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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2023

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: 001-38319

QUANTERIX CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**20-8957988**
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)
900 Middlesex Turnpike **Billerica, MA**	**01821**
(Address of principal executive offices)	(Zip Code)

(617) 301-9400

(Registrant's telephone number, including area code)

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

Title of each class:	Trading Symbol(s)	Name of each exchange on which registered:
Common Stock, $0.001 par value per share	QTRX	The Nasdaq Global Market

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

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

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

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

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

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

As of November 2, 2023, the registrant had 37,829,746 shares of common stock outstanding.

QUANTERIX CORPORATION
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NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements (within the meaning of the U.S. Private Securities Litigation Reform Act of 1995) that involve risks and uncertainties. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q are forward-looking statements. In some cases, forward-looking statements can be identified by words such as “anticipate,” “believe,” “contemplate,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “seek,” “should,” “target,” “will,” “would,” or the negative of these words, or other comparable terminology. These forward-looking statements include, but are not limited to, statements related to our financial performance, and are subject to a number of risks, uncertainties, and assumptions, including those further described elsewhere in this Quarterly Report on Form 10-Q, in the section titled “Part I, Item 1A. Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the U.S. Securities and Exchange Commission (the “SEC”) on March 6, 2023, or in other filings that we make with the SEC. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for us to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties, and assumptions, the forward-looking events and circumstances discussed in this Quarterly Report on Form 10-Q may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

Readers should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in any forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance, or events and circumstances reflected in forward-looking statements will be achieved or occur. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this Quarterly Report on Form 10-Q to conform these statements to new information, actual results, or to changes in our expectations, except as required by law.

Readers should read this Quarterly Report on Form 10-Q and any documents referenced herein that we have filed with the SEC as exhibits to this Quarterly Report on Form 10-Q with the understanding that our actual future results, levels of activity, performance, and events and circumstances may be materially different from what we expect.

Service Marks, Trademarks and Trade Names

Unless the context otherwise requires, the terms “Quanterix,” the “Company,” “we,” “it,” “us,” and “our” in this Quarterly Report on Form 10-Q refer to Quanterix Corporation and its consolidated subsidiaries. “Quanterix,” “Simoa,” “Simoa HD-X,” “Simoa HD-1,” “SR-X,” “SP-X,” “HD-X,” “LucentAD,” and our logo are our trademarks. All other service marks, trademarks, and trade names appearing in this Quarterly Report on Form 10-Q are the property of their respective owners. We do not intend our use or display of other companies’ trade names, trademarks, or service marks to imply a relationship with, endorsement, or sponsorship of us by these other companies.

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited)

QUANTERIX CORPORATION
CONSOLIDATED BALANCE SHEETS
(amounts in thousands, except per share data)

	September 30, 2023	December 31, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	$ 201,261	$ 338,740
Marketable securities	126,449	—
Accounts receivable (net of allowance for expected credit losses of $429 and $118 as of September 30, 2023 and December 31, 2022, respectively)	24,083	19,017
Inventory	19,945	16,786
Prepaid expenses and other current assets	9,273	6,860
Total current assets	381,011	381,403
Restricted cash	2,647	2,597
Property and equipment, net	17,517	20,162
Intangible assets, net	6,003	7,516
Operating lease right-of-use assets	19,860	21,223
Other non-current assets	2,004	1,298
Total assets	$ 429,042	$ 434,199
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 4,786	$ 3,836
Accrued compensation and benefits	9,775	10,658
Accrued expenses and other current liabilities	6,672	5,133
Deferred revenue	9,827	8,644
Operating lease liabilities	4,093	2,687
Total current liabilities	35,153	30,958
Deferred revenue, net of current portion	1,126	1,415
Operating lease liabilities, net of current portion	38,306	41,417
Other non-current liabilities	1,105	1,469
Total liabilities	75,690	75,259
Commitments and contingencies (Note 13)		
Stockholders’ equity:		
Common stock, $0.001 par value, per share:		
Authorized shares: 120,000; Issued and outstanding: 37,839 and 37,280 shares at September 30, 2023 and December 31, 2022, respectively	38	37
Additional paid-in capital	778,615	763,688
Accumulated other comprehensive loss	(3,214)	(2,623)
Accumulated deficit	(422,087)	(402,162)
Total stockholders’ equity	353,352	358,940
Total liabilities and stockholders’ equity	$ 429,042	$ 434,199

The accompanying notes are an integral part of these Consolidated Financial Statements.

QUANTERIX CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(amounts in thousands, except per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Revenues:				
Product revenue	$ 19,660	$ 17,693	$ 58,639	$ 53,134
Service revenue	10,938	8,370	30,069	25,728
Collaboration and license revenue	237	301	1,234	479
Grant revenue	499	282	877	357
Total revenues	31,334	26,646	90,819	79,698
Costs of goods sold and services:				
Cost of product revenue	8,342	10,511	22,611	31,178
Cost of service and other revenue	5,209	5,191	14,361	14,306
Total costs of goods sold and services	13,551	15,702	36,972	45,484
Gross profit	17,783	10,944	53,847	34,214
Operating expenses:				
Research and development	7,200	6,631	17,866	20,290
Selling, general, and administrative	23,595	19,966	66,069	72,723
Other lease costs	758	609	2,696	609
Impairment and restructuring	—	20,341	(33)	20,341
Total operating expenses	31,553	47,547	86,598	113,963
Loss from operations	(13,770)	(36,603)	(32,751)	(79,749)
Interest income, net	4,185	1,712	11,520	2,316
Other income (expense), net	2,030	(101)	1,884	(676)
Loss before income taxes	(7,555)	(34,992)	(19,347)	(78,109)
Income tax expense	(203)	(72)	(578)	(10)
Net loss	$ (7,758)	$ (35,064)	$ (19,925)	$ (78,119)
Net loss per common share, basic and diluted	$ (0.21)	$ (0.95)	$ (0.53)	$ (2.12)
Weighted-average common shares outstanding, basic and diluted	37,657	37,005	37,494	36,927

The accompanying notes are an integral part of these Consolidated Financial Statements.

QUANTERIX CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(amounts in thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net loss	$ (7,758)	$ (35,064)	$ (19,925)	$ (78,119)
Other comprehensive loss, net of tax:				
Unrealized losses on marketable securities	(241)	—	(241)	—
Foreign currency translation	(148)	(796)	(350)	(3,440)
Total other comprehensive loss	(389)	(796)	(591)	(3,440)
Comprehensive loss	$ (8,147)	$ (35,860)	$ (20,516)	$ (81,559)

The accompanying notes are an integral part of these Consolidated Financial Statements.

QUANTERIX CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(amounts in thousands)

	Three Months Ended September 30, 2023					
	Common stock					
	Shares	Value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total stockholders' equity
Balance at June 30, 2023	37,566	$ 37	$ 772,473	$ (2,825)	$ (414,329)	$ 355,356
Issuance of common stock under stock plans, including tax effects	273	1	1,799	—	—	1,800
Stock-based compensation expense	—	—	4,343	—	—	4,343
Unrealized loss on marketable securities, net of tax				(241)		(241)
Foreign currency translation	—	—	—	(148)	—	(148)
Net loss	—	—	—	—	(7,758)	(7,758)
Balance at September 30, 2023	37,839	$ 38	$ 778,615	$ (3,214)	$ (422,087)	$ 353,352

	Three Months Ended September 30, 2022					
	Common stock					
	Shares	Value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total stockholders' equity
Balance at June 30, 2022	36,975	$ 37	$ 756,139	$ (2,203)	$ (348,517)	$ 405,456
Issuance of common stock under stock plans, including tax effects	119	—	407	—	—	407
Stock-based compensation expense	—	—	2,766	—	—	2,766
Foreign currency translation	—	—	—	(796)	—	(796)
Net loss	—	—	—	—	(35,064)	(35,064)
Balance at September 30, 2022	37,094	$ 37	$ 759,312	$ (2,999)	$ (383,581)	$ 372,769

	Nine Months Ended September 30, 2023					
	Common stock					
	Shares	Value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total stockholders' equity
Balance at December 31, 2022	37,280	$ 37	$ 763,688	$ (2,623)	$ (402,162)	$ 358,940
Issuance of common stock under stock plans, including tax effects	559	1	2,489	—	—	2,490
Stock-based compensation expense	—	—	12,438	—	—	12,438
Unrealized loss on marketable securities, net of tax	—	—	—	(241)	—	(241)
Foreign currency translation	—	—	—	(350)	—	(350)
Net loss	—	—	—	—	(19,925)	(19,925)
Balance at September 30, 2023	37,839	$ 38	$ 778,615	$ (3,214)	$ (422,087)	$ 353,352

	Nine Months Ended September 30, 2022					
	Common stock					
	Shares	Value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total stockholders' equity
Balance at December 31, 2021	36,768	$ 37	$ 745,936	$ 441	$ (305,462)	$ 440,952
Issuance of common stock under stock plans, including tax effects	326	—	1,597	—	—	1,597
Stock-based compensation expense	—	—	11,779	—	—	11,779
Foreign currency translation	—	—	—	(3,440)	—	(3,440)
Net loss	—	—	—	—	(78,119)	(78,119)
Balance at September 30, 2022	37,094	$ 37	$ 759,312	$ (2,999)	$ (383,581)	$ 372,769

The accompanying notes are an integral part of these Consolidated Financial Statements.

QUANTERIX CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(amounts in thousands)

	Nine Months Ended September 30,	
	2023	2022
Cash flows from operating activities:		
Net loss	$ (19,925)	$ (78,119)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	4,788	4,186
Credit losses on accounts receivable	311	102
Foreign currency losses	359	167
Unrealized losses on marketable securities	(241)	—
Amortization of (discount) premium on marketable securities	(1,249)	—
Operating lease right-of-use asset amortization	1,518	1,099
Stock-based compensation expense	12,438	11,779
Impairment	—	16,915
Deferred income taxes	242	(134)
Loss on disposal of fixed assets	46	6
Changes in assets and liabilities:		
Accounts receivable	(5,615)	5,045
Inventory	(2,966)	3,919
Prepaid expenses and other current assets	(2,829)	(262)
Other non-current assets	(716)	(859)
Accounts payable	948	(7,085)
Accrued compensation and benefits, accrued expenses, and other current liabilities	876	(3,021)
Deferred revenue	894	3,108
Operating lease liabilities	(1,690)	(1,156)
Other non-current liabilities	(107)	128
Net cash used in operating activities	(12,918)	(44,182)
Cash flows from investing activities:		
Purchases of marketable securities	(125,200)	—
Purchases of property and equipment	(1,572)	(10,131)
Proceeds from RADx grant on assets purchased	—	520
Net cash used in investing activities	(126,772)	(9,611)
Cash flows from financing activities:		
Proceeds from common stock issued under stock plans	2,632	1,597
Payments for employee taxes withheld on stock-based compensation awards	(142)	—
Net cash provided by financing activities	2,490	1,597
Net decrease in cash, cash equivalents, and restricted cash	(137,200)	(52,196)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(229)	(507)
Cash, cash equivalents, and restricted cash at beginning of period	341,337	399,042
Cash, cash equivalents, and restricted cash at end of period	$ 203,908	$ 346,339
Supplemental disclosure of cash flow information:		
Cash paid for taxes	$ 719	$ 263
Operating lease right-of-use assets obtained in exchange for lease liabilities	$ —	$ 22,239
Shares received as consideration under product sales agreement (Note 3, 6)	$ 775	$ —

The accompanying notes are an integral part of these Consolidated Financial Statements.

QUANTERIX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

Note 1. Organization and Nature of Business

Quanterix Corporation ("Quanterix" or the "Company") is a life sciences company that has developed next generation, ultra-sensitive digital immunoassay platforms that advance precision health for life sciences research and diagnostics. The Company's platforms are based on its proprietary digital "Simoa" detection technology. The Company's Simoa bead-based and planar array platforms enable customers to reliably detect protein biomarkers in extremely low concentrations in blood, serum, and other fluids that, in many cases, are undetectable using conventional, analog immunoassay technologies, and also allow researchers to define and validate the function of novel protein biomarkers that are only present in very low concentrations. The Company is currently focusing on protein detection, but its Simoa platforms have also demonstrated applicability across other testing applications, including detection of nucleic acids and small molecules.

The Company also provides contract research services for customers and Laboratory Developed Test ("LDT") services through its CLIA-certified Accelerator Laboratory (the "Accleerator Laboratory"). The Accelerator Laboratory provides customers with access to Simoa technology and supports multiple projects and services, including sample testing, homebrew assay development, custom assay development, and blood-based biomarker testing. To date, the Company has completed over 2,200 projects for more than 470 customers from all over the world using its Simoa platforms.

Note 2. Significant Accounting Policies

Basis of Presentation

The Consolidated Financial Statements have been prepared in accordance with the generally accepted accounting principles in the United States of America ("U.S. GAAP") and pursuant to the rules and regulations of the U.S. Securities and Exchange Commission (the "SEC") regarding interim financial reporting on Form 10-Q. Accordingly, certain information and disclosures required for complete financial statements prepared in accordance with U.S. GAAP are not included herein. The Consolidated Balance Sheet and related information as of December 31, 2022 included herein was derived from the audited Consolidated Financial Statements as of December 31, 2022, but does not include all disclosures required by U.S. GAAP on an annual reporting basis. Certain prior period amounts have been reclassified to conform to the current period presentation.

These Consolidated Financial Statements should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the SEC on March 6, 2023. Since the date of that filing, there have been no changes or updates to the Company's significant accounting policies, other than those described below.

In the opinion of management, the Consolidated Financial Statements contain all normal, recurring adjustments necessary for a fair statement of financial position, results of operations, comprehensive loss, and cash flows as of the dates and for the interim periods presented. The results of operations for the three and nine months ended September 30, 2023 may not be indicative of the results for the full year ended December 31, 2023 or any other period.

The Company's fiscal year is the twelve-month period from January 1 through December 31.

Use of Estimates

The preparation of the Consolidated Financial Statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts of assets, liabilities, revenues, and expenses reported and disclosures in the financial statements and accompanying notes. Such estimates include, but are not limited to, revenue recognition, valuation of inventory, leases, valuation of intangible and other long-lived assets, recoverability of deferred

tax assets, ongoing impairment reviews, and stock-based compensation expense. The Company bases its estimates on historical experience, known trends, market specific information, or other relevant factors it believes to be reasonable. On an ongoing basis, management evaluates its estimates and changes in estimates are recorded in the period in which they become known. Actual results may differ from these estimates.

Foreign Currency

The functional currency of the Company's subsidiaries is their respective local currencies. These subsidiary financial statements are translated into U.S. dollars using the period-end exchange rates for assets and liabilities, average exchange rates during the corresponding period for revenue and expenses, and historical rates for equity. The effects of foreign currency translation adjustments are recorded in accumulated other comprehensive income (loss), a component of stockholders' equity on the Consolidated Balance Sheets.

Foreign currency transaction gains (losses) are included in other income (expense), net on the Consolidated Statements of Operations. Foreign exchange losses were not material during the nine months ended September 30, 2023, and were $0.8 million during the nine months ended September 30, 2022.

Principles of Consolidation

The Consolidated Financial Statements include the accounts of Quanterix and its wholly-owned subsidiaries. All intercompany transactions have been eliminated in consolidation.

In accordance with Accounting Standards Codification ("ASC") 810 – *Consolidation*, the Company assesses the terms of its investment interests in entities to determine if any meet the definition of a variable interest entity ("VIE") and require consolidation into its Consolidated Financial Statements. Refer to Note 16 − *Variable Interest Entities* for further discussion.

Presentation of Restricted Cash

The following table summarizes the period ending cash and cash equivalents as presented on the Consolidated Balance Sheets and the total cash, cash equivalents, and restricted cash as presented on the Consolidated Statements of Cash Flows (in thousands):

	As of September 30,	
	2023	2022
Cash and cash equivalents	$ 201,261	$ 343,743
Restricted cash (1)	2,647	2,596
Cash, cash equivalents, and restricted cash	$ 203,908	$ 346,339

(1) Restricted cash consists of collateral for a letter of credit issued as security for several of the Company's leased facilities and to secure the Company's corporate credit card program. The short-term or long-term classification is determined in accordance with the expiration of the underlying letter of credit and security.

Marketable Securities

The Company's current portfolio of marketable securities is entirely debt securities and may at any time include commercial paper, U.S. Treasuries, corporate notes and bonds, U.S. Government agency bonds, certificates of deposit, and similar types of debt securities. Marketable debt securities with original maturities of three months or less at the time of purchase are recorded in cash equivalents on the Consolidated Balance Sheets as they are considered highly liquid and readily convertible into cash. All other marketable securities, including those with maturities beyond one year, are recorded as current assets on the Consolidated Balance Sheets based on their highly liquid nature and because such securities are available for use in current operations.

The Company classifies its marketable securities as either held to maturity, available-for-sale, or trading at the time of purchase and re-evaluates such classification at each balance sheet date. All of the Company's marketable securities are currently classified as available-for-sale as it may use them in current operations. Available-for-sale securities are recorded at fair value (refer to Note 6 − *Fair Value of Financial Instruments*).

Unrealized gains and losses (other than impairment or credit related losses) are recorded in accumulated other comprehensive income (loss), net of tax, a component of stockholders' equity on the Consolidated Balance Sheets. Realized gains and losses are determined using the specific identification method and are recorded in other income (expense), net on the Consolidated Statements of Operations.

Quarterly, or more frequently if circumstances warrant, the Company monitors its marketable securities for impairment. In the event a security's fair value is less than its amortized cost basis, the Company evaluates whether an impairment exists and if the impairment is a result of credit loss or other factors. For a security in an unrealized loss position, if the Company intends to sell the security in an unrealized loss position, or it is more likely than not that the Company will be required to sell the security before recovery of its amortized cost basis, an impairment loss equal to the difference between the security's fair value and amortized cost basis is recorded in other income (expense), net. Additionally, the Company determines if a credit loss exists by considering information about the collectability of the security, current market conditions, and the issuer's financial condition. If a decline in fair value is a result of a credit loss, an allowance for credit losses is recorded in other income (expense), net, limited to the portion attributed to the credit loss.

Recent Accounting Pronouncements

There are no new accounting pronouncements issued or effective in the current or future periods that are expected to have a material impact on the Company's Consolidated Financial Statements or accompanying notes.

Note 3. Revenue and Related Matters

Disaggregated Revenue

The following tables disaggregate the Company's revenue from contracts with customers by geography, based on the location products and services are consumed, and revenue type (in thousands):

	Three Months Ended September 30, 2023				Three Months Ended September 30, 2022			
	North America	EMEA	Asia Pacific	Total	North America	EMEA	Asia Pacific	Total
Product revenue								
Instruments	$ 1,693	$ 707	$ 1,257	$ 3,657	$ 2,964	$ 3,115	$ 1,684	$ 7,763
Consumable and other products	8,710	5,205	2,088	16,003	6,262	2,840	828	9,930
Total	$ 10,403	$ 5,912	$ 3,345	$ 19,660	$ 9,226	$ 5,955	$ 2,512	$ 17,693
Service revenue								
Service-type warranties	$ 1,595	$ 810	$ 161	$ 2,566	$ 1,454	$ 703	$ 125	$ 2,282
Research services	6,690	617	433	7,740	5,246	305	44	5,595
Other services	388	243	1	632	315	142	36	493
Total	$ 8,673	$ 1,670	$ 595	$ 10,938	$ 7,015	$ 1,150	$ 205	$ 8,370
Collaboration and license revenue	$ 237	$ —	$ —	$ 237	$ 136	$ 165	$ —	$ 301
Grant revenue	$ 499	$ —	$ —	$ 499	$ 282	$ —	$ —	$ 282
Total revenues	$ 19,812	$ 7,582	$ 3,940	$ 31,334	$ 16,659	$ 7,270	$ 2,717	$ 26,646

	Nine Months Ended September 30, 2023				Nine Months Ended September 30, 2022			
	North America	EMEA	Asia Pacific	Total	North America	EMEA	Asia Pacific	Total
Product revenue								
Instruments	$ 4,879	$ 3,659	$ 3,864	$ 12,402	$ 7,602	$ 7,288	$ 4,699	$ 19,589
Consumable and other products	25,978	14,692	5,567	46,237	19,814	10,854	2,877	33,545
Total	$ 30,857	$ 18,351	$ 9,431	$ 58,639	$ 27,416	$ 18,142	$ 7,576	$ 53,134
Service revenue								
Service-type warranties	$ 4,711	$ 2,269	$ 449	$ 7,429	$ 4,057	$ 2,050	$ 341	$ 6,448
Research services	18,200	1,562	1,001	20,763	16,853	752	65	17,670
Other services	1,142	719	16	1,877	916	590	104	1,610
Total	$ 24,053	$ 4,550	$ 1,466	$ 30,069	$ 21,826	$ 3,392	$ 510	$ 25,728
Collaboration and license revenue	$ 1,234	$ —	$ —	$ 1,234	$ 179	$ 248	$ 52	$ 479
Grant revenue	$ 877	$ —	$ —	$ 877	$ 357	$ —	$ —	$ 357
Total revenues	$ 57,021	$ 22,901	$ 10,897	$ 90,819	$ 49,778	$ 21,782	$ 8,138	$ 79,698

For each of the three and nine months ended September 30, 2023, one customer accounted for more than 10% of the Company's total revenues. At September 30, 2023, one customer accounted for more than 10% of the Company's gross accounts receivable.

Product Revenue

UltraDx

On May 26, 2022, the Company and UltraDx Limited ("UltraDx"), a company formed by ARCH Venture Partners ("ARCH"), entered into an agreement (the "UltraDx Agreement). Under the UltraDx Agreement, the Company agreed to supply UltraDx with HD-X instruments (both fully assembled and disassembled), assays and assay components, and granted a co-exclusive license to manufacture, seek Chinese regulatory approval of (including performance of any necessary research and development activities), and commercialize, HD-X instruments assembled in China and related assays in the Chinese neurological in vitro diagnostic market. Refer to Note 14 − *Related Party Transactions* for a discussion of the related party relationships between Quanterix and these entities.

The Company determined that the instruments, components, and licenses formed a single, combined performance obligation. The consideration due to the Company included (1) cash proceeds of $1.9 million, which was received and recognized as revenue in the third quarter of 2022 when the instruments, components, and licenses were delivered to and paid by UltraDx, and (2) contingent, non-cash consideration in the form of ordinary shares of UltraDx with a deemed fair value of $1.0 million. The issuance of the shares was contingent on UltraDx completing a preferred share financing under the terms and conditions in the UltraDx Agreement. Given the uncertainty of the completion of the preferred share financing, the Company concluded that the non-cash consideration related to the ordinary shares was variable consideration that was fully constrained at contract inception.

In the second quarter of 2023, UltraDx completed the qualified preferred share financing and issued to the Company one million ordinary shares. Refer to Note 6 − *Fair Value of Financial Instruments* for the Company's disclosures related to determining the fair value of the shares received. Also refer to Note 16 − *Variable Interest Entities* for additional information on the Company's investment interests in UltraDx as a result of the share issuance.

During the three months ended September 30, 2023, revenue recognized was not material. During the nine months ended September 30, 2023, the Company recognized $1.6 million of revenue, which includes the one-time revenue from the receipt of the UltraDx shares in the second quarter of 2023. During the three and nine months ended September 30, 2022, the Company recognized $1.9 million of revenue.

Service Revenue

Eli Lilly and Company

On February 25, 2022, the Company entered into a Master Collaboration Agreement with Eli Lilly and Company ("Lilly") establishing a framework for future projects focused on the development of Simoa immunoassays (the "Lilly Collaboration Agreement"). The Company also entered into a statement of work under the Lilly Collaboration Agreement to perform assay research and development services within the field of Alzheimer's disease. In connection with the Lilly Collaboration Agreement, the Company received a non-refundable up-front payment of $5.0 million during the first quarter of 2022, which was recognized over a one-year period. In addition, under the statement of work, the Company receives $1.5 million per calendar quarter, which began in the first quarter of 2022. The statement of work automatically renews on a quarterly basis until Lilly provides a termination notice in accordance with the terms of the Lilly Collaboration Agreement. As of September 30, 2023, the Lilly Collaboration Agreement and the statement of work were still in effect.

Concurrent with the execution of the Lilly Collaboration Agreement, the Company entered into a Technology License Agreement (the "Lilly License") under which Lilly granted the Company a non-exclusive license to Lilly's proprietary pTau217 antibody technology for use in research use only products and services and future in vitro diagnostics applications within the field of Alzheimer's disease. In consideration of the Lilly License, the Company paid an upfront fee, is required to make milestone payments based on the achievement of predetermined regulatory and commercial events, and will pay royalties on net sales of licensed products.

The Company recognized revenue from the Lilly Collaboration Agreement of $1.5 million and $4.5 million during the three and nine months ended September 30, 2023, respectively, and $2.7 million and $8.1 million during the three and nine months ended September 30, 2022, respectively.

Collaboration and License Revenue

Abbott Laboratories

On September 29, 2020, the Company and Abbott Laboratories ("Abbott") entered into a Non-Exclusive License Agreement (the "Abbott License Agreement") under which the Company granted Abbott a non-exclusive, worldwide, royalty-bearing license, without the right to sublicense, to the Company's bead-based single molecule detection patent (the "Licensed Patents") in the field of in vitro diagnostics. Abbott paid the Company an initial license fee of $10.0 million, which was recognized as license revenue during 2020. Abbott also agreed to pay the Company milestone fees, subject to the achievement by Abbott of certain development, regulatory, and commercialization milestones and low single-digit royalties on net sales of licensed products.

The Abbott License Agreement will continue until expiration of the last-to-expire licensed patent, or the agreement is earlier terminated. Under the terms of the Abbott License Agreement, the Company and Abbott each have the right to terminate the agreement for uncured material breach by, or insolvency of, the other party. Abbott may also terminate the Abbott License Agreement at any time, without cause, upon 60 days' notice.

During the three and nine months ended September 30, 2023, the Company recognized zero and $0.5 million of one-time revenue, respectively, related to the expiration of a previously paid for option to expand the scope of the Abbott License Agreement.

Grant Revenue

The Company recognizes grant revenue after funding is committed and as each grant's related activities are performed. The timing of revenue recognition and receipt of funding varies by grant and can be independent from performance of the related activities, such as an upfront payment of the award value, or subsequent to the Company's requests for reimbursement for already performed activities (subject to the approval of the granting organization), as further described below.

NIH Grant

On September 21, 2022, the Company and the National Institutes of Health (the "NIH"), an agency of the U.S. Department of Health and Human Services, entered into a contract (the "NIH Grant") with a total award value of $1.7 million. The NIH granted the Company funding in support of the development of certain point-of-care diagnostic technologies through collaborative efforts. Grant funding is to be used solely for activities related to the point-of-care diagnostic device development project and the contract period runs through August 2025. Receipt of the award value occurs throughout the term of the contract period and after the Company submits for reimbursement of activities related to the grant. As of September 30, 2023, the Company had received $0.5 million of the award value.

During the three months ended September 30, 2023, grant revenue recognized and research and development expenses incurred were not material. During the nine months ended September 30, 2023, grant revenue recognized and research and development expenses incurred were $0.5 million and $0.4 million, respectively. During the three and nine months ended September 30, 2022, grant revenue recognized and research and development expenses incurred were not material.

ADDF Grant

On March 24, 2022, the Company and the Alzheimer's Drug Discovery Foundation (the "ADDF") entered into a contract (the "ADDF Grant") with a total funding value of $2.3 million. The ADDF is a charitable venture philanthropy entity that granted the Company funding in support of certain activities for the development of an in vitro diagnostic test for early detection of Alzheimer's disease. The ADDF Grant restricts the Company's use of the granted funds solely for activities related to the Company's Alzheimer's diagnostic test development project and the contract period runs through June 2024. Receipt of the contract funding was subject to achievement of pre-defined milestones, and as of September 30, 2023, the Company had received the total funding value of $2.3 million.

During the three and nine months ended September 30, 2023, grant revenue recognized and research and development expenses incurred were $0.3 million and $0.4 million, respectively. During the three and nine months ended September 30, 2022, grant revenue recognized and research and development expenses incurred were $0.3 million and $0.4 million, respectively.

RADx Grant

On September 29, 2020, the Company entered into a contract with the NIH under its Rapid Acceleration of Diagnostics ("RADx") program (the "RADx Grant"), with a total award value of $18.2 million. The RADx Grant was to accelerate the continued development, scale-up, and deployment of the novel SARS-CoV-2 antigen detection test using the Company's Simoa technology. Grant funding was used to expand assay kit manufacturing capacity and commercial deployment readiness, and the contract ran through the final milestone on May 31, 2022. Receipt of the award value occurred throughout the term of the contract period and after the Company submitted for reimbursement of activities related to the grant. During the first half of 2022, the Company received $0.5 million which represented the final and total funding value of the $18.2 million award.

During the three and nine months ended September 30, 2023 and 2022, the Company recognized no grant revenue and incurred no research and development expenses. As of September 30, 2023, the Company had no future obligations under the RADx Grant.

Contract Assets

There were no contract assets of as September 30, 2023 or December 31, 2022.

Deferred Revenue

The Company refers to contract liabilities as deferred revenue on the Consolidated Balance Sheets. During the nine months ended September 30, 2023 and 2022, the Company recognized $6.4 million and $4.7 million of revenue, respectively, related to its deferred revenue balance at January 1 of each such period.

Remaining Performance Obligations

As of September 30, 2023, the aggregate amount of transaction prices allocated to performance obligations that have not yet been satisfied, or are partially satisfied, was $11.0 million.

Of the performance obligations not yet satisfied or partially satisfied, $9.8 million is expected to be recognized as revenue in the next 12 months, with the remainder expected to be recognized thereafter. The $9.8 million primarily consists of amounts billed for undelivered services related to initial and extended service-type warranties and research services.

Costs to Obtain a Contract

The Company capitalizes commissions paid to its sales representatives and related fringe benefits costs that are incremental to obtaining customer contracts. These costs are included in prepaid expenses and other current assets on the Consolidated Balance Sheets. Changes in costs to obtain a contract were as follows (in thousands):

	2023	2022
Balance at December 31 of prior year	$ 377	$ 440
Deferral of costs to obtain a contract	414	1,182
Amortization of costs to obtain a contract	(491)	(914)
Balance at September 30	$ 300	$ 708

Costs to obtain a contract are amortized to earnings over the life of the contract and are recorded in cost of goods sold and selling, general, and administrative expense on the Consolidated Statements of Operations. The Company evaluates potential impairment of these amounts at each balance sheet date, and no related impairments were recorded during the nine months ended September 30, 2023 and 2022.

Note 4. Allowance for Credit Losses

The Company is exposed to credit losses primarily through accounts receivable from sales of its products and services. The Company's expected credit loss allowance methodology is developed using historical collection experience, current and future economic and market conditions, and a review of the status of customers' accounts receivable.

The change in the allowance for credit losses on accounts receivable is summarized as follows (in thousands):

	2023	2022
Balance at December 31 of prior year	$ 118	$ 419
Provision for expected credit losses	605	102
Write-offs and recoveries collected	(294)	—
Balance at September 30	$ 429	$ 521

Note 5. Marketable Securities

The amortized cost, gross unrealized gains, gross unrealized losses, and fair value of the Company's marketable securities by major security type were as follows (in thousands):

As of September 30, 2023	Amortized cost	Unrealized Gains	Unrealized Losses	Fair Value
Commercial paper	$ 75,934	$ —	$ (55)	$ 75,879
U.S. Treasuries	16,195	1	(1)	16,195
U.S. Government agency bonds	24,109	6	(50)	24,065
Corporate bonds	35,729	—	(142)	35,587
Total marketable securities	$ 151,967	$ 7	$ (248)	$ 151,726

Marketable securities are reported in the following Consolidated Balance Sheets captions:	
Cash and cash equivalents	$ 25,277
Marketable securities	126,449
Total marketable securities	$ 151,726

The Company did not have any marketable securities as of December 31, 2022.

The following table shows the gross unrealized losses and fair value of the Company's available-for-sale securities with unrealized losses that are not deemed to be other-than-temporary, aggregated by major security type and length of time that the individual securities have been in a continuous unrealized loss position (in thousands):

	Less Than 12 Months	
As of September 30, 2023	Fair Value	Unrealized Losses
Commercial paper	$ 75,879	$ (55)
U.S. Treasuries	5,940	(1)
U.S. Government agency bonds	13,328	(50)
Corporate bonds	35,587	(142)
Total	$ 130,734	$ (248)

The Company did not have any individual securities in a continuous loss position for greater than 12 months, and there were no individual securities that were in a significant unrealized loss position as of September 30, 2023. For marketable securities in an unrealized loss position, the Company does not intend to sell them before recovery of their amortized cost bases, it is not more likely than not that the Company will be required to sell them before recovery of their amortized cost bases, and the unrealized losses are not credit related. Accordingly, the Company has not recorded any impairment losses or a credit loss allowance.

The Company did not sell any marketable securities or record any realized gains or losses for the three and nine months ended September 30, 2023. At September 30, 2023, the Company had $0.4 million of accrued interest receivable on its marketable securities, which was recorded in prepaid expenses and other current assets on the Consolidated Balance Sheets.

The following table summarizes the contractual maturities of the Company's marketable securities (in thousands):

As of September 30, 2023	Amortized cost	Fair Value
Due within one year	$ 110,743	$ 110,670
Due in one to two years	41,224	41,056
Total	$ 151,967	$ 151,726

Note 6. Fair Value of Financial Instruments

Recurring Fair Value Measurements

The following tables present the Company's fair value hierarchy for its financial assets that are measured at fair value on a recurring basis (in thousands):

As of September 30, 2023	Total	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Financial assets:				
Cash equivalents: (1)				
Money market funds	$ 153,306	$ 153,306	$ —	$ —
Commercial paper	19,006	—	19,006	—
U.S. Treasuries	6,271	—	6,271	—
Total cash equivalents:	178,583	153,306	25,277	—
Marketable securities: (2)				
Commercial paper	56,874	—	56,874	—
U.S. Treasuries	9,923	—	9,923	—
U.S. Government agency bonds	24,065	—	24,065	—
Corporate bonds	35,587	—	35,587	—
Total marketable securities	126,449	—	126,449	—
Total financial assets	$ 305,032	$ 153,306	$ 151,726	$ —

As of December 31, 2022	Total	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Financial assets:				
Money market funds (1)	$ 306,097	$ 306,097	$ —	$ —
Total financial assets	$ 306,097	$ 306,097	$ —	$ —

(1) Included in cash and cash equivalents on the Consolidated Balance Sheets.

(2) Marketable securities are initially valued at their purchase price and subsequently fair valued at the end of each reporting period utilizing third party pricing services or other observable data. The pricing services utilize industry standard valuation methods, including both income and market-based approaches and observable market inputs to determine the fair value. These observable market inputs include reportable trades, benchmark yields, credit spreads, broker/dealer quotes, bids, offers, current spot rates, and other industry and economic events.

Nonrecurring Fair Value Measurements

On June 26, 2023, the Company received ordinary shares in UltraDx (refer to Note 3 − *Revenue and Related Matters*) which were valued at $1.0 million upon receipt, primarily using the third-party purchase price of similar interests issued during UltraDx's financing event that closed in the second quarter of 2023. As UltraDx is a recently formed, privately held entity, there was minimal market activity or other financial information available to determine the fair value of UltraDx's shares and therefore this investment is considered a Level 3 financial asset. Changes in the inputs and assumptions used would have resulted in a higher or lower fair value measurement.

Pursuant to ASC 321 – *Investments – Equity Securities*, the Company has elected the measurement alternative for equity investments without readily determinable fair values and will continue to recognize the UltraDx shares at cost, less any impairment, and adjusted for any observable price changes in orderly transactions.

During the third quarter of 2023, the Company recorded an immaterial adjustment to the fair value of the UltraDx shares. There were no other changes in the carrying value of these assets during the three and nine months ended September 30, 2023 and 2022. As of September 30, 2023 and December 31, 2022, the carrying value of the Company's Level 3 financial assets was $1.1 million and $0.3 million, respectively, and are included in other non-current assets on the Consolidated Balance Sheets. Refer to Note 16 − *Variable Interest Entities* for further discussion.

Other Fair Value Disclosures

During the nine months ended September 30, 2023 and 2022, the Company did not transfer financial assets between levels of the fair value hierarchy. Additionally, there have been no changes to the valuation techniques for Level 2 or Level 3 financial assets.

Note 7. Inventory

Inventory, net of inventory reserves, consisted of the following (in thousands):

	September 30, 2023	December 31, 2022
Raw materials	$ 5,125	$ 5,509
Work in process	4,907	3,362
Finished goods	9,913	7,915
Total inventory	$ 19,945	$ 16,786

Note 8. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	September 30, 2023	December 31, 2022
Accrued professional services	$ 1,761	$ 1,409
Accrued royalties	1,372	815
Accrued tax liabilities	1,716	172
Other accrued expenses	1,823	2,737
Total accrued expenses and other current liabilities	$ 6,672	$ 5,133

Note 9. Stock-Based Compensation

Stock Options

Stock option activity for the nine months ended September 30, 2023 is presented below (in thousands, except per share and contractual life amounts):

	Number of shares	Weighted-average exercise price per share	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding at December 31, 2022	2,188	$ 20.69	8.1	$ 4,273
Granted	1,102	15.74		
Exercised	(132)	12.37		
Cancelled	(418)	18.51		
Outstanding at September 30, 2023	2,740	$ 19.43	8.1	$ 26,822
Exercisable at September 30, 2023	967	$ 23.71	6.3	$ 7,260
Vested and expected to vest at September 30, 2023	2,740	$ 19.43	8.1	$ 26,822

Restricted Stock Units

Restricted stock unit ("RSU") activity for the nine months ended September 30, 2023 is presented below (in thousands, except per share and contractual life amounts):

	Number of shares	Weighted-average grant date fair value per share	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Unvested RSUs at December 31, 2022	1,188	$ 21.18	9.6	$ 16,455
Granted	812	15.49		
Vested	(306)	24.52		
Cancelled	(258)	17.59		
Unvested RSUs at September 30, 2023	1,436	$ 17.90	9.1	$ 38,976
Expected to convert at September 30, 2023	1,436	$ 17.90	9.1	$ 38,976

Employee Stock Purchase Plan ("ESPP")

In December 2017, the Company adopted the 2017 Employee Stock Purchase Plan (the "2017 ESPP"). The 2017 ESPP contains an "evergreen" provision, which allows for an increase in the number of shares under the plan on the first day of each fiscal year beginning with 2018. The increase is equal to the lower of: (i) 1% of the number of shares of common stock outstanding on the last day of the immediately preceding fiscal year and (ii) an amount determined by the Company's Board of Directors or Compensation Committee. On January 3, 2023, the number of shares of common stock available for issuance under the 2017 ESPP was increased by 372 thousand shares.

The 2017 ESPP provides for six-month offering periods commencing and ending as follows: March 1 through August 31, and September 1 through February 28. During the nine months ended September 30, 2023, employees purchased 121 thousand shares of the Company's common stock pursuant to the 2017 ESPP.

Stock-Based Compensation Expense

Stock-based compensation expense was recorded in the following categories on the Consolidated Statements of Operations (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Cost of product revenue	$ 224	$ 199	$ 611	$ 424
Cost of service and other revenue	259	159	867	530
Research and development	449	320	1,224	1,200
Selling, general, and administrative	3,411	2,088	9,736	9,625
Total stock-based compensation	$ 4,343	$ 2,766	$ 12,438	$ 11,779

As of September 30, 2023, there was $37.4 million of total unrecognized stock-based compensation expense related to unvested RSUs and stock options, which is expected to be recognized over the remaining weighted-average vesting period of 2.8 years.

The fair value of the Company's stock options granted and purchase rights to the ESPP were estimated using the Black-Scholes valuation model with the following assumptions:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Stock Options:				
Risk-free interest rate	4.0% − 4.4%	2.7% − 3.9%	3.5% − 4.4%	1.4% − 3.9%
Expected dividend yield	None	None	None	None
Expected term (in years)	5.1	5.5 − 5.7	5.0 − 5.1	5.5 − 5.8
Expected volatility	82.6% − 83.1%	62.6% − 69.8%	71.1% − 83.1%	55.0% − 69.8%
Weighted-average grant date fair value	$ 16.82	$ 5.80	$ 10.25	$ 10.28
Employee Stock Purchase Plan:				
Risk-free interest rate	5.5%	3.3% - 3.9%	5.2% - 5.5%	0.7% - 3.9%
Expected dividend yield	None	None	None	None
Expected term (in years)	0.5	0.5	0.5	0.5
Expected volatility	74.7% − 78.5%	115.3% − 117.3%	72.8% − 82.5%	51.9% − 117.3%
Weighted-average grant date fair value	$ 4.39	$ 3.02	$ 2.63	$ 3.85

Note 10. Net Loss Per Share

The following table presents the computation of basic and diluted net loss per share (in thousands, except per share data):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Numerator:				
Net loss	$ (7,758)	$ (35,064)	$ (19,925)	$ (78,119)
Denominator:				
Weighted average common shares outstanding	37,657	37,005	37,494	36,927
Net loss per share, basic and diluted	$ (0.21)	$ (0.95)	$ (0.53)	$ (2.12)

In periods when the Company is in a net loss position, dilutive securities are excluded from the computation of diluted earnings per share because their inclusion would have an anti-dilutive effect. Therefore, basic net loss per share is the same as diluted net loss per share.

The following common share equivalents have been excluded from the calculation of diluted net loss per share (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Common stock and RSUs	1,522	902	1,545	807
Stock options	2,760	2,503	2,793	2,423
Total anti-dilutive shares	4,282	3,405	4,338	3,230

Note 11. Income Taxes

The Company's effective tax rates were (2.7)% and (3.0%)% for the three and nine months ended September 30, 2023, respectively, and 0.2% and less than 0.1% for the three and nine months ended September 30, 2022, respectively. The income tax provision and effective tax rate is driven primarily by a valuation allowance in the United States, partially offset by income taxes in foreign jurisdictions.

The Company maintains a valuation allowance on the majority of its deferred tax assets, and it has concluded that it is more likely than not that the deferred assets will not be utilized.

Note 12. Goodwill

During the third quarter of 2022, the Company identified certain indicators of impairment, including a significant decline in the Company's stock price, actions taken under the Restructuring Plan (refer to Note 15 − *Restructuring*), and a reduction of forecasted sales and profitability. As a result, the Company performed a goodwill impairment test and determined its goodwill was impaired as the carrying amount of the Company's sole reporting unit exceeded its estimated fair value. The Company concluded that its entire goodwill balance was impaired and recognized an $8.2 million impairment charge during the third quarter of 2022.

As of September 30, 2023 and December 31, 2022, the Company had no remaining goodwill balance.

Note 13. Commitments and Contingencies

Purchase Commitments

Stratec

During the year ended December 31, 2022, the Company and Stratec Consumables GmbH ("Stratec") entered into an amendment to the supply agreement with Stratec (as amended, the "Stratec Supply Agreement"), related to the supply of discs used in Simoa bead-based instruments. As part of the Stratec Supply Agreement, the Company agreed to purchase a total of 515 thousand discs to be shipped at various points starting in 2022 and continuing through 2024 at an agreed purchase price per disc. In 2022, Stratec shipped 75 thousand discs to the Company. In 2023, Stratec is required to ship no less than 220 thousand discs, 184 thousand of which have been shipped as of September 30, 2023. The total purchase commitment under the Stratec Supply Agreement is $3.7 million.

Other Purchase Commitments

The Company's other non-cancellable purchase commitments primarily consist of purchases of raw materials for manufacturing operations under annual and multi-year agreements, some of which have minimum quantity requirements. The Company's total purchase commitments under these agreements as of September 30, 2023 were $4.7 million.

License Agreements

Harvard University

In August 2022, the Company and Harvard University ("Harvard") entered into a license agreement (the "Harvard License Agreement") for certain intellectual property owned by Harvard. Pursuant to the Harvard License Agreement, the Company paid an upfront fee of $0.6 million in August 2022, which was recorded in research and development expenses on the Consolidated Statements of Operations. Under this license, the Company is required to pay Harvard low single-digit royalties on net sales of products and services using the licensed technology, as well as a portion of its applicable sublicense revenues. The Company incurred no royalty expense under the Harvard License Agreement for the three and nine months ended September 30, 2023 and 2022.

Refer to Note 14 − *Related Party Transactions* for a discussion of a related party relationship with Harvard.

Tufts University

In June 2007, the Company and Tufts University ("Tufts") entered into a license agreement (the "Tufts License Agreement") for certain intellectual property owned by Tufts. The Tufts License Agreement, which was subsequently amended, is exclusive and sub-licensable, and will continue in effect on a country-by-country basis as long as there is a valid claim of a licensed patent in a country. The Company is contractually obligated to pay license and maintenance fees that are creditable against royalties, in addition to low single-digit royalties on direct sales and services, and a royalty on sublicense income. The Company incurred royalty expenses related to the Tufts License Agreement of $0.5 million and $1.3 million during the three and nine months ended September 30, 2023, respectively and $0.3 million and $1.1 million during the three and nine months ended September 30, 2022, respectively, which are recorded in cost of product revenue on the Consolidated Statements of Operations.

Refer to Note 14 − *Related Party Transactions* for a discussion of a related party relationship with Tufts.

Legal Contingencies

The Company is subject to claims in the ordinary course of business; however, the Company is not currently a party to any pending or threatened litigation, the outcome of which would be expected to have a material adverse effect on its financial condition or results of operations. The Company accrues for contingent liabilities when losses are probable and estimable. If an estimate of a probable loss is a range and no amount within the range is more likely than any other amount in the range, the Company accrues the minimum amount of the range.

Leases

Operating lease obligations are recorded in operating lease liabilities and operating lease liabilities, net of current portion on the Consolidated Balance Sheets.

Future minimum lease payments under non-cancellable operating leases were as follows (in thousands):

Maturity of lease liabilities	As of September 30, 2023
2023 (remainder)	$ 1,746
2024	7,064
2025	7,228
2026	7,408
2027	7,641
2028	7,880
Thereafter	15,741
Total lease payments	54,708
Less: imputed interest	12,309
Total operating lease liabilities	$ 42,399

The Company's lease agreement for office and laboratory facilities in Bedford, Massachusetts included a tenant improvement allowance with the landlord that offset a portion of the Company's construction costs. During the first quarter of 2023, the Company received the final tenant improvement allowance reimbursement of $0.9 million.

Note 14. Related Party Transactions

In June 2007, the Company and Tufts entered into the Tufts License Agreement for certain intellectual property owned by Tufts (refer to Note 13 − *Commitments and Contingencies*). A member of the Company's Board of Directors was previously affiliated with Tufts. This Board member continues to receive compensation from Tufts on a formulaic basis based on royalties and license payments the Company makes to Tufts. At September 30, 2023 and December 31, 2022, open payable balances to Tufts were not material.

A member of the Company's Board of Directors is affiliated with Harvard and Mass General Brigham. Revenue recorded from sales of products and services to Harvard and its affiliates and to Mass General Brigham and its affiliates totaled $0.3 million and $1.0 million for the three and nine months ended September 30, 2023, respectively. Revenue recorded from sales of products and services was not material for the three months ended September 30, 2022, and $0.5 million for the nine months ended September 30, 2022.

Additionally, in August 2022, the Company and Harvard entered into the Harvard License Agreement for certain intellectual property owned by Harvard (refer to Note 13 − *Commitments and Contingencies*). Harvard is obligated to pay a portion of the payments received from the Company under the Harvard License Agreement to a member of the Company's Board of Directors.

Cost of product revenue and operating expenses with Harvard and its affiliates and Mass General Brigham and its affiliates for the three and nine months ended September 30, 2023 and 2022 were not material. At September 30, 2023 and December 31, 2022, open payables to and receivable balances from Harvard and Mass General Brigham were not material.

As discussed in Note 3 − *Revenue and Related Matters*, on May 26, 2022, the Company and UltraDx, a company formed by ARCH, entered into the UltraDx Agreement to supply certain instruments and to grant certain licenses. At contract inception, the Company determined that UltraDx was a related party because a member of the Company's Board of Directors was affiliated with ARCH and UltraDx. As of June 7, 2023, this individual was no longer a member of the Company's Board of Directors. Cost of goods sold for both the three and nine months ended September 30, 2023 were not material. At September 30, 2023 and December 31, 2022, there were no open payable balances to UltraDx and open receivable balances from UltraDx were $0.4 million and zero, respectively.

Note 15. Restructuring

Following a strategic review and assessment of the Company's operations and cost structure, on August 8, 2022, the Company announced a restructuring and strategic re-alignment plan (the "Restructuring Plan"). As part of the Restructuring Plan, the Company began an assay redevelopment program with the ultimate objective of improving its ability to manufacture and deliver high-quality assays at scale. The Restructuring Plan aligns the Company's investments to best serve the needs of its customers, focuses the Company's innovation efforts on key platforms, and provides a foundation for the Company's entry into translational pharma and clinical markets, which it believes will be required to access new growth categories. In accordance with the Restructuring Plan, the Company implemented a workforce reduction, which was substantially completed by the end of the third quarter of 2022. The Restructuring Plan included the elimination of 119 positions and other cost-saving measures.

During the three and nine months ended September 30, 2022, the Company incurred approximately $3.4 million of expenses related to the Restructuring Plan, which were recorded in impairment and restructuring on the Consolidated Statements of Operations. These expenses were substantially for cash payments of severance and employee benefits, $3.1 million of which was paid by September 30, 2022.

Total restructuring expenses incurred in 2022 under the Restructuring Plan were $3.8 million.

As a result of the Restructuring Plan, the Company performed an impairment assessment of its goodwill, long-lived assets, including operating lease right-of-use assets, and intangibles. The assessments resulted in the Company recording an impairment charge of $16.9 million during the three and nine months ended September 30, 2022, which was recorded in impairment and restructuring on the Consolidated Statements of Operations. The impairment charge included (1) $8.2 million of goodwill (refer to Note 12 − *Goodwill*), (2) $7.7 million associated with the operating lease right-of-use asset and related property and equipment at leased facilities no longer being utilized, and (3) $1.0 million for software costs related to projects that were rationalized as part of the Restructuring Plan. During the nine months ended September 30, 2023, there were no material changes to the Restructuring Plan or the related exit and disposal costs.

The following table presents the restructuring reserve and provision activity for the nine months ended September 30, 2023 (in thousands):

	Severance and Employee Benefit Costs
Balance at December 31, 2022	$ 328
Accrual adjustments	(33)
Cash payments	(16)
Foreign currency translation	(4)
Balance at September 30, 2023	$ 275

The Company did not have any restructuring activities or additional impairment charges related to the Restructuring Plan during the nine months ended September 30, 2023.

Note 16. Variable Interest Entities

The Company enters into relationships with, or has investments in, other entities that may be VIEs. The Company assesses the criteria in ASC 810 – *Consolidation* to determine if any of these entities meet the definition of a VIE and require consolidation into its financial statements. The Company's analysis determines whether it has a controlling financial interest and also identifies the primary beneficiary of a VIE as the enterprise that has both (1) the power to direct activities of a VIE that most significantly impact the entity's economic performance and (2) the obligation to absorb losses of, or the right to receive benefits from, the entity that could potentially be significant to that entity.

As discussed in Note 3 − *Revenue and Related Matters*, during the second quarter of 2023 the Company received one million ordinary shares of UltraDx under the UltraDx Agreement. Primarily due to having less than a 5% ownership interest in UltraDx, the Company concluded that it does not have the power to direct activities impacting UltraDx's economic performance and therefore the Company is not the primary beneficiary of the VIE.

Based on the Company's assessments, it does not have any controlling financial interests in any VIEs, and therefore did not consolidate any VIEs into its Consolidated Financial Statements during the three and nine months ended September 30, 2023 and 2022.

As of September 30, 2023 and December 31, 2022, the carrying value of the Company's investment interests in VIEs was $1.1 million and $0.3 million, respectively, which are recorded in other non-current assets on the Consolidated Balance Sheets. Refer to Note 6 − *Fair Value of Financial Instruments* for the Company's related valuation disclosures. Maximum exposure to losses related to these VIEs is limited to their carrying value and the Company does not have any future funding commitments to these VIEs.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited Consolidated Financial Statements and the related notes included elsewhere in this Quarterly Report on Form 10-Q and our audited Consolidated Financial Statements and Management's Discussion and Analysis of Financial Condition and Results of Operations included in our Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the U.S. Securities and Exchange Commission (the "SEC") on March 6, 2023 (the "Annual Report on Form 10-K"). In addition to historical information, the following discussion contains forward-looking statements that involve risks, uncertainties, and assumptions. Our actual results, performance, or experience could differ materially from what is indicated by any forward-looking statement due to various important factors, risks, and uncertainties, including, but not limited to, those set forth under the section titled "Part II, Item 1A. Risk Factors" and "Note Regarding Forward-Looking Statements" included in this Quarterly Report on Form 10-Q or under the section titled "Part I, Item 1A. Risk Factors" of our Annual Report on Form 10-K, as may be updated by Part II, Item 1A. Risk Factors in our subsequently filed Quarterly Reports on Form 10-Q. Unless the context otherwise requires, the terms "Quanterix," the "Company," "we," "it," "us, "and "our" in this Quarterly Report on Form 10-Q refer to Quanterix Corporation and its consolidated subsidiaries.

Overview

We are a life sciences company that has developed next generation, ultra-sensitive digital immunoassay platforms that advance precision health for life sciences research and diagnostics. Our platforms are based on our proprietary digital "Simoa" detection technology. Our Simoa bead-based and planar array platforms enable customers to reliably detect protein biomarkers in extremely low concentrations in blood, serum, and other fluids that, in many cases, are undetectable using conventional, analog immunoassay technologies, and also allow researchers to define and validate the function of novel protein biomarkers that are only present in very low concentrations. These capabilities provide our customers with insight into the role of protein biomarkers in human health that has not been possible with other existing technologies and enable researchers to unlock unique insights into the continuum between health and disease. We believe this greater insight will enable the development of novel therapies and diagnostics and facilitate a paradigm shift in healthcare from an emphasis on treatment to a focus on earlier detection, monitoring, prognosis and, ultimately, prevention.

Our instruments are designed to be used either with assays fully developed by us, including all antibodies and supplies required to run the tests, or with "homebrew" kits where we supply some of the components required for testing and the customer supplies the remaining required elements. Accordingly, our installed instruments generate a recurring revenue stream. As the installed base of the Simoa instruments increases, we expect total consumables revenue to increase.

We commercially launched our first immunoassay platform, the Simoa HD-1, in 2014. The HD-1 is based on our bead-based technology and assays run on the HD-1 are fully automated. We initiated commercial launch of the SR-X instrument in 2017. The SR-X utilizes the same Simoa bead-based technology and assay kits as the HD-1 in a compact benchtop form with a lower price point, more flexible assay preparation, and a wider range of applications. In 2019, we launched the Simoa HD-X, an upgraded version of the Simoa HD-1, which replaces the HD-1. The HD-X has been designed to deliver significant productivity and operational efficiency improvements, as well as greater user flexibility. By September 30, 2023, approximately 81% of the HD instrument installed base was HD-X instruments.

With our acquisition of Aushon BioSystems, Inc. in 2018, we acquired a CLIA-certified laboratory, as well as their proprietary sensitive planar array detection technology. Leveraging our proprietary sophisticated Simoa image analysis and data analysis algorithms, we further refined the planar array technology to develop the SP-X instrument to provide sensitivity similar to that found in our Simoa bead-based platform. We commercially launched the SP-X instrument in 2019.

Our wholly-owned subsidiary UmanDiagnostics AB ("Uman"), a company located in Umeå, Sweden, supplies neurofilament light ("Nf-L"), antibodies, and enzyme-linked immunoassay ("ELISA") kits, which are used by

researchers and biopharmaceutical and diagnostics companies world-wide in the detection of Nf-L to advance the development of therapeutics and diagnostics for neurodegenerative conditions.

We also provide contract research services for customers and Laboratory Developed Test ("LDT") services through our CLIA-certified Accelerator Laboratory (the "Acceleratory Laboratory"). The Accelerator Laboratory provides customers with access to Simoa technology, and supports multiple projects and services, including sample testing, homebrew assay development, custom assay development, and blood-based biomarker testing. To date, we have completed over 2,200 projects for more than 470 customers from all over the world using our Simoa platforms.

We sell our instruments, consumables, and services to the life science, pharmaceutical, and diagnostics industries through a direct sales force and support organizations in North America and Europe, and through distributors and sales agents in other select markets, including Australia, Brazil, China, Czech Republic, India, Hong Kong, Israel, Japan, New Zealand, Qatar, Saudi Arabia, Singapore, South Africa, South Korea, Taiwan, and the United Arab Emirates. In addition, Uman sells Nf-L antibodies and Nf-L ELISA kits directly, and in conjunction with us and another distributor, worldwide. We have an extensive base of customers in academic and governmental research institutions, as well as pharmaceutical, biotechnology, and contract research companies.

As of September 30, 2023, we had cash, cash equivalents, and marketable securities of $327.7 million. Since our inception, we have incurred annual net losses. Our net losses were $7.8 million and $19.9 million for the three and nine months ended September 30, 2023, respectively, and $35.1 million and $78.1 million for the three and nine months ended September 30, 2022, respectively. As of September 30, 2023, we had an accumulated deficit of $422.1 million and stockholders' equity of $353.4 million.

We expect to continue to incur significant expenses and operating losses at least through the next 24 months. We expect our expenses will increase as we:

- expand our sales and marketing efforts to further commercialize our products;
- expand our research and development efforts to improve our existing products and develop and launch new products, particularly if any of our products are deemed by the U.S. Food and Drug Administration (the "FDA") to be medical devices or otherwise subject to additional regulation by the FDA;
- seek Premarket Approval ("PMA") or 510(k) clearance from the FDA for our existing products or new products if or when we decide to market products for use in the prevention, diagnosis, or treatment of a disease or other condition;
- hire additional personnel to support our growth and research and development;
- strategically acquire and integrate companies or technologies that may be complementary to our business;
- intend to invest in our diagnostics business in support of the launch of Lucent Diagnostics, LDTs and other diagnostics initiatives;
- enter into collaboration arrangements, or in-license other products and technologies; and
- add operational, financial, and management information systems.

Recent Business Developments

In October 2023, we entered into a license agreement with Janssen Sciences Ireland UC, a Johnson & Johnson Company ("J&J"). The agreement grants us worldwide, non-exclusive rights to J&J's p-Tau 217 antibodies and assay designs for use in clinical research and diagnostic products, including in the production of Simoa p-Tau 217 research-use only assay kits for global distribution. Under this license, we are required to pay royalties on net sales of the licensed products and service activities.

In July 2023, we launched Lucent Diagnostics, a new healthcare provider-facing portal to meet the future needs of patients at the same time a therapy for disease becomes more widely available. In the second half of 2023, we have launched initial blood-based biomarker LDTs, LucentAD and LucentAD p-Tau 217, to assist in the evaluation of patients experiencing cognitive symptoms consistent with the early signs of Alzheimer's disease. These tests have not been cleared or approved by the FDA. We do not expect material revenues from these tests until 2024 or later.

On September 21, 2022, we entered into a contract with the National Institutes of Health (the "NIH") with a total award value of $1.7 million (the "NIH Grant"). The NIH is an agency of the U.S. Department of Health and Human Services and under the NIH Grant granted us funding in support of the development of certain point-of-care diagnostic technologies through collaborative efforts. Grant funding is to be used solely for activities related to the point-of-care diagnostic device development project and the contract period runs through August 2025. Receipt of the award value occurs throughout the term of the contract period and after we submit for reimbursement of activities related to the grant. As of September 30, 2023, we had received $0.5 million of the award value.

During the three months ended September 30, 2023, grant revenue recognized and research and development expense incurred under the NIH Grant were not material. During the nine months ended September 30, 2023, grant revenue recognized and research and development expense incurred under the NIH Grant were $0.5 million and $0.4 million, respectively.

On March 24, 2022, we entered into a contract with the Alzheimer's Drug Discovery Foundation (the "ADDF") with a total funding value of $2.3 million (the "ADDF Grant"). The ADDF is a charitable venture philanthropy entity that granted us funding in support of certain activities for the development of an in vitro diagnostic test for early detection of Alzheimer's disease. The ADDF Grant restricts our use of the granted funds solely for activities related to our Alzheimer's diagnostic test development project and the contract period runs through June 2024. Receipt of the contract funding was subject to achievement of predefined milestones and as of September 30, 2023, we had received the total funding value of $2.3 million.

During the three and nine months ended September 30, 2023, grant revenue recognized and research and development expenses incurred under the ADDF Grant were $0.3 million and $0.4 million, respectively.

On February 25, 2022, we entered into a Master Collaboration Agreement with Eli Lilly and Company ("Lilly") establishing a framework for future projects focused on the development of Simoa immunoassays (the "Lilly Collaboration Agreement"). We also entered into a statement of work under the Lilly Collaboration Agreement to perform assay research and development services within the field of Alzheimer's disease. In connection with the Lilly Collaboration Agreement, we received a non-refundable up-front payment of $5.0 million during the first quarter of 2022, which was recognized over a one-year period. In addition, under the statement of work, we receive $1.5 million per calendar quarter, which began in the first quarter of 2022. The statement of work automatically renews on a quarterly basis until Lilly provides a termination notice in accordance with the terms of the Lilly Collaboration Agreement. As of September 30, 2023, the Lilly Collaboration Agreement and the statement of work were still in effect.

Concurrent with the execution of the Lilly Collaboration Agreement, we entered into a Technology License Agreement (the "Lilly License") under which Lilly granted us a non-exclusive license to Lilly's proprietary pTau217 antibody technology for use in research use only products and services and future in vitro diagnostics applications within the field of Alzheimer's disease. In consideration of the Lilly License, we paid an upfront fee, are required to make milestone payments based on the achievement of predetermined regulatory and commercial events, and will pay royalties on net sales of licensed products.

We recognized revenue from the Lilly Collaboration Agreement of $1.5 million and $4.5 million during the three and nine months ended September 30, 2023, respectively.

Restructuring and Strategic Re-Alignment

Following a strategic review and assessment of our operations and cost structure, on August 8, 2022, we announced a restructuring and strategic re-alignment plan (the "Restructuring Plan"). As part of the Restructuring Plan, we began an assay redevelopment program with the ultimate objective of improving our ability to manufacture and deliver high-quality assays at scale. The Restructuring Plan aligns our investments to best serve the needs of our customers, focuses our innovation efforts on key platforms, and provides a foundation for our entry into translational pharma and clinical markets, which we believe will be required to access new growth categories. In accordance with the Restructuring Plan, we implemented a workforce reduction, which was substantially completed by the end of the third quarter of 2022. The Restructuring Plan included the elimination of 119 positions and other cost-saving measures.

During the nine months ended September 30, 2022, we incurred approximately $3.4 million of expenses related to the Restructuring Plan. These expenses were substantially for cash payments of severance and employee benefits, $3.1 million of which was paid as of September 30, 2022. Total restructuring expenses incurred in 2022 under the Restructuring Plan were $3.8 million.

As a result of the Restructuring Plan, we performed an impairment assessment of our goodwill, long-lived assets, including operating lease right-of-use assets, and intangibles. The assessments resulted in us recording an impairment charge of $16.9 million during the three and nine months ended September 30, 2022. The impairment charge included (1) $8.2 million of goodwill (refer to Note 12 − *Goodwill* in the Notes to Consolidated Financial Statements), (2) $7.7 million associated with the right-of-use asset and property and equipment at leased facilities no longer being utilized, and (3) $1.0 million for software costs related to projects that were rationalized as part of the Restructuring Plan. During the nine months ended September 30, 2023, there were no material changes to the Restructuring Plan or the related exit and disposal costs.

Overall, as a result of the Restructuring Plan, we expect to realize estimated annualized operating expense savings in 2023 of approximately $25.0 million.

Comparison of Results of Operations for Three Months Ended September 30, 2023 and 2022:

The following table sets forth select Consolidated Statements of Operations data, and such data as a percentage of total revenues (in thousands, except percentages):

	Three Months Ended September 30,				Increase (Decrease)	
	2023	% of revenue	2022	% of revenue	Amount	%
Revenues:						
Product revenue	$ 19,660	63 %	$ 17,693	66 %	$ 1,967	11 %
Service revenue	10,938	35 %	8,370	31 %	2,568	31 %
Collaboration and license revenue	237	1 %	301	1 %	(64)	(21)%
Grant revenue	499	2 %	282	1 %	217	77 %
Total revenues	31,334	100 %	26,646	100 %	4,688	18 %
Costs of goods sold and services:						
Cost of product revenue	8,342	27 %	10,511	39 %	(2,169)	(21)%
Cost of service and other revenue	5,209	17 %	5,191	19 %	18	0 %
Total costs of goods sold and services	13,551	43 %	15,702	59 %	(2,151)	(14)%
Gross profit	17,783	57 %	10,944	41 %	6,839	62 %
Operating expenses:						
Research and development	7,200	23 %	6,631	25 %	569	9 %
Selling, general, and administrative	23,595	75 %	19,966	75 %	3,629	18 %
Other lease costs	758	2 %	609	2 %	149	24 %
Impairment and restructuring	—	— %	20,341	76 %	(20,341)	(100)%
Total operating expenses	31,553	101 %	47,547	178 %	(15,994)	(34)%
Loss from operations	(13,770)	(44)%	(36,603)	(137)%	(22,833)	(62)%
Interest income, net	4,185	13 %	1,712	6 %	2,473	144 %
Other income (expense), net	2,030	6 %	(101)	— %	2,131	2,110 %
Loss before income taxes	(7,555)	(24)%	(34,992)	(131)%	(27,437)	(78)%
Income tax expense	(203)	(1)%	(72)	— %	131	182 %
Net loss	$ (7,758)	(25)%	$ (35,064)	(131)%	$ (27,306)	(78)%

Revenues

Total revenues increased $4.7 million, or 18%, to $31.3 million for the three months ended September 30, 2023, compared to $26.6 million for the three months ended September 30, 2022.

Product revenue of $19.7 million for the three months ended September 30, 2023 consisted of instrument sales of $3.7 million and sales of consumables and other products of $16.0 million. This represented an increase of $2.0 million, or 11%, compared to product revenue of $17.7 million for the three months ended September 30, 2022, which consisted of $7.8 million in instrument sales and $9.9 million in sales of consumables and other products. The increase in product revenue was primarily due to a $6.1 million increase in sales of consumables and increased average selling prices. This increase was partially offset by a $4.1 million decrease in instrument sales due to reduced demand, which is a trend we expect to continue for the remainder of 2023.

Service revenue was $10.9 million for the three months ended September 30, 2023, compared to $8.4 million for the three months ended September 30, 2022, an increase of $2.6 million, or 31%. This increase was primarily due to a $3.3 million increase in Accelerator Laboratory revenue due to higher volumes of sample testing and assay development services, which was partially offset by a $1.2 million decrease in revenue recognized from the Lilly Collaboration Agreement.

Collaboration and license revenue was $0.2 million for the three months ended September 30, 2023, compared to $0.3 million for the three months ended September 30, 2022, a decrease of $0.1 million, or 21%.

Grant revenue was $0.5 million for the three months ended September 30, 2023, compared to $0.3 million for the three months ended September 30, 2022, an increase of $0.2 million, or 77%.

Cost of Goods Sold and Services

Cost of goods sold and services decreased $2.2 million, or 14%, to $13.6 million for the three months ended September 30, 2023, compared to $15.7 million for the three months ended September 30, 2022.

Cost of product revenue decreased $2.2 million, or 21%, to $8.3 million for the three months ended September 30, 2023, compared to $10.5 million for the three months ended September 30, 2022. The decrease was primarily due to improvement in inventory management and manufacturing processes and lower instrument sales. These decreases were partially offset by product revenue related increases, including compensation and benefit costs from increased headcount and an increase in royalty fees.

Cost of service revenue was consistent with the prior period at $5.2 million for each of the three months ended September 30, 2023 and September 30, 2022, primarily due to the increase in Accelerator Laboratory revenue at higher margins.

Research and Development

Research and development expense increased $0.6 million, or 9%, to $7.2 million for the three months ended September 30, 2023, compared to $6.6 million for the three months ended September 30, 2022. The increase was primarily due to professional services fees to enable product development.

Selling, General, and Administrative

Selling, general and administrative expense increased $3.6 million, or 18%, to $23.6 million for the three months ended September 30, 2023, compared to $20.0 million for the three months ended September 30, 2022. The increase was primarily due to (1) a $1.5 million increase in professional services and consulting fees related to our efforts to remediate the previously disclosed material weaknesses identified in 2022 and other services, (2) a $1.3 million increase in stock-based compensation expense, which was lower in the three months ended September 30, 2022 due to equity award forfeitures recorded from eliminating positions as part of the Restructuring Plan, and (3) a $0.6 million increase in shipping and handling costs for consumables and other products due to increased volume. Included within selling, general, and administrative expense are $2.6 million and $1.6 million of shipping and handling costs for product sales for the three months ended September 30, 2023 and 2022, respectively.

Other Lease Costs

Other lease costs increased $0.1 million, or 24% to $0.8 million for the three months ended September 30, 2023, compared to $0.6 million for the three months ended September 30, 2022. As part of the Restructuring Plan, we are not utilizing the leased office and laboratory facilities in Bedford, Massachusetts and are evaluating alternatives, including sub-leasing the facilities. Other lease costs include amortization of the related operating lease right-of-use assets and other leased facility operating expenses from periods after the impairment and the determination that the facilities would not be utilized. The increase is primarily due to the expenses incurred while not utilizing the space for the full third quarter of 2023, compared to the expenses incurred while not utilizing the space for one and a half months in the third quarter of 2022 after the Restructuring Plan was implemented. Expenses incurred prior to the Restructuring Plan were recorded in selling, general, and administrative on the Consolidated Statements of Operations.

Impairment and Restructuring Expense

There were no impairment and restructuring costs for the three months ended September 30, 2023 compared to $20.3 million incurred in the three months ended September 30, 2022. This decrease was due to the implementation of the Restructuring Plan in August 2022 which did not repeat in 2023. The costs incurred included (1) $8.2 million of goodwill impairment charges, (2) $7.7 million of long-lived asset impairment charges associated with the Bedford, Massachusetts facilities that we are no longer utilizing, (3) $1.0 million of software costs related to projects that were rationalized as part of the Restructuring Plan, and (4) $3.4 million of restructuring expenses primarily for severance and one-time termination benefits in connection with the elimination of 119 positions across the Company.

Interest Income, Net

Interest income, net increased $2.5 million, or 144%, to $4.2 million for the three months ended September 30, 2023, as compared to $1.7 million for the three months ended September 30, 2022, primarily due to (1) higher interest rates earned on cash and cash equivalents, and (2) higher interest rates and accretion of discounts from the purchase of marketable securities.

Other Income (Expense), Net

Other income (expense), net was $2.0 million for the three months ended September 30, 2023, as compared to ($0.1) million for the three months ended September 30, 2022. The $2.1 million increase was primarily due to the recognition of $2.4 million receivable under the Employee Retention Credit established by the Coronavirus Aid, Relief, and Economic Security Act in 2021.

Income Tax (Expense) Benefit, Net

Income tax (expense) benefit, net was consistent with the prior period with a $0.1 million increase, or 182%, to ($0.2) million for the three months ended September 30, 2023, as compared to ($0.1) million for the three months ended September 30, 2022.

Comparison of Results of Operations for the Nine Months Ended September 30, 2023 and 2022:

The following table sets forth select Consolidated Statements of Operations data, and such data as a percentage of total revenues (in thousands, except percentages):

	Nine Months Ended September 30,				Increase (Decrease)	
	2023	% of revenue	2022	% of revenue	Amount	%
Revenues:						
Product revenue	$ 58,639	65 %	$ 53,134	67 %	$ 5,505	10 %
Service revenue	30,069	33 %	25,728	32 %	4,341	17 %
Collaboration and license revenue	1,234	1 %	479	1 %	755	158 %
Grant revenue	877	1 %	357	— %	520	146 %
Total revenues	90,819	100 %	79,698	100 %	11,121	14 %
Costs of goods sold and services:						
Cost of product revenue	22,611	25 %	31,178	39 %	(8,567)	(27)%
Cost of service and other revenue	14,361	16 %	14,306	18 %	55	0 %
Total costs of goods sold and services	36,972	41 %	45,484	57 %	(8,512)	(19)%
Gross profit	53,847	59 %	34,214	43 %	19,633	57 %
Operating expenses:						
Research and development	17,866	20 %	20,290	25 %	(2,424)	(12)%
Selling, general, and administrative	66,069	73 %	72,723	91 %	(6,654)	(9)%
Other lease costs	2,696	3 %	609	1 %	2,087	343 %
Impairment and restructuring	(33)	— %	20,341	26 %	(20,374)	(100)%
Total operating expenses	86,598	95 %	113,963	143 %	(27,365)	(24)%
Loss from operations	(32,751)	(36)%	(79,749)	(100)%	(46,998)	(59)%
Interest income, net	11,520	13 %	2,316	3 %	9,204	397 %
Other income (expense), net	1,884	2 %	(676)	(1)%	2,560	379 %
Loss before income taxes	(19,347)	(21)%	(78,109)	(98)%	(58,762)	(75)%
Income tax expense	(578)	(1)%	(10)	— %	568	5,680 %
Net loss	$ (19,925)	(22)%	$ (78,119)	(98)%	$ (58,194)	(74)%

Revenues

Total revenues increased $11.1 million, or 14%, to $90.8 million for the nine months ended September 30, 2023, compared to $79.7 million for the nine months ended September 30, 2022.

Product revenue of $58.6 million for the nine months ended September 30, 2023 consisted of instrument sales of $12.4 million and sales of consumables and other products of $46.2 million. This represented an increase of $5.5 million, or 10%, compared to product revenue of $53.1 million for the nine months ended September 30, 2022, which consisted of $19.6 million in instrument sales and $33.5 million in sales of consumables and other products. The increase in product revenue was primarily due to a $12.7 million increase in sales of consumables and increased average selling prices. These increases were partially offset by a $7.2 million decrease in instrument sales due to reduced demand, which is a trend we expect to continue for the remainder of 2023. Included in consumables and other product revenue for the nine months ended September 30, 2023 is $0.8 million of one-time revenue, which includes the immaterial fair value adjustment recorded during the third quarter, from the receipt of ordinary shares from UltraDx Limited (“UltraDx”) that was accounted as variable consideration under the UltraDx Agreement (as a Level 3 financial asset with minimal market activity or other data available, the fair value of the ordinary shares was determined primarily using the third-party purchase price of similar instruments issued by UltraDx).

Service revenue was $30.1 million for the nine months ended September 30, 2023, compared to $25.7 million for the nine months ended September 30, 2022, an increase of $4.3 million, or 17%. This increase was primarily due to a $6.7 million increase in Accelerator Laboratory revenue due to higher volumes of sample testing and assay development services and a $1.0 million increase in extended service-type warranties, which were partially offset by a $3.7 million decrease in revenue recognized from the Lilly Collaboration Agreement.

Collaboration and license revenue was $1.2 million for the nine months ended September 30, 2023, compared to $0.5 million for the nine months ended September 30, 2022, an increase of $0.8 million, or 158%. The increase was primarily due to a $0.5 million one-time increase from the expiration of a previously paid for option to expand the scope of the Abbott License Agreement.

Grant revenue was $0.9 million for the nine months ended September 30, 2023, compared to $0.4 million for the nine months ended September 30, 2022, an increase of $0.5 million or 146%. This increase was due to the receipt of a portion of the NIH Grant.

Cost of Goods Sold and Services

Cost of goods sold and services decreased $8.5 million, or 19%, to $37.0 million for the nine months ended September 30, 2023 compared to $45.5 million for the nine months ended September 30, 2022.

Cost of product revenue decreased $8.6 million, or 27%, to $22.6 million for the nine months ended September 30, 2023, compared to $31.2 million for the nine months ended September 30, 2022. The decrease was primarily due to improvement in inventory management and manufacturing processes and lower instrument sales.

Cost of service revenue was consistent with the prior period with an increase of $0.1 million, or less than 1%, to $14.4 million for the nine months ended September 30, 2023, compared to $14.3 million for the nine months ended September 30, 2022, primarily due to the increase in Accelerator Laboratory revenue at higher margins.

Research and Development

Research and development expense decreased $2.4 million, or 12%, to $17.9 million for the nine months ended September 30, 2023, compared to $20.3 million for the nine months ended September 30, 2022. This decrease was primarily due to a decrease in compensation and benefit costs related to the reduction in headcount from the Restructuring Plan, which was partially offset by an increase in license fees and professional services to enable product development.

Selling, General, and Administrative

Selling, general and administrative expense decreased $6.7 million, or 9%, to $66.1 million for the nine months ended September 30, 2023, compared to $72.7 million for the nine months ended September 30, 2022. The decrease was primarily due to a decrease in compensation and benefit costs related to the reduction in headcount in from the Restructuring Plan and a full nine months of facilities costs from the leased office and laboratory facilities we are no longer utilizing being recorded in other lease costs instead of selling, general, and administrative expenses on the Consolidated Statements of Operations. These decreases were partially offset by an increase in professional services and consulting fees related to our efforts to remediate the previously disclosed material weaknesses identified in 2022 and other services, and a increase in shipping and handling costs for consumables and other products due to higher volume. Included within selling, general and administrative expense are $6.0 million and $5.3 million of shipping and handling costs for product sales for the nine months ended September 30, 2023 and 2022, respectively.

Other Lease Costs

Other lease costs increased $2.1 million, or 343%, to $2.7 million for the nine months ended September 30, 2023, compared to $0.6 million for the nine months ended September 30, 2022. As part of the Restructuring Plan, we are not utilizing the leased office and laboratory facilities in Bedford, Massachusetts and are

evaluating alternatives, including sub-leasing the facilities. Other lease costs include the amortization of the related operating lease right-of-use assets and other leased facility operating expenses from periods after the impairment and the determination that the facilities would not be utilized. The increase is primarily due to the expenses incurred while not utilizing the space for the full nine months of 2023, compared to the expenses incurred while not utilizing the space for one and a half months in the third quarter of 2022 after the Restructuring Plan was implemented. Expenses incurred prior to the Restructuring Plan were recorded in selling, general, and administrative on the Consolidated Statements of Operations.

Impairment and Restructuring Expense

There were no impairment and restructuring costs for the nine months ended September 30, 2023, compared to $20.3 million for the nine months ended September 30, 2022. This decrease was due to the implementation of the Restructuring Plan in August 2022 which did not repeat in 2023. The costs incurred included (1) $8.2 million of goodwill impairment charges, (2) $7.7 million of long-lived asset impairment charges associated with the Bedford, Massachusetts facilities that we are no longer utilizing, (3) $1.0 million of software costs related to projects that were rationalized as part of the Restructuring Plan, and (4) $3.4 million of restructuring expenses primarily for severance and one-time termination benefits in connection with the elimination of 119 positions across the Company.

Interest Income, Net

Interest income, net increased $9.2 million, or 397%, to $11.5 million for the nine months ended September 30, 2023, compared to $2.3 million for the nine months ended September 30, 2022. This increase was primarily due to higher interest rates earned on cash, cash equivalents and marketable securities, and the accretion of discounts from the purchase of marketable securities.

Other Income (Expense), Net

Other income (expense), net increased $2.6 million or 379%, to $1.9 million for the nine months ended September 30, 2023, as compared to ($0.7) million for the nine months ended September 30, 2022. The increase was primarily due to recognizing $2.4 million receivable under the Employee Retention Credit established by the Coronavirus Aid, Relief, and Economic Security Act in 2021.

Income Tax Expense, Net

Income tax expense, net was ($0.6) million for the nine months ended September 30, 2023, as compared to less than ($0.1) million for the nine months ended September 30, 2022.

Liquidity and Capital Resources

Our principal sources of liquidity are cash, cash equivalents, marketable securities, and funds generated from sales of our products and services. As of September 30, 2023, we had cash and cash equivalents of $201.3 million and marketable securities of $126.4 million. Historically we have also financed our operations through equity offerings and borrowings from credit facilities.

As discussed in Note 2 − *Significant Accounting Policies* and Note 5 − *Marketable Securities* in the Notes to Consolidated Financial Statements, during the third quarter of 2023 we invested available cash and cash equivalents in a portfolio of marketable securities. These securities are currently classified as available-for-sale and recorded in current assets on the Consolidated Balance Sheets based on their highly liquid nature and because we may use them in our current operations. Our marketable securities are required to be recorded at fair value each reporting period. The fair value is determined utilizing quoted prices in active markets in cases that such information exists (i.e. Level 1 fair value inputs), or third party pricing services and other market observable data (i.e. Level 2 fair value inputs).

Cash Flows

The following table summarizes our cash flows (in thousands):

	Nine Months Ended September 30,	
	2023	2022
Net cash used in operating activities	$ (12,918)	$ (44,182)
Net cash used in investing activities	(126,772)	(9,611)
Net cash provided by financing activities	2,490	1,597
Net decrease in cash, cash equivalents, and restricted cash	$ (137,200)	$ (52,196)

Net Cash Used in Operating Activities

We derive cash flows from operations primarily from the sale of our products and services. Our cash flows from operating activities are also significantly influenced by our use of cash for operating expenses to develop new products and services, invest in process and product improvements, and increase our sales and marketing efforts. We have historically experienced negative cash flows from operating activities as we have developed our technology, expanded our business, and built our infrastructure. We expect negative cash flows from operating activities may continue in the future.

Net cash used in operating activities was $12.9 million during the nine months ended September 30, 2023. The $31.3 million reduction in net cash used in operating activities from $44.2 million during the nine months ended September 30, 2022 was primarily driven by an overall reduction in our net loss, adjusted for non-cash items, consisting of revenue growth, a full nine months of reduced expenses resulting from the Restructuring Plan implemented in the third quarter of 2022, continued improvements in our inventory management and manufacturing processes leading to improved gross margin, and increased interest income from investing in marketable securities and rising interest rates.

Net Cash Used in Investing Activities

Our primary investing activities consist of purchases of marketable securities and capital expenditures for the purchase of equipment to support our expanding infrastructure and work force. We expect to continue to incur additional capital expenditures related to these efforts in future periods. Cash used towards capital expenditures can be partially offset by proceeds from grants with third parties to purchase assets (refer to the section titled “Grant Revenue” in Note 3 − *Revenue and Related Matters* in the Notes to Consolidated Financial Statements for more information).

Net cash used in investing activities was $126.8 million during the nine months ended September 30, 2023, which consisted of the purchase of $125.2 million of marketable securities and $1.6 million of purchases of property and equipment.

Net cash used in investing activities was $9.6 million during the nine months ended September 30, 2022, which consisted of $10.1 million of purchases of property and equipment which were partially offset by $0.5 million in grant proceeds under the RADx Grant.

Net Cash Provided by Financing Activities

Our primary financing activities are proceeds from sales of our common stock.

Financing activities provided $2.5 million and $1.6 million of cash during the nine months ended September 30, 2023 and 2022, respectively.

Capital Resources

We have not achieved profitability on an annual basis since our inception, and we expect to continue to incur net losses in the future. We also expect that our operating expenses will increase as we continue to increase our marketing efforts to drive adoption of our commercial products, as well as our investment in improving the quality of, and expanding, our products and services. Our liquidity requirements have consisted, and we expect that they will continue to consist, of sales and marketing expenses, research and development expenses, working capital, and general corporate expenses.

We believe cash generated from product and services sales, along with our current cash, cash equivalents, and marketable securities, will be sufficient to meet our anticipated operating cash requirements for at least 12 months from the date of this Quarterly Report on Form 10-Q. In the future, we expect our operating and capital expenditures to increase as we increase headcount, expand our sales, marketing, and research and development activities, and grow our customer base. Our estimates of the period of time through which our financial resources will be adequate to support our operations and the costs to expand our business are forward-looking statements and involve risks and uncertainties. Actual results could vary materially and negatively as a result of a number of factors, including the factors discussed in the section titled “Part I, Item 1A. Risk Factors” of our Annual Report on Form 10-K.

We have based our estimates on assumptions that may change or not materialize and we could utilize our available capital resources sooner than we currently expect. Our future funding requirements will depend on many factors, including but not limited to:

- continued market acceptance of our products and services and the ability of our products to meet our customers’ expectations;
- the cost and timing of establishing additional sales, marketing, and distribution capabilities;
- the extent to which we achieve revenue improvement and related benefits from our Restructuring Plan;
- the extent to which we are able to successfully complete our assay improvement program to enhance product quality;
- the cost of our research and development activities;
- our ability to enter into collaborations in the future, and the success of any such collaborations;
- potential opportunities to strategically acquire and integrate companies or technologies that may be complementary to our business;
- the cost and timing of potential regulatory clearances or approvals that may be required in the future for our products; and
- the effect of competing technological and market developments.

We cannot guarantee that we will be able to obtain additional funds on acceptable terms, or at all. If we raise additional funds by issuing equity or equity-linked securities, our stockholders may experience dilution. Future debt financing, if available, may involve covenants restricting our operations or our ability to incur additional debt. Any debt or equity financing that we raise may contain terms that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or our products or grant licenses on terms that are not favorable to us. If we do not have or are not able to obtain sufficient funds, we may have to delay development or commercialization of our products and services. We also may have to reduce marketing, customer support or other resources devoted to our products, or cease operations.

If the conditions for raising capital are favorable, we may seek to finance future cash needs through public or private equity, debt offerings, or other financings.

Contractual Obligations and Commitments

As of September 30, 2023, there have been no material changes to our contractual obligations and commitments from those described in the section titled “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in our Annual Report on Form 10-K.

In addition to these cash commitments disclosed in our Annual Report on Form 10-K, we may have other payables and liabilities that may be legally enforceable but are not considered contractual commitments.

Critical Accounting Policies and Estimates

Our critical accounting policies and significant estimates that involve a higher degree of judgment and complexity are described in the section titled “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies, Significant Judgments and Estimates” included in our Annual Report on Form 10-K.

There have been no material changes to our critical accounting policies and estimates as previously disclosed in that report.

Related Party Transactions

Refer to Note 14 − *Related Party Transactions* in the Notes to Consolidated Financial Statements included in this Quarterly Report on Form 10-Q for a full description of related party transactions.

Non-GAAP Financial Measures

To supplement our financial statements presented on a U.S. GAAP basis, we present non-GAAP gross profit, non-GAAP gross margin, non-GAAP total operating expenses, and non-GAAP loss from operations, which are calculated by including shipping and handling costs for product sales within cost of goods sold instead of within selling, general, and administrative expenses. Management uses these non-GAAP measures to evaluate our operating performance in a manner that allows for meaningful period-to-period comparison and analysis of trends in our business and our competitors. Management believes that presentation of these non-GAAP measures provides useful information to investors in assessing our operating performance within our industry and in order to allow comparability to the presentation of other companies in our industry where shipping and handling costs are included in cost of goods sold for products. Management also uses these non-GAAP measures as a factor in assessing our progress against the Restructuring Plan. The non-GAAP financial information presented here should be considered in conjunction with, and not as a substitute for, the financial information presented in accordance with U.S. GAAP.

Set forth below is a reconciliation of non-GAAP gross profit, non-GAAP gross margin, non-GAAP total operating expenses, and non-GAAP loss from operations to their most directly comparable GAAP financial measures.

Reconciliation of U.S. GAAP Financial Measures to Non-GAAP Financial Measures:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
GAAP gross profit	$ 17,783	$ 10,944	$ 53,847	$ 34,214
Shipping and handling costs	(2,553)	(1,639)	(6,004)	(5,288)
Non-GAAP gross profit	$ 15,230	$ 9,305	$ 47,843	$ 28,926
GAAP revenue	$ 31,334	$ 26,646	$ 90,819	$ 79,698
GAAP gross margin (gross profit as % of revenue)	56.8%	41.1%	59.3%	42.9%
Non-GAAP gross margin (non-GAAP gross profit as % of revenue)	48.6%	34.9%	52.7%	36.3%
GAAP total operating expenses	$ 31,553	$ 47,547	$ 86,598	$ 113,963
Shipping and handling costs	(2,553)	(1,639)	(6,004)	(5,288)
Non-GAAP total operating expenses	$ 29,000	$ 45,908	$ 80,594	$ 108,675
GAAP loss from operations	$ (13,770)	$ (36,603)	$ (32,751)	$ (79,749)
Non-GAAP loss from operations	$ (13,770)	$ (36,603)	$ (32,751)	$ (79,749)

Recent Accounting Pronouncements

Refer to Note 2 − *Significant Accounting Policies* in the Notes to Consolidated Financial Statements included in this Quarterly Report on Form 10-Q for a full description of recent accounting pronouncements, including the expected dates of adoption and effects on our Consolidated Financial Statements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

As of September 30, 2023, there have been no material changes to the market risk information from those described in the section titled “Part II, Item 7A. Quantitative and Qualitative Disclosures About Market Risk” included in our Annual Report on Form 10-K.

Item 4. Controls and Procedures

As previously disclosed in the section titled “Part II, Item 9A. Controls and Procedures” in our Annual Report on Form 10-K, management concluded that our internal control over financial reporting was not effective at a reasonable assurance level as of December 31, 2022, due to certain deficiencies that constituted material weaknesses in our internal control over financial reporting. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

Management has been actively engaged in the implementation of remediation efforts to address the material weaknesses, as well as other identified areas of risk. For a complete description of management’s remediation plan, refer to the section titled “Part II, Item 9A. Controls and Procedures” in our Annual Report on Form 10-K, as may be updated by Part I. Item 4. “Controls and Procedures” of our subsequently filed Quarterly Reports on Form 10-Q. For updates on management’s remediation plan as of September 30, 2023, refer to the section titled “Management’s Implementation of Remediation Plan” below.

Evaluation of Disclosure Controls and Procedures

We have established disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) that are designed to provide reasonable assurance that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the SEC and to ensure that such information is accumulated and communicated to management, including our Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer and principal accounting officer), to allow timely decisions regarding required disclosures. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our disclosure controls and procedures are designed to provide a reasonable assurance of achieving their objectives. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures as of September 30, 2023. Because we commenced implementing efforts to remediate the material weaknesses in our internal control over financial reporting in March 2023 and we have not had a sufficient period of time to test the operating effectiveness of our internal control over financial reporting, which we view as an integral part of our disclosure controls and procedures, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective at a reasonable assurance level as of September 30, 2023.

Nevertheless, based on a number of factors, including the performance of additional procedures by management designed to ensure the reliability of our financial reporting, we believe that the Consolidated Financial Statements in this Quarterly Report on Form 10-Q fairly present, in all material respects, our financial position, results of operations, and cash flows as of the dates, and for the periods, presented, in conformity with U.S. GAAP.

Management's Implementation of Remediation Plan

Management, with oversight from the Audit Committee of our Board of Directors, previously commenced implementing changes to our internal control over financial reporting in order to remediate the control deficiencies that resulted in the material weaknesses as previously disclosed in our Annual Report on Form 10-K. As of September 30, 2023, we are on track with the remediation plan disclosed therein. Our ongoing efforts for remediation include, but are not limited to, the following:

- we have hired a Corporate Controller and an Assistant Controller and are actively continuing to hire additional personnel with public company experience who have the appropriate level of expertise in the respective areas of accounting, SEC financial reporting, and associated internal controls commensurate with the type, volume, and complexity of our accounting operations and reporting requirements. In the interim we continue to supplement our team with advisory consultants to provide additional depth and breadth in our period end closes, technical accounting, financial reporting capabilities, and internal controls compliance. We will continue to utilize such consultants until we have filled vacancies with qualified personnel, with a sufficient period of overlap to ensure successful transition of responsibilities;

- we engaged a third-party service provider who has performed an assessment of our internal control design and operation and provided us recommendations to enhance the effectiveness of such controls, and we are currently in the process of implementing these recommendations;

- we have engaged a third-party consultant who assessed our current enterprise resource planning system and identified opportunities to enhance our use of the system through automating certain controls and processes, for which development of system enhancements are actively underway; and

- we have engaged an accounting advisory consultant who has conducted additional trainings on a regular basis related to internal control over financial reporting with our team members including, but not limited to, finance and accounting personnel, which trainings will continue throughout fiscal year 2023.

We will continue our efforts through fiscal year 2023 to remediate the material weaknesses described in our Annual Report on Form 10-K and expect to implement all necessary recommendations during fiscal year 2023. We are actively executing the remediation plan and are focused on implementing those recommendations deemed as high priority. We believe that the implementation of the above steps, will allow us to address the deficient controls within our internal control environment, which will facilitate the remediation of the material weaknesses.

Given that many of the remediation efforts described above were recently implemented and continue to undergo independent testing, we will not be able to consider the material weaknesses remediated until the applicable remedial controls operate for a sufficient period of time and management has concluded, through testing, that our controls are operating effectively. We, along with our Audit Committee, will continue to monitor and evaluate the effectiveness of these remedial actions and take further actions as we deem appropriate.

Changes in Internal Control over Financial Reporting

Other than the changes outlined above to remediate the material weaknesses, there have been no changes in our internal control over financial reporting during the quarter ended September 30, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

In the ordinary course of business, we are from time to time involved in lawsuits, claims, investigations, proceedings and threats of litigation consisting of intellectual property, contractual, employment, and other matters. While the outcome of any such actions or proceedings cannot be predicted with certainty, as of September 30, 2023, we were not party to any legal proceedings, the outcome of which would be expected to have a material adverse effect on our financial condition or results of operations.

Item 1A. Risk Factors

Our business is subject to risks and events that, if they occur, could adversely affect our financial condition, results of operations, or the price of our common stock. In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the risk factors described in the section titled “Part I, Item 1A. Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the SEC on March 6, 2023 (the “Annual Report on Form 10-K”). Those risk factors are not the only risks we face. Additional risks and uncertainties not currently known to us or that we deem to be not material also may adversely affect our business, financial condition, and results of operations.

As of the date of this Quarterly Report on Form 10-Q, there were no material changes to the risk factors described in our Annual Report on Form 10-K.

Item 2. Unregistered Sales of Equity Securities, Use of Proceeds, and Issuer Purchases of Equity Securities

Not applicable.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Securities Trading Plans of Directors and Executive Officers

On August 14, 2023, Laurie Olson, a member of our Board of Directors, adopted a trading plan intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Securities Exchange Act of 1934 (the “Exchange Act”). The Rule 10b5-1 trading plan provides for the potential sale of up to 5,694 shares of our common stock and the potential exercise of vested stock options and the associated sale of up to 4,306 shares of our common stock. The plan will terminate at the earlier of the execution of all trading orders under the plan or November 13, 2024.

On August 14, 2023, The Martin D. Madaus GST Exempt 2012 Irrevocable Trust, of which Martin Madaus, a member of our Board of Directors, is a trust advisor who shares voting and investment power over the shares held by the trust, adopted a trading plan intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act. The Rule 10b5-1 trading plan provides for the potential sale of up to 34,000 shares of our common stock. The plan will terminate at the earlier of the execution of all trading orders under the plan or May 17, 2024.

Item 6. Exhibits

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/ Reg. Number
3.1	Amended and Restated Certificate of Incorporation.		8-K	12/15/2017	001-38319
3.2	Restated Bylaws.		10-Q	8/8/2023	001-38319
10.1	Employment Agreement dated August 3, 2023 between Vandana Sriram and the Company.		8-K	8/9/2023	001-38319
31.1	Certification of the Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X			
31.2	Certification of the Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X			
32.1	Certifications of the Principal Executive Officer and Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X			
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.	X			
101.SCH	XBRL Taxonomy Extension Schema Document.	X			
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.	X			
101.DEF	XBRL Taxonomy Extension Definition.	X			
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.	X			
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.	X			
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).	X			

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

QUANTERIX CORPORATION

Dated: November 7, 2023

By: /s/ Masoud Toloue
Masoud Toloue
President and Chief Executive Officer
(principal executive officer)

Dated: November 7, 2023

By: /s/ Vandana Sriram
Vandana Sriram
Chief Financial Officer
(principal financial officer and principal accounting officer)

Exhibit 31.1

CERTIFICATIONS UNDER SECTION 302

I, Masoud Toloue, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Quanterix Corporation;

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

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

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2023

/s/ Masoud Toloue
Masoud Toloue
President and Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATIONS UNDER SECTION 302

I, Vandana Sriram, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Quanterix Corporation;

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

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

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2023

/s/ Vandana Sriram
Vandana Sriram
Chief Financial Officer
(principal financial officer and principal accounting officer)

Exhibit 32.1

CERTIFICATIONS UNDER SECTION 906

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Quanterix Corporation, a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

The Quarterly Report for the period ended September 30, 2023 (the "Form 10-Q") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 7, 2023

/s/ Masoud Toloue
Masoud Toloue
President and Chief Executive Officer

Dated: November 7, 2023

/s/ Vandana Sriram
Vandana Sriram
Chief Financial Officer