000 shares of preferred stock, par value $0.00001 per share. Each share of Class A common stock is entitled to one vote. The holders of common stock are also entitled to receive dividends whenever funds are legally available and when declared by the Board, subject to the prior rights of holders of all classes of stock outstanding. As of June 30, 2022 and December 31, 2021, a total of 37,766,655 and 37,424,101 shares of common stock were issued and outstanding, respectively, and 8,237,869 and 6,709,218 shares of common stock were reserved for issuance, respectively.

(10) Stock compensation plans

2021 Equity Incentive Plan

On March 24, 2021, the Board and on April 8, 2021, its stockholders approved and adopted the 2021 Equity Incentive Award Plan (the "2021 Plan"). The 2021 Plan became effective immediately prior to 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 Company's 2015 Equity Incentive Plan (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 were 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 Board.

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. Under the 2015 Plan, stock options were generally granted with exercise prices equal to or greater than the fair value of the common stock as determined by the

Board, expired no later than 10 years from the date of grant, and vested over various periods not exceeding four years. While no shares are available for future issuance under the 2015 Plan, it continues to govern outstanding equity awards granted thereunder.

Stock Options

During the six months ended June 30, 2022 and 2021, the Company granted options with an aggregate fair value of $8,798 and $12,327, respectively, which are being recorded as 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.

Expected Volatility. The Company uses an average historical stock price volatility of comparable public companies within a group of similar entities that were deemed to be representative of future stock price trends as the Company does not have sufficient trading history for its common stock. The Company will continue to apply this process until a sufficient amount of historical information regarding volatility of its own stock price options becomes available.

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 six months ended June 30, 2022, the Company granted options to purchase 1,672,328 shares of common stock at a weighted average fair value of $5.29 per share and a weighted average exercise price of $10.53 per share. During the six months ended June 30, 2021, the Company granted options to purchase 1,610,842 shares of common stock at a weighted average fair value of $7.65 per share and a weighted average exercise price of $15.23 per share. For the three and six months ended June 30, 2022 and 2021, the fair values were estimated using the Black-Scholes valuation model using the following weighted-average assumptions:

	Three months ended June 30, 2022	Three months ended June 30, 2021	Six months ended June 30, 2022	Six months ended June 30, 2021
Weighted-average risk-free interest rate	2.9 %	1.0 %	2.5 %	1.0 %
Expected dividend yield	0 %	0 %	0 %	0 %
Expected volatility	50.5 %	50.4 %	50.2 %	50.9 %
Expected term	5.9 years	5.8 years	6.0 years	6.0 years

Restricted Stock Units

During the six months ended June 30, 2022, the Company granted RSUs to employees with an aggregate fair value of $3,263, which are being recorded as compensation expense over the requisite service period. The fair value of each grant is calculated based on the Company’s stock price on the date of grant. During the six months ended June 30, 2022, the Company granted 309,525 shares of restricted common stock at a weighted average fair value of $10.68 per share.

Stock-Based Compensation

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

	Three months ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Cost of goods sold	$ 60	$ 31	$ 107	$ 47
Selling, general and administrative	1,378	1,090	2,603	1,273
Research and development	283	95	556	150
Total stock-based compensation	$ 1,721	$ 1,216	$ 3,266	$ 1,470

As of June 30, 2022, and 2021, there was $20,295 and $10,917, respectively, of total unrecognized compensation cost related to non-vested stock options. The Company expects to recognize that cost over a remaining weighted-average period of 3.0 and 3.4 years as of June 30, 2022 and 2021, respectively.

As of June 30, 2022 there was $3,033 of total unrecognized compensation cost related to non-vested RSUs. The Company expects to recognize that cost over a remaining weighted-average period of 3.8 years as of June 30, 2022.

(11) Employee stock purchase plan

On March 24, 2021, the Board and on April 8, 2021, its stockholders approved and adopted the 2021 Employee Stock Purchase Plan (the "ESPP"). The ESPP became effective in connection with the closing of the Company's 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 Board. No shares have been issued under the ESPP at June 30, 2022.

(12) Income taxes

During the three and six months ended June 30, 2022 and 2021, the Company recorded a tax (provision) benefit of ($106), ($128), $6, and $12, respectively. The 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.

In response to the COVID-19 pandemic, the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") was signed into law on March 27, 2020. The CARES Act included several provisions that provide economic relief for individuals and businesses. The CARES Act, among other things, included tax provisions relating to refundable payroll tax credits, the deferral of employer's social security payments, and modifications to net operating loss carryback provisions. On December 27, 2020, the Consolidated Appropriations Act of 2021 (the "CAA"), which includes the Economic Aid to Hard-Hit Small Businesses, Nonprofits, and Venues Act and the American Rescue Plan Act of 2021, was signed into law and provided further COVID-19 economic relief with an expansion of the employee retention credit. In March 2021, the Internal Revenue Service ("IRS") released Notice 2021-20, which retroactively eliminated the restriction that prevented employers who received a PPP loan from qualifying for the Employee Retention Credit ("ERC"), which is a refundable tax credit against certain employment taxes. Upon determination that the employer has complied with all of the conditions required to receive the credit, a receivable is recognized and the credit reduces salaries and wages. In connection with the CARES Act, the Company adopted a policy to recognize the employee retention credit when earned. During the second quarter of 2021, we determined that we qualify for the employee retention credit as it relates to wages paid during the twelve months ended December 31, 2020, as well as wages paid during the first and second fiscal quarters of 2021. As a result, we recorded a net benefit of $2,825 related to the employee retention credit as a reduction to payroll expense for the three and six months ended June 31, 2021 and recorded a gross receivable of $3,332 within Prepaid expenses and other current assets as of June 31, 2021.

(13) Commitments and contingencies

License Agreements

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 $1,295 and $1,207 of accrued royalties in connection with this agreement as of June 30, 2022 and December 31, 2021, respectively, payable in the first quarter of 2023 and 2022, respectively.

Research Agreements

In 2019, the Company entered into a research arrangement with an unrelated third party. Under this arrangement, the Company is obligated to pay such third party $415 and $120 in 2022 and 2023, respectively.

(14) 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 June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Net loss	$ (17,495)	$ (5,563)	$ (33,894)	$ (13,645)
Dividends accrued on redeemable convertible preferred stock	—	(245)	—	(1,435)
Accretion of redeemable convertible preferred stock	—	(296)	—	(296)
Adjusted net loss attributable to common stockholders	$ (17,495)	$ (6,104)	$ (33,894)	$ (15,376)
Weighted average common shares used in net loss per share attributable to common stockholders, basic and diluted	37,612,331	29,974,811	37,538,821	16,415,800
Basic and diluted net loss per common share outstanding	$ (0.47)	$ (0.20)	$ (0.90)	$ (0.94)

The Company's potential dilutive securities, which include stock options, unvested restricted stock units, convertible preferred stock, and the outstanding 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:

	Six months ended June 30,	
	2022	2021
Outstanding stock options	6,696,436	4,957,855
Unvested restricted stock units	301,575	—
Warrant to purchase common stock	158,274	158,274
Total	7,156,285	5,116,129

(15) 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 June 30,		Six months ended June 30,	
	2022	2021	2022	2021
North America	$ 9,478	$ 6,401	$ 18,802	$ 11,610
APAC	4,271	3,009	7,780	6,699
EMEA	4,145	3,661	8,206	6,974
Total Revenue	$ 17,894	$ 13,071	$ 34,788	$ 25,283

	Three months ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
North America	53 %	49 %	54 %	46 %
APAC	24 %	23 %	22 %	26 %
EMEA	23 %	28 %	24 %	28 %
Total Revenue	100 %	100 %	100 %	100 %

North America includes the United States and related territories, as well as Canada. APAC also includes Australia. For the three and six months ended June 30, 2022, the Company had one country outside of the United States with 19% and 14% of total revenue, respectively. For the three and six months ended June 30, 2021, the Company had one country outside of the United States with 17% and 16% of total revenue, respectively.

As of June 30, 2022 and December 31, 2021, substantially all of the Company's long-lived assets are located in the United States.

(16) Related party transactions

Argonaut Manufacturing Services Inc. ("AMS") is a portfolio company of Telegraph Hill Partners, which holds greater than 5% of our total outstanding shares. During the three and six months ended June 30, 2022, the Company incurred costs of goods sold of approximately $1,443 and $2,413, respectively, related to sales of consumables manufactured by AMS. During the three and six months ended June 30, 2021, the Company incurred costs of goods sold of approximately $744 and $1,235, respectively, related to sales of consumables manufactured by AMS. As of June 30, 2022 and December 31, 2021, $6,497 and $4,263, respectively, is included in inventory related to consumables manufactured by AMS. As of June 30, 2022 and December 31, 2021, the Company had $948 and $1,700 in accounts payable, respectively, due to AMS.

(17) Leases

On January 1, 2022, the Company adopted ASU No. 2016-02, *Leases* (Topic 842), (ASC 842), using the modified retrospective method. The Company chose to apply the transition provisions as of the period of adoption. Results for reporting periods beginning on or after January 1, 2022 are presented under ASC 842 while prior period amounts are not adjusted and continue to be reported in accordance with our historical accounting under ASC 840.

Adoption of the new standard resulted in the recording of $10,409 of operating lease right of use assets, $673 of financing lease right of use assets, $2,741 of short-term operating lease liabilities, $272 of short-term financing operating lease liabilities, $7,968 of long-term operating lease liabilities, and $197 of long-term financing lease liabilities. The difference between the operating lease liabilities and operating right of use assets is associated with existing deferred rent under ASC 840. The following table summarizes the amount by which each financial statement line item was affected in the current reporting period due to the adoption of ASC 842 as compared with the guidance that was in effect before the change.

	December 31, 2021	ASC 842 Adjustment	January 1, 2022
Assets			
Operating lease right of use assets, net	$ —	$ 10,409	$ 10,409
Financing lease right of use assets, net	—	673	673
Property and equipment, net	673	(673)	—
Total assets	$ 190,907	$ 10,409	$ 201,316
Liabilities and stockholders' equity			
Deferred rent	$ 300	$ (300)	$ —
Current portion of capital lease liabilities	272	(272)	—
Current portion of operating lease liabilities	—	2,741	2,741
Current portion of financing lease liabilities	—	272	272
Total current liabilities	27,682	2,441	30,123
Capital lease liabilities, net of current portion	197	(197)	—
Operating lease liabilities, net of current portion	—	7,968	7,968
Financing lease liabilities, net of current portion	—	197	197
Total liabilities	69,556	10,409	79,965
Stockholders' equity			
Total stockholders' equity	121,351	—	121,351
Total liabilities and stockholders' equity	$ 190,907	$ 10,409	$ 201,316

The Company considers a lease to be a contract, or part of a contract, that conveys the right to control the use of identified property or equipment (an identified asset) for a period of time in exchange for consideration. The Company leases office, lab, and warehouse spaces as follows:

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. On June 18, 2021, the Company entered into an amendment to reduce its letter of credit to $300. The Company's letter of credit is recorded as restricted cash in the consolidated balance sheet.

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. In July of 2021, the Company signed a 70-month amendment to its lease in Menlo Park, CA to expand its existing space. In connection with this agreement, the Company paid a security deposit totaling $92, in addition to the existing security deposit, which is recorded as a component of long-term assets in the consolidated balance sheet; the lease commencement date was August 2021.

In August 2021, the Company signed a 30-month lease with MTP Equity Partners, LLC for office space in Marlborough, MA. In connection with this agreement, the Company paid a security deposit totaling $43, which is recorded as a component of long-term assets in the consolidated balance sheet; The lease commencement date was August 2021.

In March 2022, the Company signed a 96-month lease with Atlantic-Fulcrum Realty LLC for warehouse space in Marlborough, MA. The leased premises ranges from approximately 16,068 rentable square feet to 32,125 rentable square feet during the lease term. The lease commencement date was April 2022.

The Company holds various auto leases which have an initial term of 48 months.

For the six months ended June 30, 2022, the Company entered into three financing leases for staining equipment. The Company also holds financing leases for computer equipment, staining equipment, and furniture which the Company was accounting for as capital leases prior to its adoption of ASC 842.

Leases with an initial term of 12 months or less are not recorded on the balance sheet; the Company recognizes lease expense for these leases on a straight-line basis over the lease term. For these lease agreements, the Company has elected the practical expedient to not separate non-lease and lease components and instead to account for them as a single lease component.

Under Topic 842, lease payments include: fixed payments, including in-substance fixed payments, less any lease incentives paid or payable to the lessee; variable lease payments that depend on an index or a rate; exercise price of a purchase option reasonably certain to be exercised; penalties for terminating a lease; and amounts where it is probable that the Company will owe under a residual value guarantee. Refundable deposits are not considered to be a fixed payment. Variable lease costs that are not based on an index or a rate are recorded to expenses in the period incurred. Lease term is determined at lease commencement. The initial determination of a lease liability is calculated as the net present value of the lease payments not yet paid.

Some leases include an option to renew, with renewal terms that can extend the lease term by five years. The exercise of lease renewal options is at the Company's sole discretion. None of these options to renew are recognized as part of the Company's right-to-use asset or lease liability as of June 30, 2022, as renewal was determined to not be reasonably assured. The depreciable life of assets and leasehold improvements are limited by the expected lease term. The Company recognizes lease expense for operating leases on a straight-line basis over the lease term. The Company recognizes amortization expense for finance leases over the lease term based on the terms of the lease agreement.

The Company's lease agreements do not contain any material residual value guarantees or material restrictive covenants.

As most of the Company's leases do not provide an implicit rate, the Company used its incremental borrowing rate based on the information available at the adoption or commencement date, in determining the present value of lease payments.

The table below summarizes the Company's lease costs for the three and six months ended June 30, 2022:

Lease Costs	Classification	Three Months Ended June 30, 2022	Six Months Ended June 30, 2022
Finance lease cost:			
Amortization of right-of-use assets	Cost of service and other revenue	$ 18	$ 34
Amortization of right-of-use assets	Depreciation and amortization	127	266
Interest on lease liabilities	Interest expense, net	14	20
Operating lease cost	Selling, general and administrative	806	1,516
Total lease cost		$ 965	$ 1,836

As of June 30, 2022, future minimum commitments under ASC 842 under the Company's operating leases were as follows:

Maturity of operating lease liabilities	As of June 30, 2022
Remainder 2022	$ 1,605
2023	3,071
2024	2,661
2025	2,709
2026	2,548
2027 and thereafter	2,103
Total lease payments	$ 14,697
Less: discount to lease payments	(2,616)
Total operating lease liabilities	$ 12,081

As of June 30, 2022, future minimum commitments under ASC 842 under the Company's financing leases were as follows:

Maturity of financing lease liabilities	As of June 30, 2022
Remainder 2022	$ 326
2023	573
2024	445
2025	113
2026	—
2027 and thereafter	—
Total lease payments	$ 1,457
Less: discount to lease payments	(158)
Total financing lease liabilities	$ 1,299

The table below summarizes the weighted-average remaining lease term (in years), the weighted-average incremental borrowing rate (in percentages), as well as supplemental cash flow information related to leases for the three and six months ended June 30, 2022:

Lease Term, Discount Rates, and Other	**Six Months Ended June 30, 2022**
Weighted average remaining lease term	
Operating leases	5.0 years
Financing leases	2.5 years
Weighted average incremental borrowing rate	
Operating leases	7.85 %
Financing leases	6.24 %
Cash payments of amounts included in lease liabilities	
Operating cash flows from operating leases	$ 1,405
Operating cash flows from finance leases	20
Financing cash flows from finance leases	316

(18) Subsequent events

The Company has evaluated subsequent events from the consolidated balance sheet date through August 8, 2022, which is the date the consolidated financial statements were issued.

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, 2021 included in the Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 15, 2022. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those in our Annual Report on Form 10-K for the year ended December 31, 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 PhenoCycler™ and PhenoImager™ 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 research through the translational and clinical phases, leading to a better understanding of human biology, disease progression and response to therapy.

We offer distinct stand-alone as well as integrated platforms for spatial phenotyping, designed to serve the unique needs of our customers in the discovery, translational and clinical markets. The PhenoCycler, is an ultra-high parameter and cost-effective platform ideally suited for discovery high-plex research. The PhenoImager platforms, which includes the newly introduced Fusion instrument and HT instrument (formerly Vectra Polaris), provide high-throughput with the automation and robustness needed for translational and clinical applications. Furthermore, the PhenoCycler and the PhenoImager Fusion can be integrated into a combined system, PhenoCycler-Fusion System, to enable spatial discovery at scale. Together, the systems 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 and six months ended June 30, 2022, revenue from North America accounted for approximately 53% and 54% of our revenue, respectively. For the three and six months ended June 30, 2021, revenue from North America accounted for approximately 49% and 46% of our revenue, respectively.

As of June 30, 2022, we employed a commercial team of 149 employees, including many with significant industry and technical experience. This total includes field instrument service personnel who are classified in cost of goods sold in our consolidated statements of operations. 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, 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 $17.5 million, $33.9 million, $5.6 million and $13.6 million for the three and six months ended June 30, 2022 and 2021, 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 PhenoCycler and PhenoImager platforms (Fusion and HT) 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 36%, 37%, 46% and 40% of total revenue for the three and six months ended June 30, 2022 and 2021, 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

The global spread of the COVID-19 pandemic, including the spread of recent variants, continues to evolve, and to date has led to the implementation of various containment efforts. While conditions appear to be improving, particularly as more people get vaccinated, states and counties may re-implement restrictive measures to protect against further spread of any new variants. 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 2021 and 2022 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. Our corporate office facility is open for those who want to work in that space, subject to certain restrictions. While we learned during COVID-19 that we can work very effectively in a fully-remote environment, the partial return to in-office work and the transition to permanent remote working arrangements for some employees may result in increased costs, decreased efficiency, deterioration of corporate culture, greater exposure to cybersecurity threats, and other operational risks.

Disruptions in our customers' operations have impacted and may continue to impact our business. We do not yet know the net impact that the COVID-19 pandemic and any future variants of the virus 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. As a result of the COVID-19 pandemic, and the precautionary measures that we have adopted, substantially all of our field sales and professional services activities were conducted remotely for over two years, which resulted in a decrease in our travel expenditures. However, our travel expenditures have begun to increase as COVID-19 restrictions have eased, 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 September 2018, in connection with the acquisition of the QPS technology from PKI, we entered into a license and royalty agreement with PKI, Cambridge Research, 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 PhenoImager 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 and six months ended June 30, 2022 and 2021, our instrument placements were as follows:

	Three months ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Instrument Placements:	60	31	111	68

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 PhenoCycler and PhenoImager 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 67%, 65%, 58% and 63% of our product revenue for the three and six months ended June 30, 2022 and 2021, respectively. Consumables revenue accounted for 32%, 33%, 40% and 33% of our product revenue for the three and six months ended June 30, 2022 and 2021, respectively.

Our current instrument offerings include our PhenoCycler and PhenoImager platforms. 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 operations, where we provide sample testing services to customers utilizing our in-house lab operation, and revenue generated from companion diagnostic development.

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.

We record 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 and six months ended June 30, 2022 and 2021, respectively, our revenue was comprised of the following sources:

	Three months ended June 30,		Six months ended June 30,	
($ in thousands)	**2022**	**2021**	**2022**	**2021**
Revenue:				
Product revenue	$ 14,161	$ 10,719	$ 27,504	$ 20,682
Service and other revenue	3,733	2,352	7,284	4,601
Total revenue	$ 17,894	$ 13,071	$ 34,788	$ 25,283

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 revenue 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 or 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 $10.3 million compared to $8.1 million for the three months ended June 30, 2022 and 2021, respectively, and $20.4 million compared to $15.5 million for the six months ended June 30, 2022 and 2021, 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, 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 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. Prior to our IPO, we classified our outstanding warrant to purchase shares of our Series D redeemable convertible preferred stock as a liability on our balance sheets at its estimated fair value since the underlying redeemable convertible preferred stock was classified as temporary equity. At the end of each reporting period, changes in the estimated fair value during the period were recorded as a component of other income (expense). In connection with our IPO, this warrant was adjusted to become a warrant to purchase shares of our common stock and met the criteria to be classified within stockholders' equity; therefore, the warrant was no longer subject to liability accounting. Accordingly, the fair value of the warrant liability was reclassified to stockholders' equity.

Gain on extinguishment of debt. Gain on extinguishment of debt relates to forgiveness of our PPP loan.

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 minimal state 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:

($ in thousands)	Three months ended June 30, 2022	Three months ended June 30, 2021	Six months ended June 30, 2022	Six months ended June 30, 2021
Product revenue	$ 14,161	$ 10,719	$ 27,504	$ 20,682
Service and other revenue	3,733	2,352	7,284	4,601
Total revenue	17,894	13,071	34,788	25,283
Cost of goods sold:				
Cost of product revenue	$ 5,198	$ 3,180	$ 9,278	$ 6,787
Cost of service and other revenue	2,355	1,757	5,073	2,957
Total cost of goods sold	7,553	4,937	$ 14,351	$ 9,744
Gross profit	10,341	8,134	$ 20,437	$ 15,539
Operating expenses:				
Selling, general and administrative	20,590	10,066	38,783	18,245
Research and development	5,598	2,947	11,312	6,139
Change in fair value of contingent consideration	(1,156)	400	(956)	826
Depreciation and amortization	1,617	1,099	3,160	2,108
Total operating expenses	26,649	14,512	52,299	27,318
Loss from operations	(16,308)	(6,378)	(31,862)	(11,779)
Other income (expense):				
Interest expense, net	(849)	(757)	(1,598)	(1,508)
Change in fair value of warrant liability	—	(858)	—	(2,728)
Gain on extinguishment of debt	—	2,476	—	2,476
Other expense, net	(232)	(52)	(306)	(118)
Loss before benefit (provision) for income taxes	(17,389)	(5,569)	(33,766)	(13,657)
Benefit (provision) for income taxes	(106)	6	(128)	12
Net loss	$ (17,495)	$ (5,563)	$ (33,894)	$ (13,645)

Comparison of the three months ended June 30, 2022 and 2021

Revenue

($ in thousands, except percentages)	Three months ended June 30, 2022	Three months ended June 30, 2021	Change Amount	Change %
Product revenue	$ 14,161	$ 10,719	3,442	32 %
Service and other revenue	3,733	2,352	1,381	59 %
Total revenue	$ 17,894	$ 13,071	4,823	37 %

Product revenue increased by $3.4 million, or 32%, for the three months ended June 30, 2022, compared to the three months ended June 30, 2021. The increase was primarily driven by a $0.2 million increase in consumable revenue resulting from a larger installed base of 785 systems as of June 30, 2022, as compared to 618 systems as of June 30, 2021, and a $3.2 million increase in instrument revenue resulting from 60 new system placements during the three months ended June 30, 2022, compared to 31 new system placements for the three months ended June 30, 2021.

Service and other revenue increased by $1.4 million, or 59%, for the three months ended June 30, 2022, compared to the three months ended June 30, 2021. The increase was primarily due to an increase relating to lab services operations, revenue generated from companion diagnostic development, and other immaterial changes.

Costs of Goods Sold, Gross Profit and Gross Margin

($ in thousands, except percentages)	Three months ended June 30, 2022	2021	Change Amount	%
Cost of product revenue	$ 5,198	$ 3,180	$ 2,018	63 %
Cost of service and other revenue	2,355	1,757	598	34 %
Total cost of goods sold	$ 7,553	$ 4,937	$ 2,616	53 %
Gross profit	$ 10,341	$ 8,134	$ 2,207	27 %
Gross margin	58 %	62 %		

Cost of product revenue increased by $2.0 million, or 63%, for the three months ended June 30, 2022, compared to the three months ended June 30, 2021. 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. Cost of service and other revenue increased by $0.6 million, or 34%, for the three months ended June 30, 2022, compared to the three months ended June 30, 2021. The increase was primarily due to increases in costs for lab services driven by an increase in activity, as well as an increase in extended warranty costs as there were higher customer renewals due to the maturity of the installed base. Additionally, the Company recorded a $0.2 million reduction to cost of goods sold in the three months ended June 30, 2021, associated with the employee retention credit.

Gross profit increased by $2.2 million, or 27%, and gross margin decreased by 4% for the three months ended June 30, 2022 as compared to the three months ended June 30, 2021.

Operating Expenses

Selling, General and Administrative

($ in thousands, except percentages)	Three months ended June 30, 2022	2021	Change Amount	%
Selling, general and administrative	$ 20,590	$ 10,066	$ 10,524	105 %

Selling, general and administrative expense increased by $10.5 million, or 105%, for the three months ended June 30, 2022, compared to the three months ended June 30, 2021. The increase was primarily due to a $7.1 million increase in personnel-related expenses due to an increase in headcount to support the growth in our overall operations subsequent to our IPO, net of the impact of the employee retention credit of $1.6 million recognized during the second quarter of 2021. Additionally, there was a $1.5 million increase in professional fees and other third-party fees, which are largely incremental costs of operating a public business, including increased marketing, legal, accounting, insurance, and other consulting costs. Remaining increases are due to higher costs in recruiting, facilities, supplies, software licenses and subscriptions, and other related costs.

Research and development

($ in thousands, except percentages)	Three months ended June 30, 2022	2021	Change Amount	%
Research and development	$ 5,598	$ 2,947	$ 2,651	90 %

Research and development expense increased by $2.7 million, or 90%, for the three months ended June 30, 2022, compared to the three months ended June 30, 2021, net of the impact of the employee retention credit of $1.0 million recognized during the second quarter of 2021. The increase was primarily due to a $1.9 million increase in personnel-related expenses due to an increase in headcount. Additionally, there was a $0.4 million increase in third-party consulting and lab supplies consumed as the Company has ramped up its efforts subsequent to the IPO.

Change in fair value of contingent consideration

($ in thousands, except percentages)	Three months ended June 30, 2022	Three months ended June 30, 2021	Change Amount	Change %
Change in fair value of contingent consideration	$ (1,156)	$ 400	$ (1,556)	(389)%

Change in fair value of contingent consideration decreased by $1.6 million, or 389%, for the three months ended June 30, 2022, compared to the three months ended June 30, 2021, due to current period remeasurement.

Depreciation and amortization

($ in thousands, except percentages)	Three months ended June 30, 2022	Three months ended June 30, 2021	Change Amount	Change %
Depreciation and amortization	$ 1,617	$ 1,099	$ 518	47 %

The $0.5 million increase in depreciation and amortization expense was primarily related to an increase in property and equipment as of June 30, 2022 as compared to June 30, 2021.

Interest expense

($ in thousands, except percentages)	Three months ended June 30, 2022	Three months ended June 30, 2021	Change Amount	Change %
Interest expense	$ 849	$ 757	$ 92	12 %

Interest expense increased by $0.1 million for the three months ended June 30, 2022, compared to the three months ended June 30, 2021.

Change in fair value of warrant liability

($ in thousands, except percentages)	Three months ended June 30, 2022	Three months ended June 30, 2021	Change Amount	Change %
Change in fair value of warrant liability	$ —	$ 858	$ (858)	(100)%

Change in fair value of warrant liability decreased by $0.9 million, or 100%, for the three months ended June 30, 2022, compared to the three months ended June 30, 2021. In connection with the IPO, the preferred stock warrant was converted to a warrant to purchase shares of the Company’s common stock and met the criteria to be classified within stockholders’ equity; therefore, the warrant is no longer subject to liability accounting, and thus no further remeasurement.

Gain on extinguishment of debt

($ in thousands, except percentages)	Three months ended June 30, 2022	Three months ended June 30, 2021	Change Amount	Change %
Gain on extinguishment of debt	$ —	$ 2,476	$ (2,476)	(100)%

Gain on extinguishment of debt decreased by $2.5 million, or 100%, for the three months ended June 30, 2022, compared to the three months ended June 30, 2021, due to forgiveness of the PPP Loan in the second quarter of 2021.

Other expense, net

($ in thousands, except percentages)	Three months ended June 30, 2022	2021	Change Amount	%
Other expense, net	$ 232	$ 52	$ 180	346 %

Other expense, net increased by $180 thousand for the three months ended June 30, 2022, compared to the three months ended June 30, 2021.

Comparison of the six months ended June 30, 2022 and 2021

Revenue

($ in thousands, except percentages)	Six months ended June 30, 2022	2021	Change Amount	%
Product revenue	$ 27,504	$ 20,682	6,822	33 %
Service and other revenue	7,284	4,601	2,683	58 %
Total revenue	$ 34,788	$ 25,283	9,505	38 %

Product revenue increased by $6.8 million, or 33%, for the six months ended June 30, 2022, compared to the six months ended June 30, 2021. The increase was primarily driven by a $2.3 million increase in consumable revenue resulting from a larger installed base of 785 systems as of June 30, 2022, as compared to 618 systems as of June 30, 2021, and a $4.9 million increase in instrument revenue resulting from 111 new system placements during the six months ended June 30, 2022, compared to 68 new system placements for the six months ended June 30, 2021.

Service and other revenue increased by $2.7 million, or 58%, for the six months ended June 30, 2022, compared to the six months ended June 30, 2021. The increase was primarily due to an increase relating to lab services operations, revenue generated from companion diagnostic development, and other immaterial changes.

Costs of Goods Sold, Gross Profit and Gross Margin

($ in thousands, except percentages)	Six months ended June 30, 2022	2021	Change Amount	%
Cost of product revenue	$ 9,278	$ 6,787	$ 2,491	37 %
Cost of service and other revenue	5,073	2,957	2,116	72 %
Total cost of goods sold	$ 14,351	$ 9,744	$ 4,607	47 %
Gross profit	$ 20,437	$ 15,539	$ 4,898	32 %
Gross margin	59 %	61 %		

Cost of product revenue increased by $2.5 million, or 37%, for the six months ended June 30, 2022, compared to the six months ended June 30, 2021. The increase in cost of product revenue was primarily driven by costs associated with increased instrument and consumable sales. Cost of service and other revenue increased by $2.1 million, or 72%, for the six months ended June 30, 2022, compared to the six months ended June 30, 2021. The increase was primarily due to increases in costs for lab services driven by an increase in activity, as well as an increase in extended warranty costs as there were higher customer renewals due to the maturity of the installed base. Additionally, the Company recorded a $0.2 million reduction to cost of goods sold in the three months ended June 30, 2021, associated with the employee retention credit.

Gross profit increased by $4.9 million, or 32%, and gross margin decreased by 2% for the six months ended June 30, 2022 as compared to the six months ended June 30, 2021.

Operating Expenses

Selling, General and Administrative

($ in thousands, except percentages)	Six months ended June 30, 2022	2021	Change Amount	%
Selling, general and administrative	$ 38,783	$ 18,245	$ 20,538	113 %

Selling, general and administrative expense increased by $20.5 million, or 113%, for the six months ended June 30, 2022, compared to the six months ended June 30, 2021. The increase was primarily due to a $13.3 million increase in personnel-related expenses due to an increase in headcount to support the growth in the Company's overall operations subsequent to the IPO, net of the impact of the employee retention credit of $1.6 million recognized during the second quarter of 2021. Additionally, there was a $3.6 million increase in professional fees and other third-party fees, which are largely incremental costs of operating a public company, including increased marketing, legal, accounting, insurance, and other consulting costs. Remaining increases were due to higher costs in recruiting, facilities, supplies, software licenses and subscriptions, and other related costs.

Research and development

($ in thousands, except percentages)	Six months ended June 30, 2022	2021	Change Amount	%
Research and development	$ 11,312	$ 6,139	$ 5,173	84 %

Research and development expense increased by $5.2 million, or 84%, for the six months ended June 30, 2022, compared to the six months ended June 30, 2021. The increase was primarily due to a $3.1 million increase in personnel-related expenses due to an increase in headcount, net of the impact of the employee retention credit of $1.0 million recognized during the second quarter of 2021. Additionally, there was a $1.5 million increase in third-party consulting and lab supplies consumed as the Company ramped up its efforts subsequent to the IPO.

Change in fair value of contingent consideration

($ in thousands, except percentages)	Six months ended June 30, 2022	2021	Change Amount	%
Change in fair value of contingent consideration	$ (956)	$ 826	$ (1,782)	(216)%

Change in fair value of contingent consideration decreased by $1.8 million, or 216%, for the six months ended June 30, 2022, compared to the six months ended June 30, 2021, due to current period remeasurement.

Depreciation and amortization

($ in thousands, except percentages)	Six months ended June 30, 2022	2021	Change Amount	%
Depreciation and amortization	$ 3,160	$ 2,108	$ 1,052	50 %

The $1.1 million increase in depreciation and amortization expense was primarily related to an increase in property and equipment as of June 30, 2022 as compared to June 30, 2021.

Interest expense

($ in thousands, except percentages)	Six months ended June 30, 2022	2021	Change Amount	%
Interest expense	$ 1,598	$ 1,508	$ 90	6 %

Interest expense increased by $0.1 million for the six months ended June 30, 2022, compared to the six months ended June 30, 2021.

Change in fair value of warrant liability

($ in thousands, except percentages)	Six months ended June 30, 2022	2021	Change Amount	%
Change in fair value of warrant liability	$ —	$ 2,728	$ (2,728)	(100)%

Change in fair value of warrant liability decreased by $2.7 million, or 100%, for the six months ended June 30, 2022, compared to the six months ended June 30, 2021. In connection with the IPO, this warrant was adjusted to become a warrant to purchase shares of the Company's common stock and met the criteria to be classified within stockholders' equity; therefore, the warrant is no longer subject to liability accounting, and thus no further remeasurement.

Gain on extinguishment of debt

($ in thousands, except percentages)	Six months ended June 30, 2022	2021	Change Amount	%
Gain on extinguishment of debt	$ —	$ 2,476	$ (2,476)	(100)%

Gain on extinguishment of debt decreased by $2.5 million, or 100%, for the six months ended June 30, 2022, compared to the six months ended June 30, 2021, due to forgiveness of the PPP Loan in the second quarter of 2021.

Other expense, net

($ in thousands, except percentages)	Six months ended June 30, 2022	2021	Change Amount	%
Other expense, net	$ 306	$ 118	$ 188	159 %

Other expense, net increased by $188 thousand for the six months ended June 30, 2022, compared to the six months ended June 30, 2021.

Liquidity and Capital Resources

As of June 30, 2022, we had approximately $87.6 million in cash, cash equivalents, and marketable securities.

Since our inception, we have experienced losses and negative cash flows from operations, and as of June 30, 2022, we had a consolidated net loss of $33.9 million and an accumulated deficit of $130.0 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, cash equivalents, marketable securities 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 the filing 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 $138.6 million, net of offering costs, underwriter discounts and commissions of $12.8 million.

Convertible preferred stock financings

Through June 30, 2022, 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. All preferred stock converted to common stock immediately prior to our IPO.

Payroll Protection Program loan

During April 2020, we received a $2.48 million small business loan under the Payroll Protection Program (the “PPP Loan”), part of the Coronavirus Aid, Relief and Economic Security Act (the “CARES Act”). The PPP Loan was forgiven in full in June 2021.

Midcap Trust Term Loan

In October 2020, we entered into the Midcap Trust Term Loan for a $37.5 million credit facility, consisting of a senior, secured term loan. We realized $32.5 million in aggregate proceeds as a result of the debt financing. On June 1, 2022, we entered into Amendment No. 2, which permitted the draw of a second tranche of $10.0 million, which was drawn on June 1, 2022. Additionally, Amendment No. 2 provides us with a new third tranche pursuant to which we may draw $10.0 million any time after September 30, 2022 until September 30, 2023. Amendment No. 2 also delayed the amortization start dates for the outstanding loan amounts from November 1, 2023 until April 1, 2025, at which point we will repay the principal amounts in seven equal monthly installments until the maturity date. Finally, Amendment No. 2 amended the interest rate payable on the term loan to apply an interest rate equal to the SOFR rate (with a floor of 1.61448%) plus 6.35%.

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

The Midcap Trust 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 Midcap Trust 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 Midcap Trust Term Loan as of June 30, 2022.

Cash flows

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

($ in thousands)	Six months ended June 30, 2022	Six months ended June 30, 2021
Net cash provided by (used in):		
Operating activities	$ (31,318)	$ (16,819)
Investing activities	(43,476)	(1,854)
Financing activities	8,596	136,930
Net (decrease) increase in cash, cash equivalents, and restricted cash	$ (66,198)	$ 118,257

Operating activities

Net cash used in operating activities increased by $14.5 million to $31.3 million in the six months ended June 30, 2022 compared to $16.8 million in the six months ended June 30, 2021. This amount is attributable to a net loss of $33.9 million and a change in our net operating assets and liabilities of $3.3 million, offset by non-cash charges of $5.9 million. The change in our net operating assets and liabilities was primarily due to increased prepaid expenses and other assets of $12.7 million, increased inventory levels of $4.1 million, and increased accounts receivable of $1.0 million, offset by increases in accounts payable, accrued expenses and other liabilities of $13.5 million, and increases in deferred revenue of $1.1 million. Non-cash charges primarily consisted of $3.3 million of depreciation and amortization, $3.3 million of stock-based compensation, $1.0 million in change in fair value of contingent consideration, and $0.2 million of non-cash interest expense.

Investing activities

Net cash used in investing activities was $43.5 million in the six months ended June 30, 2022 compared to $1.9 million during the six months ended June 30, 2021. This amount was driven by purchases of marketable securities of $40.8 million and purchases of property and equipment of $2.7 million.

Financing activities

Net cash provided by financing activities was $8.6 million for the six months ended June 30, 2022 compared with $136.9 million for the six months ended June 30, 2021. This amount was driven by $10.0 million in debt proceeds and $0.2 million in proceeds from stock option exercises, offset by $1.2 million in payments of contingent consideration, $0.3 million in principal payments on financing leases, and $0.1 million in payments of debt issuance costs.

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 our Annual Report on Form 10-K for the year ended December 31, 2021 filed with the SEC on March 15, 2022 with the exception of the adoption of the FASB's ASU 2016-02, "*Leases* (Topic 842)" in the first quarter of 2022. Please refer to Note 17 of the notes to the consolidated financial statements for further detail.

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 as of the last trading day of our second quarter 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 as of the last trading day of our second quarter 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 as of the last trading day of our second quarter. 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. For example, 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 June 30, 2022. 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 June 30, 2022 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. We operate in a rapidly changing environment that involves a number of risks that could materially affect our business, financial condition or future results, some of which are beyond our control. In addition to the other information set forth in this report, the risks and uncertainties that we believe are most important for you to consider are discussed in Part I, Item 1A under the caption “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2021 filed with the SEC on March 15, 2022. The risk factors may be important to understanding other statements in this report and should be read in conjunction with the unaudited financial statements and related notes in this report. The occurrence of any single risk or any combination of risks could materially and adversely affect our business, operations, product pipeline, operating results, financial condition or liquidity, and consequently, the value of our securities. Further, 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.

There have been no material changes to the risk factors described in the Annual Report on Form 10-K for the year ended December 31, 2021 filed with the SEC on March 15, 2022.

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

Not applicable.

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	
4.1	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	
10.1	Amendment No. 1 to Credit and Security Agreement, dated March 21, 2022, by and between the Registrant and Midcap Financial Trust					X
10.2	Amendment No. 2 to Credit and Security Agreement, dated June 1, 2022, by and between the Registrant and Midcap Financial Trust	8-K	001-40344	10.1	6/2/2022	
10.3+	Offer Letter, dated April 1, 2022, by and between Registrant and Ehab El-Gabry					X
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	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					X

\+ Management contract or compensatory plan or arrangement.

* 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: August 8, 2022	By: /s/ Brian McKelligon Brian McKelligon President and Chief Executive Officer (Principal Executive Officer)
Date: August 8, 2022	By: /s/ Joseph Driscoll Joseph Driscoll Chief Financial Officer (Principal Financial and Accounting Officer)

AMENDMENT NO. 1 TO CREDIT AND SECURITY AGREEMENT (TERM LOAN)

This AMENDMENT NO. 1 TO CREDIT AND SECURITY AGREEMENT (TERM LOAN) (this "**Agreement**") is made as of the 21st day of March, 2022, by and among **AKOYA BIOSCIENCES, INC.**, a Delaware corporation ("**Borrower**"), **MIDCAP FINANCIAL TRUST**, a Delaware statutory trust, as Agent (in such capacity, together with its successors and assigns, "**Agent**") and the Lenders (as defined in the Credit Agreement referenced below) party hereto.

RECITALS

A. Agent, Lenders and Borrower have entered into that certain Credit and Security Agreement (Term Loan), dated as of October 27, 2020 (as amended, restated, amended and restated, supplemented or otherwise modified prior to the date hereof, the "**Existing Credit Agreement**" and, as the same is amended hereby and as it may be further amended, modified, supplemented and restated from time to time, the "**Credit Agreement**"), pursuant to which the Lenders have agreed to make certain advances of money and to extend certain financial accommodations to Borrowers in the amounts and manner set forth in the Credit Agreement.

B. Borrower has requested that that Agent and Lenders amend certain provisions of the Existing Credit Agreement to permit certain additional purchase money Debt and Capital Leases.

C. Agent and the Lenders party hereto have agreed, on and subject to the terms and conditions set forth in this Agreement, to amend the Existing Credit Agreement to, among other things, accommodate the Borrowers' requests set forth in such Recitals.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing, the terms and conditions set forth in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Agent, the Lenders party hereto and Borrowers hereby agree as follows:

1. **Recitals**. This Agreement shall constitute a Financing Document and the Recitals and each reference to the Credit Agreement, unless otherwise expressly noted, will be deemed to reference the Credit Agreement as modified hereby. The Recitals set forth above shall be construed as part of this Agreement as if set forth fully in the body of this Agreement and capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Credit Agreement (including those capitalized terms used in the Recitals hereto).

2. **Amendments to Existing Credit Agreement**. Subject to the terms and conditions of this Agreement, including, without limitation, the conditions to effectiveness set forth in Section 4 below, the Existing Credit Agreement is hereby amended as follows::

(a) Clause (c) of the definition of "Permitted Debt" in Section 1.1 of the Existing Credit Agreement is hereby amended by deleting "$1,000,000" where it appears in the first line thereof and replacing it in its entirely with "$1,500,000".

3. **Representations and Warranties; Reaffirmation of Security Interest.** Borrower hereby (a) confirms that all of the representations and warranties set forth in the Credit Agreement are true and correct in all material respects (without duplication of any materiality qualifier in the text of such representation or warranty) with respect to Borrower as of the date hereof except to the extent that any such representation or warranty relates to a specific date in which case such representation or warranty shall be true and correct as of such earlier date, and (b) covenants to perform its respective obligations under the

Credit Agreement. Borrower confirms and agrees that all security interests and Liens granted to Agent continue in full force and effect, and all Collateral remains free and clear of any Liens, other than Permitted Liens. Nothing herein is intended to impair or limit the validity, priority or extent of Agent's security interests in and Liens on the Collateral. Borrower acknowledges and agrees that the Credit Agreement, the other Financing Documents and this Agreement constitute the legal, valid and binding obligation of Borrower, and are enforceable against Borrower in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency or other similar laws relating to the enforcement of creditors' rights generally and by general equitable principles.

4. **<u>Conditions to Effectiveness</u>.** This Agreement shall become effective as of the date on which each of the following conditions has been satisfied, as determined by Agent in its sole discretion:

(a) Agent shall have received (including by way electronic transmission) a duly authorized, executed and delivered counterpart of the signature page to this Agreement from Borrower, Agent and the Required Lenders;

(b) all representations and warranties of Credit Parties contained herein shall be true and correct in all material respects (without duplication of any materiality qualifier in the text of such representation or warranty) as of the date hereof, except to the extent that any such representation or warranty relates to a specific date in which case such representation or warranty shall be true and correct in all material respects as of such earlier date (and such parties' delivery of their respective signatures hereto shall be deemed to be its certification thereof);

(c) immediately prior to and after giving effect to the agreements set forth herein, no Default or Event of Default shall exist under any of the Financing Documents; and

(d) Agent shall have received such other documents, certificates, and information as Agent may reasonably request in connection with this Agreement.

5. **<u>Release</u>**. In consideration of the agreements of Agent and Lenders contained herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Borrower, voluntarily, knowingly, unconditionally and irrevocably, with specific and express intent, for and on behalf of itself and all of its respective parents, subsidiaries, affiliates, members, managers, predecessors, successors, and assigns, and each of its respective current and former directors, officers, shareholders, agents, and employees, and each of its respective predecessors, successors, heirs, and assigns (individually and collectively, the "**Releasing Parties**") does hereby fully and completely release, acquit and forever discharge each of Agent, Lenders, and each their respective parents, subsidiaries, affiliates, members, managers, shareholders, directors, officers and employees, and each of their respective predecessors, successors, heirs, and assigns (individually and collectively, the "**Released Parties**"), of and from any and all actions, causes of action, suits, debts, disputes, damages, claims, obligations, liabilities, costs, expenses and demands of any kind whatsoever, at law or in equity, whether matured or unmatured, liquidated or unliquidated, vested or contingent, choate or inchoate, known or unknown that the Releasing Parties (or any of them) has against the Released Parties or any of them (whether directly or indirectly), based in whole or in part on facts, whether or not now known, existing on or before the date hereof, that relate to, arise out of or otherwise are in connection with: (i) any or all of the Financing Documents or transactions contemplated thereby or any actions or omissions in connection therewith or (ii) any aspect of the dealings or relationships between or among any Borrower, on the one hand, and any or all of the Released Parties, on the other hand, relating to any or all of the documents, transactions, actions or omissions referenced in clause (i) hereof, in each case, based in whole or in part on facts, whether or not now known, existing before the date hereof. Borrower acknowledges that the foregoing release is a material inducement to Agent's and each Lender's decision to enter into this Agreement and agree to the

modifications contemplated hereunder, and has been relied upon by Agent and Lenders in connection therewith.

6. **No Waiver or Novation.** The execution, delivery and effectiveness of this Agreement shall not, except as expressly provided in this Agreement, operate as a waiver of any right, power or remedy of Agent, nor constitute a waiver of any provision of the Credit Agreement, the Financing Documents or any other documents, instruments and agreements executed or delivered in connection with any of the foregoing. Nothing herein is intended or shall be construed as a waiver of any existing Defaults or Events of Default under the Credit Agreement or the other Financing Documents or any of Agent's rights and remedies in respect of such Defaults or Events of Default. This Agreement (together with any other document executed in connection herewith) is not intended to be, nor shall it be construed as, a novation of the Credit Agreement.

7. **Affirmation.** Except as specifically amended pursuant to the terms hereof, Borrower hereby acknowledges and agrees that the Credit Agreement and all other Financing Documents (and all covenants, terms, conditions and agreements therein) shall remain in full force and effect, and are hereby ratified and confirmed in all respects by Borrower. Borrower covenants and agrees to comply with all of the terms, covenants and conditions of the Credit Agreement and the Financing Documents, notwithstanding any prior course of conduct or other actions or inactions on Agent's or any Lender's part which might otherwise constitute or be construed as a waiver of or amendment to such terms, covenants and conditions.

8. **Miscellaneous**.

(a) Reference to the Effect on the Credit Agreement. Upon the effectiveness of this Agreement, each reference in the Credit Agreement to "this Agreement," "hereunder," "hereof," "herein," or words of similar import shall mean and be a reference to the Credit Agreement, as modified by this Agreement. Except as specifically set forth above, the Credit Agreement, and all other Financing Documents (and all covenants, terms, conditions and agreements therein), shall remain in full force and effect, and are hereby ratified and confirmed in all respects by Borrower.

(b) GOVERNING LAW. THIS AGREEMENT AND ALL DISPUTES AND OTHER MATTERS RELATING HERETO OR THERETO OR ARISING THEREFROM (WHETHER SOUNDING IN CONTRACT LAW, TORT LAW OR OTHERWISE), SHALL BE GOVERNED BY, AND SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO CONFLICTS OF LAWS PRINCIPLES (OTHER THAN SECTION 5-1401 OF THE GENERAL OBLIGATIONS LAW).

(c) WAIVER OF JURY TRIAL. BORROWER, AGENT AND THE LENDERS PARTY HERETO HEREBY IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY AND AGREES THAT ANY SUCH ACTION OR PROCEEDING SHALL BE TRIED BEFORE A COURT AND NOT BEFORE A JURY. BORROWER, AGENT AND EACH LENDER ACKNOWLEDGES THAT THIS WAIVER IS A MATERIAL INDUCEMENT TO ENTER INTO A BUSINESS RELATIONSHIP, THAT EACH HAS RELIED ON THE WAIVER IN ENTERING INTO THIS AGREEMENT, AND THAT EACH WILL CONTINUE TO RELY ON THIS WAIVER IN THEIR RELATED FUTURE DEALINGS. BORROWER, AGENT AND EACH LENDER WARRANTS AND REPRESENTS THAT IT HAS HAD THE OPPORTUNITY OF REVIEWING THIS JURY WAIVER WITH LEGAL COUNSEL, AND THAT IT KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS.

(d) Incorporation of Credit Agreement Provisions. The provisions contained in Section 11.6 (*Indemnification*), and Section 12.8(b) (*Submission to Jurisdiction*) of the Credit Agreement are incorporated herein by reference to the same extent as if reproduced herein in their entirety.

(e) Headings. Section headings in this Agreement are included for convenience of reference only and shall not constitute a part of this Agreement for any other purpose.

(f) Counterparts. This Agreement may be signed in any number of counterparts, each of which shall be deemed an original and all of which when taken together shall constitute one and the same instrument. Delivery of an executed counterpart of this Agreement by facsimile or by electronic mail delivery of an electronic version (e.g., .pdf or .tif file) of an executed signature page shall be effective as delivery of an original executed counterpart hereof and shall bind the parties hereto. In furtherance of the foregoing, the words “execution”, “signed”, “signature”, “delivery” and words of like import in or relating to any document to be signed in connection with this Agreement and the transactions contemplated hereby or thereby shall be deemed to include Electronic Signatures, deliveries or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature, physical delivery thereof or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act. As used herein, “**Electronic Signature**” means an electronic sound, symbol, or process attached to, or associated with, a contract or other record and adopted by a Person with the intent to sign, authenticate or accept such contract or other record.

(g) Entire Agreement. This Agreement constitutes the entire agreement and understanding among the parties hereto and supersedes any and all prior agreements and understandings, oral or written, relating to the subject matter hereof.

(h) Severability. In case any provision of or obligation under this Agreement shall be invalid, illegal or unenforceable in any applicable jurisdiction, the validity, legality and enforceability of the remaining provisions or obligations, or of such provision or obligation in any other jurisdiction, shall not in any way be affected or impaired thereby.

(i) Successors/Assigns. This Agreement shall bind, and the rights hereunder shall inure to, the respective successors and assigns of the parties hereto, subject to the provisions of the Credit Agreement and the other Financing Documents.

[SIGNATURES APPEAR ON FOLLOWING PAGES]

IN WITNESS WHEREOF, intending to be legally bound, the undersigned have executed this Agreement as of the day and year first hereinabove set forth.

AGENT:

MIDCAP FINANCIAL TRUST

By: Apollo Capital Management, L.P.,
its investment manager

By: Apollo Capital Management GP, LLC,
its general partner

By: /s Maurice Amsellem
Name: Maurice Amsellem
Title: Authorized Signatory

LENDER:

ELM 2020-3 TRUST
By: MidCap Financial Services Capital Management, LLC, as Servicer

By: /s John O’Dea
Name: John O’Dea
Title: Authorized Signatory

ELM 2020-4 TRUST
By: MidCap Financial Services Capital Management, LLC, as Servicer

By: /s John O’Dea
Name: John O’Dea
Title: Authorized Signatory

LENDER:

APOLLO INVESTMENT CORPORATION

By: Apollo Investment Management, L.P., as Advisor

By: ACC Management, LLC, as its General Partner

By: /s Joseph D. Glatt
Name: Joseph D. Glatt
Title: Vice President

BORROWERS: AKOYA BIOSCIENCES, INC.

By: s/ Joseph Driscoll
Name: Joseph Driscoll
Title: CFO

Dear Ehab, This letter supersedes our letter dated February 11, 2022

We are very pleased to confirm our offer of employment as Chief Medical Officer reporting to Brian Mckelligon, Chief Executive Officer. It is our understanding that you will initially be working remote from Oro Valley, AZ before relocating to a mutually agreeable location near one of our sites. This letter confirms the terms of your employment.

Compensation

Akoya Biosciences, Inc. shall pay you a salary of $450,000.00 per year payable on a semi- monthly pay schedule, subject to applicable tax withholding requirements.

Annual Bonus

The Company has created an incentive pay plan under which you may be eligible for an annual cash incentive bonus (the “Bonus”). Your target cash bonus opportunity (the “Bonus”) will be equal to 50% of your gross earnings in the calendar year. The bonus is based on a combination of your personal achievement as well as the Company’s ability to meet its financial and operational performance objectives. The bonus payment is subject to your continued employment through the date of payment by the Company.

Incentive Stock Options

The Company will offer you participation in an **Equity Incentive Program**. Subject to approval by the Board of Directors of the Company (the “Board”), you will be provided an option to acquire the number of shares equivalent to **150,000** of the Company’s common stock under the Company’s stock option plan (the “Option”). You will vest as to 25% of the shares subject to the Option on the first anniversary of your date of employment, with the remaining 75% of the shares subject to the Option vesting in equal monthly installments over the subsequent 36 months on the same day of the month as your date of employment, subject to your continued service to the Company through each applicable vesting date. The exercise price per share of the Option will be equal to the fair market value per share of the Company’s common stock on the date the Option is granted, as determined by the Board in good faith. There is no guarantee that the Internal Revenue Service will agree with this value. You should consult with your own tax advisor concerning the tax consequences associated with accepting the Option.

Signing Bonus:

The Company will provide you with a one-time signing bonus of $100,000. The sign-on bonus will be provided as follows: the first $25,000 will be paid within the first month of your Akoya employment. The remaining amount of $75,000 will be paid to you upon your formal notification to Akoya that you have initiated your relocation, as discussed. The signing bonus is repayable to the Company on a pro-rata basis should you voluntarily resign your position before your first service anniversary with Akoya.

Severance and Change in Control:

Akoya has recently approved a severance and change in control provision. We will soon communicate this formally to the other C-Suite members; you will receive a formal copy of the plan upon your start date.

Time Off/PTO:

Employees at this compensation band are afforded unlimited PTO under the Akoya PTO policy as stated in the Employee Handbook.

Company Holidays

The Company offers 10 paid Holidays per calendar year.

Benefit Plans / Eligibility Effective Date

Beginning on the first of the month following your start date with Akoya you shall be entitled to participate in any standard health and other benefit plans established by Akoya Biosciences, Inc. on terms as may be established by Akoya Biosciences, Inc. which, in its sole discretion, may change or alter. Although you may be eligible for other benefits as they become available in the future, Akoya Biosciences, Inc. does not promise or represent that such benefits will in fact become available or that once made available they will be continued. We offer a 401(k) Plan with immediate Company match of 50% up to the first 4% of eligible compensation. You may commence participation in our program at the first of the month following your date of employment.

Confidential Information and Invention Assignment Agreement

As a condition of your employment with Akoya Biosciences, Inc., you acknowledge that you have executed and delivered a copy of Akoya Biosciences, Inc.'s Proprietary Information and Inventions Agreement and will abide by its terms. You acknowledge that a remedy at law for any breach or threatened breach by you of the provisions of the Proprietary Information and

Inventions Agreement would be inadequate, and you therefore agree that Akoya Biosciences, Inc. shall be entitled to injunctive relief in case of any such breach or threatened breach.

Current or Previous Confidentiality / Non-Disclosure Agreements:

Akoya reminds you of your obligations, if any, to adhere to confidentiality / non-disclosure agreements previously signed with your current and / or previous employers. It is up to you, the employee, to abide by the obligations of such agreements in terms of the use and disclosure of any company confidential information in any form.

At-Will Employment and Terms

Your employment with the Company is for no specified period, and constitutes “at will” employment. As a result, you are free to resign at any time, for any reason or for no reason. Similarly, the Company is free to terminate its employment relationship with you at any time, with or without cause. You agree to devote your full business time, attention, and best efforts to the business of Akoya Biosciences, Inc. during the employment relationship.

Your position, job description, manager, salary, duties, work location, and responsibilities may be modified from time to time at the sole discretion of Akoya Biosciences, Inc. You agree to strictly adhere to the policies and regulations of Akoya Biosciences, Inc. as may be set forth in any Employee Handbook or published policies of Akoya Biosciences, Inc. now or in the future, including all amendments to the Handbook which may be made in the future in Akoya Biosciences, Inc.'s sole discretion as published or amended from time to time. This offer is contingent upon successfully completing a standard background check clearance and satisfactory proof of the right to work in the US, as required by law.

Terms and conditions of employment with Akoya Biosciences, Inc. may be modified at the sole discretion of Akoya Biosciences, Inc. with or without cause and with or without notice. Other than the Chief Executive Officer (“CEO”), no one has the authority to make any agreement for employment other than for employment at-will or to make any agreement limiting Akoya Biosciences, Inc.'s discretion to modify the terms and conditions of employment. Only the CEO has the authority to make any such agreement and then only in writing and signed by each of the CEO and the respective employee. No implied contract concerning any employment- related decision or term, or condition of employment can be established by any other statement, conduct, policy, or practice.

Governing Law

This Agreement is made and shall be construed and enforced in accordance with the laws of the State of California. This Agreement and the Exhibits supersede and replace all prior agreements or understandings, oral or written, between Akoya Biosciences, Inc., and you, except for prior confidentiality agreements, if any. This Agreement may not be modified except by a writing signed both by the CEO and by you.

Arbitration

In the event of any dispute in connection with this Agreement or the Exhibits, the parties agree to resolve the dispute by binding arbitration in San Francisco, California, under the Commercial Arbitration Rules of the American Arbitration Association ("AAA"), with a single arbitrator familiar with employment and technology agreements appointed by AAA. In the event of any dispute, the prevailing party shall be entitled to its reasonable attorneys' fees and costs from the other party, whether the matter is litigated or arbitrated to a final judgment or award. The arbitrator's decision shall be final and binding on all parties and may be entered in any court having competent jurisdiction.

Closing

We are very excited about your joining Akoya Biosciences, Inc. Please confirm your acceptance of this updated offer letter which includes the bonus target increase from 40% to 50%. This memo will expire on March 31, 2022. We look forward to having you join the company on a date that is mutually convenient for both you and Akoya. Currently, we are targeting a start date on or around April 11, 2022. On or before your first day of employment, you will be provided with on-boarding information from Akoya regarding company benefits and policies.

We look forward to welcoming you to the Akoya Biosciences team! We believe you will find your employment at Akoya to be an enjoyable and fulfilling experience. If you have any questions, please do not hesitate to contact me.

Sincerely,

Marilee Moy
Chief People Officer

____

Offer Letter Acceptance

I have read and accept this offer of employment:

/s Ehab El-Gabry

Ehab El-Gabry

04/01/2022

Date

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: August 8, 2022

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: August 8, 2022

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

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Akoya Biosciences, Inc. (the “Company”) on Form 10-Q for the quarterly period ended June 30, 2022 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: August 8, 2022

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 June 30, 2022 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: August 8, 2022

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