Table of Contents

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 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)

Registrant's telephone number, including area code: **(617) 301-9400**

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 May 1, 2023, the registrant had 37,408,723 shares of common stock, $0.001 par value per share, outstanding.

TABLE OF CONTENTS

Special 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 statements related to our financial performance including anticipated benefits and costs associated with our plan of restructuring announced in August 2022, and are subject to a number of risks, uncertainties and assumptions, including those further described elsewhere in this Quarterly Report on Form 10-Q and in “Part I, Item 1A, Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2022 or other filings that we make with the Securities and Exchange Commission, or 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 our management 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 the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the 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 the documents that we reference herein and 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,” “us” and “our” in this Quarterly Report on Form 10-Q refer to Quanterix Corporation and its subsidiaries. “Quanterix,” “Simoa,” “Simoa HD-X,”“Simoa HD-1,” “SR-X,” “SP-X”, “HD-X” 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, or endorsement or sponsorship of us by, these other companies.

PART I — FINANCIAL INFORMATION

Item 1. Consolidated Financial Statements (Unaudited)

Quanterix Corporation
Consolidated Balance Sheets
(amounts in thousands, except share and per share data)

	March 31, 2023	December 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	$ 329,354	$ 338,740
Accounts receivable (less allowance for credit losses of $222 and $118 as of March 31, 2023 and December 31, 2022, respectively)	22,546	19,017
Inventory	17,070	16,786
Prepaid expenses and other current assets	7,002	6,860
Total current assets	375,972	381,403
Restricted cash	2,920	2,597
Property and equipment, net	19,056	20,162
Intangible assets, net	7,129	7,516
Goodwill	—	—
Right-of-use assets	20,891	21,223
Other non-current assets	1,345	1,298
Total assets	$ 427,313	$ 434,199
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 2,585	$ 3,836
Accrued compensation and benefits	4,880	10,658
Other accrued expenses	4,624	4,747
Deferred revenue	10,682	8,644
Short-term lease liabilities	3,875	2,687
Other current liabilities	291	386
Total current liabilities	26,937	30,958
Deferred revenue, net of current portion	1,419	1,415
Long-term lease liabilities	40,409	41,417
Other non-current liabilities	1,216	1,469
Total liabilities	69,981	75,259
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Common stock, $0.001 par value:		
Authorized shares: 120,000,000 at March 31, 2023 and December 31, 2022, respectively; Issued and outstanding: 37,423,981 shares and 37,279,994 shares at March 31, 2023 and December 31, 2022, respectively	37	37
Additional paid-in capital	768,141	763,688
Accumulated other comprehensive (loss) income	(2,581)	(2,623)
Accumulated deficit	(408,265)	(402,162)
Total stockholders' equity	357,332	358,940
Total liabilities and stockholders' equity	$ 427,313	$ 434,199

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

Quanterix Corporation
Consolidated Statements of Operations
(amounts in thousands, except share and per share data)

	Three Months Ended March 31,	
	2023	2022
Product revenue	$ 19,287	$ 20,656
Service and other revenue	8,579	8,810
Collaboration revenue	368	86
Grant revenue	222	—
Total revenue	28,456	29,552
Costs of goods sold:		
Cost of product revenue	7,033	10,746
Cost of service and other revenue	4,497	4,247
Total costs of goods sold and services	11,530	14,993
Gross profit	16,926	14,559
Operating expenses:		
Research and development	4,720	7,034
Selling, general and administrative	20,883	25,712
Other lease costs	776	—
Restructuring	(33)	—
Total operating expenses	26,346	32,746
Loss from operations	(9,420)	(18,187)
Interest income (expense), net	3,449	52
Other (expense) income, net	8	(217)
Loss before income taxes	(5,963)	(18,352)
Income tax (expense) benefit	(140)	199
Net loss	$ (6,103)	$ (18,153)
Net loss per share, basic and diluted	$ (0.16)	$ (0.49)
Weighted-average common shares outstanding, basic and diluted	37,326,559	36,850,894

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

Quanterix Corporation
Consolidated Statements of Comprehensive Loss
(amounts in thousands)

	Three Months Ended March 31,	
	2023	2022
Net loss	$ (6,103)	$ (18,153)
Other comprehensive loss:		
Foreign currency translation adjustment	42	(1,197)
Total other comprehensive loss	42	(1,197)
Comprehensive loss	$ (6,061)	$ (19,350)

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

Quanterix Corporation
Consolidated Statements of Cash Flows
(amounts in thousands)

	Three Months Ended March 31,	
	2023	2022
Operating activities		
Net loss	$ (6,103)	$ (18,153)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	1,439	1,358
Credit (income) loss expense on accounts receivable	110	(171)
Unrealized losses (gains) on foreign currency transactions	63	—
Non-cash operating lease expense	334	348
Stock-based compensation expense	3,902	3,827
Deferred taxes	207	—
Changes in operating assets and liabilities:		
Accounts receivable	(3,673)	1,319
Inventory	(89)	(484)
Prepaid expenses and other assets	(422)	(2,070)
Other non-current assets	(33)	1
Accounts payable	(1,271)	(5,306)
Accrued compensation and benefits, other accrued expenses and other current liabilities	(5,983)	(4,962)
Deferred revenue	2,041	2,956
Operating lease liabilities	179	(87)
Other non-current liabilities	(203)	(271)
Net cash used in operating activities	(9,502)	(21,695)
Investing activities		
Purchases of property and equipment	(136)	(1,394)
Proceeds from RADx grant on assets purchased	—	520
Net cash used in investing activities	(136)	(874)
Financing activities		
Proceeds from stock options exercised	13	385
Proceeds from ESPP purchase	551	594
Payments for employee taxes on units withheld	(13)	—
Net cash provided by financing activities	551	979
Net (decrease) increase in cash, cash equivalents and restricted cash	(9,087)	(21,590)
Effect of foreign currency exchange rate on cash	24	(558)
Cash, cash equivalents and restricted cash at beginning of period	341,337	399,042
Cash, cash equivalents and restricted cash at end of period	$ 332,274	$ 376,894
Supplemental disclosure of cash flow information:		
Cash paid for income taxes	$ 246	$ —
Noncash transactions:		
Purchases of property and equipment included in accounts payable and accrued expenses	$ 147	$ —
Right-of-use asset obtained in exchange for lease liabilities	$ —	$ 18,156
Reconciliation of cash, cash equivalents and restricted cash:		
Cash and cash equivalents	$ 329,354	$ 374,317
Restricted cash	2,920	2,577
Total cash, cash equivalents, and restricted cash	$ 332,274	$ 376,894

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

Quanterix Corporation
Consolidated Statements of Stockholders' Equity
(amounts in thousands, except share data)

	Common stock					
	Shares	Value	Additional paid-in capital	Accumulated other comprehensive income (loss)	Accumulated deficit	Total stockholders' equity
Balance at December 31, 2022	37,279,994	$ 37	$ 763,688	$ (2,623)	$ (402,162)	$ 358,940
Issuance of capital shares:						
−Exercised stock options	1,555	—	13	—	—	13
−Restricted units converted	67,851	—	—	—	—	—
−ESPP stock purchase	70,316	—	551	—	—	551
−Issuance of common stock	4,265	—	—	—	—	—
Tax withholding on restricted units	—	—	(13)	—	—	(13)
Stock-based compensation expense	—	—	3,902	—	—	3,902
Cumulative translation adjustment	—	—	—	42	—	42
Net loss	—	—	—	—	(6,103)	(6,103)
Balance at March 31, 2023	37,423,981	$ 37	$ 768,141	$ (2,581)	$ (408,265)	$ 357,332
Balance at December 31, 2021	36,768,035	$ 37	$ 745,936	$ 441	$ (305,462)	$ 440,952
Issuance of capital shares:						
−Exercised stock options	60,126	—	385	—	—	385
−Restricted units converted	49,208	—	—	—	—	—
−ESPP stock purchase	20,449	—	594	—	—	594
−Issuance of common stock	1,338	—	—	—	—	—
Stock-based compensation expense	—	—	3,827	—	—	3,827
Cumulative translation adjustment	—	—	—	(1,197)	—	(1,197)
Net loss	—	—	—	—	(18,153)	(18,153)
Balance at March 31, 2022	36,899,156	$ 37	$ 750,742	$ (756)	$ (323,615)	$ 426,408

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

Quanterix Corporation
Notes to consolidated financial statements (unaudited)

1. Organization and operations

Quanterix Corporation (Nasdaq: QTRX) (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 the Company's Simoa platforms have also demonstrated applicability across other testing applications, including detection of nucleic acids and small molecules.

The Company launched its first immunoassay platform, the Simoa HD-1, in 2014. The HD-1 is a fully automated immunoassay bead-based platform with multiplexing and custom assay capability, and related assay test kits and consumable materials. The Company launched a second bead-based immunoassay platform (SR-X) in 2017 with a more compact footprint than the Simoa HD-1 and less automation designed for lower volume requirements while still allowing multiplexing and custom assay capability. In 2019, the Company launched its third instrument (SP-X) on the new Simoa planar array platform and the Simoa HD-X, an upgraded version of the Simoa HD-1 replacing the HD-1. The HD-X has been designed to deliver productivity and operational efficiency improvements, as well as greater user flexibility. The Company also performs research services on behalf of customers to apply the Simoa technology to specific customer needs. The Company's customers are primarily in the research use only market, which includes academic and governmental research institutions, the research and development laboratories of pharmaceutical manufacturers, contract research organizations, and specialty research laboratories.

The Company's wholly owned subsidiary UmanDiagnostics AB (Uman), a Swedish company located in Umeå, Sweden, supplies neurofilament light (Nf-L) antibodies and 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.

Basis of presentation

The accompanying unaudited consolidated financial statements reflect, in the opinion of the Company's management, all adjustments, consisting of only normal recurring adjustments, necessary for a fair presentation of financial position, results of operations, comprehensive loss and cash flows for each period presented and have been prepared in accordance with United States generally accepted accounting principles (U.S. GAAP) for interim financial information and with the instructions to Form 10 Q and Article 10 of Regulation S-X. Accordingly, these unaudited consolidated financial statements do not include all of the information and notes required by U.S. GAAP for complete financial statements. These unaudited consolidated financial statements and notes thereto should be read in conjunction with the audited consolidated financial statements and footnotes thereto included in Item 8 of our most recent Annual Report on Form 10-K for the year ended December 31, 2022.

Use of Estimates

Our consolidated financial statements and the related notes included elsewhere in this Quarterly Report on Form 10-Q are prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP). The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Changes in accounting estimates may occur from period to period. Accordingly, actual results could differ significantly from the estimates made by our management. We evaluate our estimates and assumptions on an ongoing basis. To the

extent that there are material differences between these estimates and actual results, our future financial statement presentation, financial condition, results of operations and cash flows will be affected.

2. Significant accounting policies

The significant accounting policies and estimates used in the preparation of the accompanying consolidated financial statements are described in the Company's audited consolidated financial statements for the year ended December 31, 2022, included in the Company's Annual Report on Form 10-K filed with the SEC on March 6, 2023. There have been no material changes in the Company's significant accounting policies during the three months ended March 31, 2023.

Recent Accounting Pronouncement

Periodically, new accounting pronouncements are issued by the FASB or other standard setting bodies. Recently issued standards typically do not require adoption until a future effective date. Prior to their effective date, we evaluate the pronouncements to determine the potential effects of adoption on our accompanying unaudited consolidated financial statements. During the first three months of 2023, no new accounting pronouncements issued or effective in the period had or are expected to have a material impact on our accompanying unaudited consolidated financial statements.

3. Revenue

The Company recognizes revenue when a customer obtains control of a promised good or service. The amount of revenue recognized reflects consideration that the Company expects to be entitled to receive in exchange for these goods and services. Any related incentives and taxes collected from customers are subsequently remitted to governmental authorities.

Customers

The Company's customers primarily consist of entities engaged in the life sciences research market that pursue the discovery and development of new drugs for a variety of neurologic, cardiovascular, oncologic and other protein biomarkers associated with diseases. The Company's customer base includes several of the largest biopharmaceutical companies, academic research organizations and distributors who serve certain geographic markets.

Product revenue

The Company's products are composed of analyzer instruments, assay kits and other consumables such as reagents. Products are sold directly to biopharmaceutical and academic research organizations or are sold through distributors in EMEA and Asia Pacific regions. The sales of instruments are generally accompanied by an initial year of implied service-type warranties and may be bundled with assays and other consumables and may also include other items such as training and installation of the instrument and/or an extended service warranty. Revenues from the sale of products are recognized at a point in time when the Company transfers control of the product to the customer, which is generally upon installation for instruments sold to direct customers and based upon shipping terms for assay kits and other consumables. Revenue for instruments sold to distributors is generally recognized based upon shipping terms (either upon shipment or delivery).

Service and other revenue

Service revenues are composed of contract research services, initial implied one-year service-type warranties, extended services contracts and other services such as training. Contract research services are provided through the Company's Accelerator Laboratory and generally consist of fixed fee contracts. Revenues from contract research services are recognized at a point in time when the Company completes and delivers its research report on each individually completed study, or over time if the contractual provisions allow for the collection of transaction consideration for costs incurred plus a reasonable margin through the period of performance of the services. Revenues

from service-type warranties are recognized ratably over the contract service period. For contract research services recognized over time, the Company uses the output method to measure the progress toward the complete satisfaction of the performance obligations. Revenues from other services are immaterial.

During the first quarter of 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 has been recognized over a one-year period. In addition, under the Statement of Work, the Company receives $1.5 million per calendar quarter during 2022, beginning with the first quarter of 2022. The Statement of Work automatically renews on a quarterly basis unless Lilly provides termination notice under the Lilly Collaboration Agreement.

Concurrent with the execution of the Lilly Collaboration Agreement, the Company entered into a Technology License Agreement (the Lilly License) under which Lilly granted to the Company a non-exclusive license to Lilly's proprietary pTau217 antibody technology for potential near-term 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 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 a royalty on net sales of licensed products.

During the three months ended March 31, 2023 and 2022, the Company recognized $1.5 million and $2.7 million of revenue from the Lilly Collaboration Agreement, respectively.

Collaboration and license revenue

The Company may enter into agreements to license the intellectual property and know-how associated with its instruments and certain antibodies in exchange for license fees and future royalties (as described below). The license agreements provide the licensee with a right to use the intellectual property with the license fee revenues recognized at a point in time as the underlying license is considered functional intellectual property.

Payment terms

The Company's payment terms vary by the type and location of the customer and the products or services offered. Payment from customers is generally required in a term ranging from 30 to 45 days from date of shipment or satisfaction of the performance obligation. The Company does not provide financing arrangements to its customers.

Disaggregated revenue

When disaggregating revenue, the Company considered all of the economic factors that may affect its revenues. The following tables disaggregate the Company's revenue from contracts with customers by revenue type (in thousands):

	Three Months Ended March 31, 2023				Three Months Ended March 31, 2022			
	North America	EMEA	Asia Pacific	Total	North America	EMEA	Asia Pacific	Total
Product revenues								
Instruments	$ 2,144	1,981	1,135	$ 5,260	$ 2,165	$ 2,046	$ 2,011	$ 6,222
Consumable and other products	7,457	4,940	1,630	14,027	8,833	4,426	1,175	14,434
Total	$ 9,601	6,921	2,765	$ 19,287	$ 10,998	$ 6,472	$ 3,186	$ 20,656
Service and other revenues								
Service-type warranties	$ 1,557	$ 706	$ 135	$ 2,398	$ 1,283	$ 659	$ 92	$ 2,034
Research services	5,190	234	115	5,539	6,096	131	13	6,240
Other services	381	257	4	642	284	211	41	536
Total	$ 7,128	$ 1,197	$ 254	$ 8,579	$ 7,663	$ 1,001	$ 146	$ 8,810
Collaboration and license revenue								
Collaboration and license revenue	$ 368	$ —	$ —	$ 368	$ —	$ 34	$ 52	$ 86
Grant revenue								
Grant revenue	$ 222	$ —	$ —	$ 222	$ —	$ —	$ —	$ —

For the three months ended March 31, 2023, one customer accounted for more than 10% of the Company's total revenue at 11%. At March 31, 2023, no customer individually accounted for more than 10% of the Company's gross accounts receivable.

The Company's contracts with customers may include promises to transfer multiple products and services to a customer. The Company combines any performance obligations that are immaterial with one or more other performance obligations that are material to the contract. For arrangements with multiple performance obligations, the Company allocates the contract transaction price, including discounts, to each performance obligation based on its relative standalone selling price. Judgment is required to determine the standalone selling price for each distinct performance obligation. The Company determines standalone selling prices based on prices charged to customers in observable transactions and uses a range of amounts to estimate standalone selling prices for each performance obligation. The Company may have more than one range of standalone selling price for certain products and services based on the pricing for different customer classes.

Variable consideration in the Company's contracts primarily relates to (i) sales- and usage-based royalties related to the license of intellectual property in collaboration and license contracts and (ii) certain non-fixed fee research services contracts. Accounting Standard Codification (ASC) Topic 606, *Revenue from Contracts with Customers* (ASC 606) provides for an exception to estimating the variable consideration for sales- and usage-based royalties related to the license of intellectual property, such that the sales- and usage-based royalty will be recognized in the period the underlying transaction occurs. The Company recognizes revenue from sales- and usage-based royalty revenue at the later of when the sale or usage occurs and the satisfaction or partial satisfaction of the performance obligation to which the royalty has been allocated.

Changes in deferred revenue from contracts with customers were as follows (in thousands):

	2023	2022
Balance at December 31 of prior year	$ 10,059	$ 7,460
Deferral of revenue	4,436	5,000
Recognition of deferred revenue	(2,394)	(2,044)
Balance at March 31	$ 12,101	$ 10,416

As of March 31, 2023, of the performance obligations not yet satisfied or partially satisfied, $10.7 million is expected to be recognized as revenue in the next 12 months, with the remainder to be recognized within the 24 months thereafter. The $10.7 million at March 31, 2023 principally consists of amounts billed for undelivered services related to initial and extended service-type warranties and research services, as well as $0.5 million related to undelivered licenses of intellectual property for a diagnostics company (see Note 5).

Costs to obtain a contract

The Company's sales commissions are generally based on bookings of the Company. The Company has determined that certain commissions paid under its sales incentive programs meet the requirements to be capitalized as they are incremental and would not have occurred absent a customer contract. The change in the balance of costs to obtain a contract are as follows (in thousands):

	2023	2022
Balance at December 31 of prior year	$ 377	$ 440
Deferral of costs to obtain a contract	197	363
Recognition of costs to obtain a contract	(191)	(321)
Balance at March 31	$ 383	$ 482

The Company has classified the balance of capitalized costs to obtain a contract as a component of prepaid expenses and other current assets and classifies the expense as a component of cost of goods sold and selling, general, and administrative expense over the estimated life of the contract. The Company considers potential impairment in these amounts each period.

ASC 606 provides entities with certain practical expedients and accounting policy elections to minimize the cost and burden of adoption.

The Company does not disclose the value of unsatisfied performance obligations for (i) contracts with original expected length of one year or less and (ii) contracts for which revenue is recognized at the amount to which the Company has the right to invoice for services performed.

The Company will exclude from its transaction price any amounts collected from customers related to sales and other similar taxes.

When determining the transaction price of a contract, an adjustment is made if payment from a customer occurs either significantly before or significantly after performance, resulting in a significant financing component. The Company does not assess whether a significant financing component exists if the period between when the Company performs its obligations under the contract and when the customer pays is one year or less. None of the Company's contracts contained a significant financing component as of March 31, 2023 and 2022, respectively.

The Company has elected to account for the shipping and handling as an activity to fulfill the promise to transfer the product, and therefore will not evaluate whether shipping and handling activities are promised services to its customers.

Grant revenue

The Company recognizes grant revenue as the Company performs services under the arrangement when the funding is committed. Revenues and related research and development expenses are presented gross in the consolidated statements of operations as the Company has determined it is the primary obligor under the arrangement relative to the research and development services.

Accounting for grants does not fall under ASC 606, as the grantor will not benefit directly from the Company's expansion or product development. As there is no authoritative guidance under U.S. GAAP on accounting for grants to for-profit business entities from government entities, the Company has accounted for grants obtained with the National Institute of Health (NIH) under its Rapid Acceleration of Diagnostics (RADx) program by analogy to International Accounting Standards Topic 20, *Accounting for Government Grants and Disclosure of Government Assistance* (IAS 20). The Company accounts for grants from the Alzheimer's Drug Discovery Foundation (ADDF) under ASC Topic 958, *Not-for-Profit Entities* (ASC 958).

Under IAS 20, grants related to assets are presented in the consolidated balance sheets either by recognizing the grant as deferred income (which is recognized in the consolidated statements of operations on a systematic basis over the useful life of the asset), or by deducting the grant in calculating the carrying amount of the asset (which is recognized in the consolidated statements of operations over the life of the depreciable asset as a reduced depreciation expense). Both methods are acceptable under IAS 20. The Company has elected to record grants related to assets as a deduction in calculating the carrying value of the asset.

Under IAS 20, grants related to income are presented as part of the consolidated statements of operations, either separately or under a general heading. Both methods are acceptable under IAS 20. The Company has elected to record grants related to income separately on the consolidated statements of operations as grant revenue. The related expenses are recorded within operating expenses.

Under ASC 958, grants related to income are presented as part of the consolidated statements of operations, either separately or under a general heading. Both methods are acceptable under ASC 958. The Company has elected to record grants related to income separately on the consolidated statements of operations as grant revenue. The related expenses are recorded within operating expenses.

RADx Grant

On September 29, 2020, the Company entered into a contract with RADx (the RADx Grant), which had a total award value of $18.2 million and accelerated the continued development, scale-up, and deployment of the novel SARS-CoV-2 antigen detection test using the Company's Simoa technology. The RADx Grant provided funding to expand assay kit manufacturing capacity and commercial deployment readiness. Release of the $18.2 million of funding under the RADx Grant was based on the achievement of certain milestones. Contract funding was subject to achievement of these pre-defined milestones and the contract period ran through September 2021, with one milestone extending to May 31, 2022. The Company has received the full $18.2 million under the RADx Grant and the Company has no future obligations under the RADx Grant.

During both the three months ended March 31, 2023 and 2022, the Company recognized no grant revenue and incurred no research and development expense related to the RADx Grant.

The RADx Grant contains both monetary amounts granted related to assets and monetary amounts granted related to income, which are grants other than those related to assets. The grants related to assets are for the expansion and increase of manufacturing capacity. The grants related to income are for additional research and development, as well as other non-asset related scale up costs.

ADDF

On March 24, 2022, the Company entered into a contract with the ADDF (the ADDF Grant). ADDF is a charitable venture philanthropy entity that has granted the Company funding in support of certain activities for the development of an in vitro diagnostic (IVD) test for early detection of Alzheimer's disease. The ADDF Grant, which has a total funding value of $2.3 million, restricts the Company's use of the granted funds to be used solely for activities related to the Alzheimer's diagnostic test development project. Contract funding is subject to achievement of pre-defined milestones and the contract period runs through June 2024. The Company recognizes revenue over time as the related services are performed. As of March 31, 2023, the Company had received the total funding value of $2.3 million under the ADDF Grant, after receiving the second payment in the amount of $1.0 million during the first quarter of 2023 upon submission of satisfactory scientific and financial progress reports to ADDF. At March 31, 2023 and December 31, 2022, the Company had $1.7 million and $0.7 million of deferred revenue related to the ADDF Grant, respectively. During the three months ended March 31, 2023, grant revenue recognized and research and development expense incurred related to the ADDF Grant were immaterial. No such activities occurred in the three months ended March 31, 2022.

NIH Grant

On September 21, 2022, the Company entered into a contract with National Institutes of Health (NIH) (the NIH Grant) with a total award value of $1.7 million. NIH is an agency of the U.S. Department of Health and Human Services. NIH has 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.

During the three months ended March 31, 2023, the Company recognized $0.2 million of revenue and incurred $0.1 million of expense related to NIH Grant. There was no revenue recognized or expense incurred related to the NIH Grant for the three months ended March 31, 2022.

4. Allowance for credit losses

The Company is exposed to credit losses primarily through sales of products and services. The Company's expected loss allowance methodology for accounts receivable is developed using historical collection experience, current and future economic and market conditions, and a review of the current status of customers' trade accounts receivable. Due to the short-term nature of such receivables, the estimated accounts receivable that may not be collected is based on aging of the accounts receivable balances.

Customers are assessed for credit worthiness upfront through a credit review, which includes assessment based on the Company's analysis of customers' financial statements when a credit rating is not available. The Company evaluates contract terms and conditions, country, and political risk, and may require prepayment to mitigate risk of loss. Specific allowance amounts are established to record the appropriate provision for customers that have a higher probability of default. The Company monitors changes to the receivables balance on a timely basis, and balances are written off as they are determined to be uncollectable after all collection efforts have been exhausted.

Activity related to the allowance for credit losses was as follows (in thousands):

	2023	2022
Balance at January 1	$ 118	$ 419
Provision charges	178	-
Deduction / recoveries collected	(74)	(171)
Balance at March 31	$ 222	$ 248

5. Collaboration and license arrangements

The Company has entered into certain licenses with other companies for use of the Company's technology. These licenses have royalty components which the Company earns and recognizes as collaboration and license revenue throughout the year.

Abbott Laboratories

On September 29, 2020, the Company entered into a Non-Exclusive License Agreement (the Abbott License Agreement) with Abbott Laboratories (Abbott). Under the terms of the Abbott License Agreement, the Company granted Abbott a non-exclusive, worldwide, royalty-bearing license, without the right to sublicense, under the Company's bead-based single molecule detection patents (Licensed Patents) in the field of *in vitro* diagnostics. Abbott agreed to pay the Company an initial license fee of $10.0 million in connection with the execution of the Abbott License Agreement, which was recognized as license revenue during the 2020 fiscal year. Abbott has 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 includes customary representations and warranties, covenants and indemnification obligations for a transaction of this nature. The Abbott License Agreement became effective upon signing and 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 months ended March 31, 2023 and 2022, the Company did not recognize any revenue under the Abbott License Agreement.

6. Fair value of financial instruments

Fair value measurements are as follows (in thousands):

March 31, 2023	Total	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Financial assets				
Cash equivalents - money market funds	$ 309,266	$ 309,266	$ —	$ —

December 31, 2022	Total	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Financial assets				
Cash equivalents - money market funds	$ 306,097	$ 306,097	$ —	$ —

7. Inventory

Inventory consists of the following (in thousands):

	March 31, 2023	December 31, 2022
Raw materials	$ 4,311	$ 5,509
Work in process	4,741	3,362
Finished goods	8,018	7,915
Total net inventory	$ 17,070	$ 16,786

8. Other accrued expenses

Other accrued expenses consist of the following (in thousands):

	March 31, 2023	December 31, 2022
Royalties	$ 978	$ 815
Professional and outside services	1,370	1,409
Tax liabilities	531	172
Other	1,745	2,351
Total accrued expenses	$ 4,624	$ 4,747

9. Stock-based compensation

Stock-based compensation expense for all stock awards consists of the following (in thousands):

	Three Months Ended March 31,	
	2023	2022
Cost of product revenue	$ 187	$ 88
Cost of service and other revenue	350	166
Research and development	370	398
Selling, general, and administrative	2,995	3,175
Total stock-based compensation	$ 3,902	$ 3,827

As of March 31, 2023, there was $43.8 million of total unrecognized compensation cost related to unvested restricted stock units and stock options, which is expected to be recognized over the remaining weighted-average vesting period of 3.0 years.

10**. Net Loss per share**

The following table presents the computation of basic and diluted net loss per share:

	Three Months Ended March 31,	
	2023	2022
	(in thousands, except share and per share data)	
Numerator:		
Net loss attributable to Quanterix Corporation	($ 6,103)	($ 18,153)
Denominator:		
Weighted average shares of common stock outstanding, basic and diluted	37,326,559	36,850,894
Net loss per share attributable to Quanterix Corporation, basic and diluted	($ 0.16)	($ 0.49)

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. Thus, 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:

	Three Months Ended March 31,	
	2023	2022
Unvested restricted common stock and restricted stock units	1,489,354	587,939
Outstanding stock options	2,720,047	2,185,706

11. Income taxes

The Company recorded income tax expense of $0.1 million for the three months ended March 31, 2023 and recorded income tax benefit of $0.2 million for the three months ended March 31, 2022. Furthermore, the Company's effective tax rate was (2.36)% for the three months ended March 31, 2023 and 1.09% for the three months ended March 31, 2022. The difference between the United States Federal income tax rate and the Company's effective tax rate is principally due to 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.

12. Goodwill

During the year ended December 31, 2022, the Company identified certain indicators of impairment, including the significant decline in the Company's stock price, actions taken under the Restructuring Plan (as defined in Note 15) and the reduction of forecasted sales and profitability. As a result, during the third quarter of 2022, the Company performed a goodwill impairment test. It was determined that the Company's goodwill was impaired as the carrying amount of the Company's sole reporting unit exceeded the estimated fair value. The Company concluded that the entire goodwill balance was impaired and recognized a non-cash impairment charge during the third quarter of 2022.

During the three months ended March 31, 2023 and March 31, 2022, no impairment expenses were recognized for goodwill. As of March 31, 2023 and December 31, 2022, the Company had no remaining goodwill balance on the consolidated balance sheets.

13. Commitments and contingencies

Purchase Commitments

Stratec

During the year ended December 31, 2022, the Company entered into a supply agreement (the Stratec Supply Agreement) with Stratec Consumables GmBH (Stratec) to order discs used in manufacturing the Simoa HD-X instrument. As part of the Stratec Supply Agreement, the Company agreed to purchase a total of 375,000 discs to be shipped at various points starting in 2022 and continuing through 2024 at an agreed purchase price per disc. In 2022, under the Stratec Supply Agreement, Stratec shipped 75,000 discs to the Company. Additionally, per the Stratec Supply Agreement, during the years ended December 31, 2023 and 2024, Stratec is required to ship 220,000 and 80,000 discs, respectively, to the Company. As of March 31, 2023, the Company had $4.9 million of open purchase orders with Stratec.

Other Purchase Commitments

The Company purchases substantial amounts of raw materials for manufacturing operations under annual and multi-year agreements, some of which have minimum quantity requirements. Additionally, the Company enters into annual agreements for other parts of its operations. The Company had total purchase commitments for the three months ended March 31, 2023, of $2.7 million, most of which the Company expects to incur in the year ending December 31, 2023.

License Agreements

Tufts University

In June 2007, the Company entered into a license agreement (the License Agreement) for certain intellectual property with Tufts University (Tufts). The 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, prior to commercialization, in addition to low single digit royalties on direct sales and services and a royalty on sublicense income. During each of the three months ended March 31, 2023 and 2022, the Company recorded royalty expense of $0.4 million related to the License Agreement. This royalty expense is recorded in cost of product revenue on the consolidated statements of operations.

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 the results of its operations. The Company accrues for contingent liabilities to the extent that the liability is probable and estimable.

14. Related party transactions

In June 2007, the Company entered into the License Agreement for certain intellectual property with Tufts (see Note 13). Tufts' equity ownership in the Company makes Tufts a related party. A member of our Board of Directors was previously affiliated with Tufts and continues to receive compensation from Tufts on a formulaic basis on royalties and license payments the Company makes to Tufts. During each of the three months ended March 31, 2023 and 2022, the Company recorded royalty expense of $0.4 million in cost of product revenue on the consolidated statements of operations.

One of the Company's directors is affiliated with Harvard University and Mass General Brigham. Revenue recorded from sales to Harvard University and its affiliates and to Mass General Brigham and its affiliates totaled $0.3 million and $0.2 million for the three months ended March 31, 2023, and 2022, respectively. The Company recorded cost of goods sold of $0.1 million for the three months ended March 31, 2023 related to Harvard University and its affiliates and to Mass General Brigham and its affiliates, with immaterial cost of goods sold recorded for the three months ended March 31, 2022. The Company had $0.1 million in accounts receivable from Harvard University and its affiliates and Mass General Brigham and its affiliates at both March 31, 2023 and December 31, 2022. Deferred revenue from Harvard University and its affiliates and Mass General Brigham and its affiliates was less than $0.1 million at both March 31, 2023 and December 31, 2022. In August 2022, the Company also entered into a license agreement with Harvard University and paid an upfront fee of $0.6 million which was recognized as research and development expenses. Under this license, the Company is required to pay Harvard royalties on net sales of licensed products and services as well as a portion of our applicable sublicense revenues. Harvard University is obligated to pay a portion of the payments received from the Company to one of the Company's directors. The Company incurred no royalty expense under this license for both three months ended March 31, 2023, and 2022.

On May 26, 2022, the Company entered into an agreement with UltraDx Limited (the UltraDx Agreement), a company formed by ARCH Venture Partners (ARCH). Under the UltraDx Agreement, the Company will supply HD-X instruments (both fully assembled and disassembled) as well as assays and assay components to UltraDx, and UltraDx has the non-exclusive right to seek Chinese regulatory approval of and to commercialize the HD-X instrument and related assays in the Chinese neurological in vitro diagnostic market. The Company has determined that UltraDx is a related party because one of the Company's directors is affiliated with ARCH and UltraDx. Under the terms of the UltraDx Agreement, the Company shipped a total of ten fully assembled and disassembled HD-X instruments to UltraDx on June 30, 2022 at a purchase price of approximately $1.9 million. Because UltraDx was formed during the second quarter of 2022, the Company recognized revenue on these shipments upon receipt of payment in the third quarter of 2022. Revenue recognized on shipments to UltraDx for the three months ended March 31, 2023 was less than $0.1 million and no revenue was recognized on shipments to UltraDx for the three months ended March 31, 2022.

15. Restructuring

Following a strategic review and assessment of the Company's operations and cost structure, on August 8, 2022, the Company announced a plan of restructuring and strategic re-alignment (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. The workforce reduction was substantially completed by the end of the third quarter of 2022.

As part of the Restructuring Plan, the Company also performed an assessment of impairment for long-lived assets, including right-of-use assets, and recorded an impairment charge of $17.4 million during the year ended December 31, 2022. The impairment expense includes $16.3 million associated with the right-of-use and property and equipment at the Bedford facilities. Additionally, the Company recorded an impairment charge of $1.1 million for software costs related to projects that were rationalized as part of the Restructuring Plan. There were no impairment charges recorded associated with the Restructuring Plan during the three months ended March 31, 2023.

The following table presents the restructuring reserve and provision activity for the three months ended March 31, 2023 (in thousands):

	Severance and Employee Benefit Costs
Balance at December 31, 2022	$ 328
Accrual adjustments	(33)
Cash payments	(16)
Foreign exchange	3
Balance at March 31, 2023	$ 282

No such activities existed for the three months ended March 31, 2022.

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 consolidated financial statements and the related notes included elsewhere in this Quarterly Report on Form 10-Q and our audited 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, filed with the Securities and Exchange Commission (the SEC) on March 6, 2023. 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 "Special Note Regarding Forward-Looking Statements" included elsewhere in this Quarterly Report on Form 10-Q or under "Risk Factors" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2022 as may be updated by "Part II, Item 1A, Risk Factors" of our subsequently filed Quarterly Reports on Form 10-Q.

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, total consumables revenue overall is expected 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 March 31, 2023, approximately 80% 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 Swedish company located in Umeå, Sweden, supplies neurofilament light (Nf-L) antibodies and 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 through our CLIA-certified Accelerator Laboratory. The Accelerator Laboratory provides customers with access to Simoa technology, and supports multiple projects and services, including sample testing, homebrew assay development and custom assay development. To date, we have completed over 2,000 projects for more than 450 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 or 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 UAE. 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.

Recent Business Developments

On March 24, 2022, we entered into a contract with the ADDF (the ADDF Grant). ADDF is a charitable venture philanthropy entity that has granted us funding in support of certain activities for the development of an in vitro diagnostic (IVD) test for early detection of Alzheimer's disease. The ADDF Grant, which has a total funding value of $2.3 million, restricts our use of the granted funds to be used solely for activities related to the Alzheimer’s diagnostic test development project. Contract funding is subject to achievement of pre-defined milestones and the contract period runs through June 2024. We recognize revenue over time as the related services are performed. As of March 31, 2023, we had received the total funding value of $2.3 million under the ADDF Grant, after receiving the second payment in the amount of $1.0 million during the first quarter of 2023 upon submission of satisfactory scientific and financial progress reports to ADDF. At March 31, 2023 and December 31, 2022, we had $1.7 million and $0.7 million of deferred revenue related to the ADDF Grant, respectively. During the three months ended March 31, 2023, grant revenue recognized and research and development expense incurred related to the ADDF Grant were immaterial. No such activities occurred in the three months ended March 31, 2022.

On September 21, 2022, we entered into a contract with National Institutes of Health (NIH) (the NIH Grant) with a total award value of $1.7 million. NIH is an agency of the U.S. Department of Health and Human Services. NIH has 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. During the three months ended March 31, 2023, we recognized $0.2 million of revenue and incurred $0.1 million of expense related to NIH Grant. There was no revenue recognized or expense incurred related to the NIH Grant for the three months ended March 31, 2022.

During the first quarter of 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 (the 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 has been recognized over a one-year period. In addition, under the Statement of Work, we receive $1.5 million per calendar quarter, beginning with the first quarter of 2022. The Statement of Work automatically renews on a quarterly basis unless Lilly provides termination notice under the Lilly Collaboration Agreement.

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 pTau-217 antibody technology for potential near-term 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 a royalty on net sales of licensed products.

During the three months ended March 31, 2023 and 2022, we recognized $1.5 million and $2.7 million of revenue from the Lilly Collaboration Agreement, 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 plan of restructuring and strategic re-alignment (the Restructuring Plan). As part of this 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 plan aligns our investments to best serve the needs of customers, focuses innovation efforts on key platforms and provides the foundation for our entry into translational pharma and clinical markets, which we believe will be required to access new growth categories. The Restructuring Plan included the elimination of 119 positions and other cost-saving measures. The workforce reduction was substantially completed by the end of the third quarter of 2022. As part of the Restructuring Plan, we are also reviewing alternative uses of the additional facility space that we currently lease in Bedford, Massachusetts. These alternatives may include termination of the lease, or sub-leasing all, or a portion, of the Bedford facilities. During the year ended December 31, 2022, we recorded an impairment expense of $16.3 million on our long-lived assets related to the Bedford facilities, as well as a $1.1 million impairment expense related to software projects. There were no impairment charges recorded associated with the Restructuring Plan in the three months ended March 31, 2023. Overall, as a result of the Restructuring Plan, we expect to realize estimated annualized operating expense savings of approximately $25 million.

As of March 31, 2023, we had cash and cash equivalents of $329.4 million. Since inception, we have incurred annual net losses. Our net losses were $6.1 million and $18.2 million for the three months ended March 31, 2023 and 2022, respectively. As of March 31, 2023, we had an accumulated deficit of $408.3 million and stockholders' equity of $357.3 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 substantially 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 FDA to be medical devices or otherwise subject to additional regulation by FDA;
- seek PMA or 510(k) clearance from 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 and grow our employee headcount;
- strategically acquire and integrate companies or technologies that may be complementary to our business;
- enter into collaboration arrangements, if any, or in-license other products and technologies; and
- add operational, financial and management information systems.

Results of Operations

Comparison of the Three Months Ended March 31, 2023 and March 31, 2022 (dollars in thousands):

	Three Months Ended March 31,				Increase (Decrease)	
	2023	% of revenue	2022	% of revenue	Amount	%
Product revenue	$ 19,287	68 %	$ 20,656	70 %	$ (1,369)	(7)%
Service and other revenue	8,579	30 %	8,810	30 %	(231)	(3)%
Collaboration and license revenue	368	1 %	86	— %	282	328 %
Grant revenue	222	1 %	—	— %	222	— %
Total revenue	28,456	100 %	29,552	100 %	(1,096)	(4)%
Cost of goods sold:						
Cost of product revenue	7,033	25 %	10,746	36 %	(3,713)	(35)%
Cost of service revenue	4,497	16 %	4,247	14 %	250	6 %
Total costs of goods sold and services	11,530	41 %	14,993	51 %	(3,463)	(23)%
Gross profit	16,926	59 %	14,559	49 %	2,367	16 %
Operating expenses:						
Research and development	4,720	17 %	7,034	24 %	(2,314)	(33)%
Selling, general, and administrative	20,883	73 %	25,712	87 %	(4,829)	(19)%
Other lease costs	776	3 %	—	— %	776	—
Restructuring	(33)	- %	—	— %	(33)	—
Total operating expenses	26,346	93 %	32,746	111 %	(6,400)	(20)%
Loss from operations	(9,420)	(33)%	(18,187)	(62)%	8,767	48 %
Interest income (expense), net	3,449	12 %	52	— %	3,397	(6,533)%
Other (expense) income, net	8	- %	(217)	(1)%	225	(104)%
Loss before income taxes	(5,963)	(21)%	(18,352)	(62)%	12,389	68 %
Income tax (expense) benefit	(140)	— %	199	1 %	(339)	(170)%
Net loss	$ (6,103)	(21)%	$ (18,153)	(63)%	$ 12,728	70 %

Revenue

Total revenue decreased $1.1 million, or 4%, to $28.5 million for the three months ended March 31, 2023, compared to $29.6 million for the three months ended March 31, 2022.

Product revenue of $19.3 million for the three months ended March 31, 2023 consisted of instrument sales of $5.3 million and sales of consumables and other products of $14.0 million. This represented a decrease of $1.4 million, or 7%, as compared to product revenue of $20.7 million for the three months ending March 31, 2022, which consisted of $6.2 million in instrument sales and $14.4 million in consumables and other. The decrease in product revenue was primarily due to reduced demand for our instruments in Asia Pacific and softening demand in North America, as well as reducing our production levels of consumables as we focus on building quality infrastructure and redeveloping our assays.

Service and other revenue was $8.6 million for the three months ended March 31, 2023, compared to $8.8 million for the three months ended March 31, 2022, a decrease of $0.2 million, or 3%, primarily due to lower revenue recognized from the Lilly Collaboration Agreement.

Collaboration and license revenue was $0.4 million for the three months ended March 31, 2023, compared to $0.1 million for the three months ended March 31, 2022, an increase of $0.3 million, or 328%. This was primarily due to an increase in collaboration and license revenue from our subsidiary Uman.

Grant revenue of $0.2 million for the three months ended March 31, 2023 consisted of revenue related to the NIH and ADDF Grants. We did not have any grant revenue during the three months ended March 31, 2022.

Cost of Goods Sold and Services

Cost of goods sold and services decreased $3.5 million, or 23%, to $11.5 million for the three months ended March 31, 2023 compared to $15.0 million for the three months ended March 31, 2022, primarily due to decreased cost of product revenue. Cost of product revenue decreased $3.7 million, or 35%, to $7.0 million for the three months ended March 31, 2023, compared to $10.7 million for the three months ended March 31, 2022, as a result of improved inventory management, utilization of raw materials previously reserved as excess and a reduction in the operations and supply chain department costs as a result of the Restructuring Plan.

Research and Development Expense

Research and development expense decreased $2.3 million, or 33%, to $4.7 million for the three months ended March 31, 2023, as compared to $7.0 million for the three months ended March 31, 2022, primarily due to the reduction in headcount in connection with the Restructuring Plan.

Selling, General, and Administrative Expense

Selling, general and administrative expense decreased $4.8 million, or 19%, to $20.9 million for the three months ended March 31, 2023, as compared to $25.7 million for the three months ended March 31, 2022, mainly due to the reduction in headcount in connection with the Restructing Plan. Included within selling, general and administrative expense are shipping and handling costs for product sales of $1.8 million for both the three months ended March 31, 2023 and 2022.

Other Lease Costs

During the three months ended March 31, 2023, we incurred other lease costs of $0.8 million. As part of the Restructuring Plan, we are not utilizing the office and laboratory space leased in Bedford, Massachusetts and are evaluating alternatives, including termination of the lease or sub-leasing the facilities. Other lease costs represent the depreciation expense of the right-of-use asset and the accretion of the lease facility for periods after the impairment and the determination that the facilities would not be utilized. There were no similar charges for the three months ended March 31, 2022.

Interest Income (Expense), Net

Interest income (expense), net was income of $3.4 million for the three months ended March 31, 2023, as compared to income of $0.1 million for the three months ended March 31, 2022, due to the favorable impact of higher interest rates earned on cash and cash equivalents.

Other (Expense) Income, Net

Other (expense) income, net was immaterial in the three months ended March 31, 2023, as compared to ($0.2) million of expense in the three months ended March 31, 2022, mainly due to the impact of foreign currency exchange rates.

Income Tax (Expense) Benefit, Net

Income tax (expense) benefit, net was ($0.1) million of expense for the three months ended March 31, 2023, as compared to benefit of $0.2 million for the three months ended March 31, 2022. The difference between the United States Federal income tax rate and the Company's effective tax rate is principally due to a valuation allowance in the United States, partially offset by income taxes in foreign jurisdictions.

Non-GAAP Financial Measures

To supplement our financial statements presented on a GAAP basis, we present non-GAAP gross profit, non-GAAP gross margin and non-GAAP operating expenses, 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 non-GAAP gross margin 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 non-GAAP gross margin as a factor in assessing the Company's 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 GAAP.

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

Reconciliation of Non-GAAP Financial Measures:

	Three Months Ended March 31,	
	2023	**2022**
GAAP gross profit	$ 16,926	$ 14,559
Shipping and handling costs	(1,829)	(1,781)
Non-GAAP gross profit	$ 15,097	$ 12,778
GAAP revenue	$ 28,456	$ 29,552
GAAP gross margin (gross profit as % of revenue)	59.5%	49.3%
Non-GAAP gross margin (non-GAAP gross profit as % of revenue)	53.1%	43.2%
GAAP total operating expenses	$ 26,346	$ 32,746
Shipping and handling costs	(1,829)	(1,781)
Non-GAAP total operating expenses	$ 24,517	$ 30,965
GAAP loss from operations	$ (9,420)	$ (18,187)
Non-GAAP loss from operations	$ (9,420)	$ (18,187)

Liquidity and Capital Resources

To date, we have financed our operations principally through equity offerings, borrowings from credit facilities and revenue from our commercial operations.

Cash Flows

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

	Three Months Ended March 31,	
	2023	2022
Net cash used in operating activities	$ (9,502)	$ (21,695)
Net cash used in investing activities	(136)	(874)
Net cash provided by financing activities	551	979
Net (decrease) increase in cash, cash equivalents and restricted cash	$ (9,087)	$ (21,590)

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 invest in process improvements. We have historically experienced negative cash flows from operating activities as we have developed our technology, expanded our business and built our infrastructure and this may continue in the future.

Net cash used in operating activities was $9.5 million during the three months ended March 31, 2023. The net cash used in operating activities primarily consisted of the net loss of $6.1 million offset by non-cash charges of $3.9 million of stock-based compensation expense and $1.4 million of depreciation and amortization expense. Cash used as a result of changes in operating assets and liabilities of $9.5 million was primarily due to a decrease in accounts payable of $1.3 million, a decrease in accrued compensation and benefits, other accrued expenses and other current liabilities of $6.0 million and an increase in accounts receivable of $3.7 million primarily offset by an increase in deferred revenue of $2.0 million.

Net cash used in operating activities was $21.7 million during the three months ended March 31, 2022. The net cash used in operating activities primarily consisted of the net loss of $18.2 million offset by non-cash charges of $3.8 million of stock-based compensation expense and $1.4 million of depreciation and amortization expense. Cash used as a result of changes in operating assets and liabilities of $8.9 million was primarily due to a decrease in accounts payable of $5.3 million and a decrease in accrued compensation and benefits, other accrued expenses and other current liabilities of $4.9 million, offset by an increase in deferred revenue of $3.0 million.

Net Cash Used in Investing Activities

Historically, our primary investing activities have consisted of capital expenditures for the purchase of capital equipment to support our expanding infrastructure and work force. We expect to continue to incur additional costs for capital expenditures related to these efforts in future periods.

We used $0.1 million and $0.9 million in cash during the three months ended March 31, 2023 and three months ended March 31, 2022, respectively, primarily related to purchases of property and equipment.

Net Cash Provided by Financing Activities

Historically, we have financed our operations principally through sales of our stock, borrowings from credit facilities and revenues from our commercial operations.

Financing activities provided $0.6 million and $1.0 million of cash during the three months ended March 31, 2023 and three months ended March 31, 2022, respectively, mainly from proceeds from employee stock purchases and stock option exercises.

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 our products and services. Our liquidity requirements have historically consisted, and we expect that they will continue to consist, of sales and marketing expenses, research and development expenses, working capital, debt service and general corporate expenses.

We believe cash generated from commercial sales along with our current cash and cash equivalents will be sufficient to meet our anticipated operating cash requirements for at least the next 12 months. In the future, we expect our operating and capital expenditures to increase as we increase headcount, expand our sales and marketing 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 support research and development and our sales and marketing activities are forward-looking statements and involve risks and uncertainties and actual results could vary materially and negatively as a result of a number of factors, including the factors discussed in “Part I - Item 1A - “Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2022.

We have based our estimates on assumptions that may prove to be wrong and we could utilize our available capital resources sooner than we currently expect. Our future funding requirements will depend on many factors, including:

- 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 intended cost savings, 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. 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 or debt offerings or other financings.

Contractual Obligations and Commitments

As of March 31, 2023, there have been no material changes to our contractual obligations and commitments from those described under “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.

Critical Accounting Policies, Significant Judgments and Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States, or U.S. GAAP, requires management to make estimates and assumptions that impact the reported amounts of assets, liabilities, revenues, and expenses and the disclosure of assets and liabilities in our financial statements and accompanying notes. The most significant assumptions used in the financial statements are the underlying assumptions used in revenue recognition and valuation of inventory. We base estimates and assumptions on historical experience when available and on various factors that we determined to be reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

Our critical accounting policies and significant estimates that involve a higher degree of judgment and complexity are described under “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 for the year ended December 31, 2022.

There have been no material changes to our critical accounting policies and estimates as disclosed therein.

Recent Accounting Pronouncements

See Note 2 to our unaudited consolidated financial statements included in this Quarterly Report on Form 10-Q for information.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

At March 31, 2023, there have been no material changes to the market risk information from those described under “Quantitative and Qualitative Disclosures About Market Risk” included in the Annual Report on Form 10-K for the year ended December 31, 2022.

Item 4. Controls and Procedures

As previously disclosed under “Part II - Item 9A - Controls and Procedures” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, management concluded that our internal control over financial reporting was not effective at the 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 the Company's annual or interim financial statements will not be prevented or detected on a timely basis.

Our 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, see “Part II - Item 9A - Controls and Procedures” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022. For updates on management’s remediation plan as of March 31, 2023, see 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), 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 March 31, 2023. Based on this evaluation and previously identified material weaknesses in 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 March 31, 2023, given that we commenced implementing efforts to remediate the material weakness 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.

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 Report 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 US GAAP.

Management’s Implementation of Remediation Plan

Management, with oversight from the Audit Committee of our Board of Directors, has 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 Form 10-K for the fiscal year ended December 31, 2022. As of March 31, 2023, we are on track with our remediation plan as previously disclosed in our Form 10-K for the fiscal year ended December 31, 2022. Our ongoing efforts for remediation include, but are not limited to, the following:

- we have hired an Assistant Corporate Controller and a Manager of Financial Reporting and Internal Controls and will continue to hire additional personnel (including those with public company experience) who have the appropriate level of expertise in the areas of accounting, financial reporting, and internal controls commensurate with the volume and complexity of our reporting requirements;

- we have engaged accounting advisory consultants to provide additional depth and breadth in our period end close, technical accounting, and financial reporting capabilities and 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 have engaged a third-party service provider to perform an assessment of our internal control design and related documentation, which assessment is underway;

- we have engaged a third-party consultant to assess our current enterprise resource planning system and identify opportunities to enhance our use of the system through automating certain controls and processes, which assessment is underway; and

- we have engaged an accounting advisory consultant to conduct 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 commenced in Q1 2023 and are expected to continue throughout fiscal year 2023.

We expect to continue our efforts through fiscal year 2023 to remediate the material weaknesses described in our Form 10-K for the fiscal year ended December 31, 2022. We believe that the implementation of the above steps, together with those disclosed under “Part II - Item 9A - Controls and Procedures” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, 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, we will not be able to consider the material weaknesses remediated until the applicable remedial controls operate for a sufficient period of time and our 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 deemed appropriate.

Changes in Internal Control over Financial Reporting

Other than related to the changes outlined above to remediate the material weaknesses, there have been no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the three months ended March 31, 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 March 31, 2023, we were not party to any material legal proceedings.

Item 1A. Risk Factors

There have been no material changes to the risk factors described in our Annual Report on Form 10-K for the year ended December 31, 2022.

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

Not applicable.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

The following is a list of exhibits filed as part of this Quarterly Report on Form 10-Q.

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.		8-K	12/15/2017	001-38319
10.1	Amended and Restated Employment Agreement dated March 27, 2023 between Michael Doyle and the Company.		8-K	3/27/2023	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: May 9, 2023

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

Dated: May 9, 2023

By: /s/ Michael A. Doyle
Michael A. Doyle
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: May 9, 2023

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

Exhibit 31.2

CERTIFICATIONS UNDER SECTION 302

I, Michael A. Doyle, 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: May 9, 2023

/s/ Michael A. Doyle
Michael A. Doyle
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 March 31, 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: May 9, 2023

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

Dated: May 9, 2023

/s/ Michael A. Doyle
Michael A. Doyle
Chief Financial Officer