

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

**FORM 10-Q**

(Mark One)

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

For the quarterly period ended June 30, 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**

(State or other jurisdiction of incorporation or organization)

**20-8957988**

(IRS Employer Identification No.)

**900 Middlesex Turnpike**

**Billerica, MA**

(Address of principal executive offices)

**01821**

(Zip Code)

**(617) 301-9400**

(Registrant's telephone number, including area code)

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

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

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

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

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

Large accelerated filer

Non-accelerated filer

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 August 2, 2023, the registrant had 37,552,586 shares of common stock outstanding.

QUANTERIX CORPORATION  
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## NOTE REGARDING FORWARD-LOOKING STATEMENTS

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

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

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

### **Service Marks, Trademarks and Trade Names**

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

**PART I — FINANCIAL INFORMATION**

**Item 1. Financial Statements (Unaudited)**

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

	June 30, 2023	December 31, 2022
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 329,525	\$ 338,740
Accounts receivable (net of allowance for expected credit losses of \$442 and \$118 as of June 30, 2023 and December 31, 2022, respectively)	24,423	19,017
Inventory	18,156	16,786
Prepaid expenses and other current assets	6,954	6,860
Total current assets	379,058	381,403
Restricted cash	2,686	2,597
Property and equipment, net	18,328	20,162
Intangible assets, net	6,476	7,516
Operating lease right-of-use assets	20,380	21,223
Other non-current assets	2,282	1,298
Total assets	\$ 429,210	\$ 434,199
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 3,238	\$ 3,836
Accrued compensation and benefits	7,525	10,658
Accrued expenses and other current liabilities	6,777	5,133
Deferred revenue	10,421	8,644
Operating lease liabilities	3,986	2,687
Total current liabilities	31,947	30,958
Deferred revenue, net of current portion	1,304	1,415
Operating lease liabilities, net of current portion	39,378	41,417
Other non-current liabilities	1,225	1,469
Total liabilities	73,854	75,259
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Common stock, \$0.001 par value, per share:		
Authorized shares: 120,000; Issued and outstanding: 37,566 and 37,280 shares at June 30, 2023 and December 31, 2022, respectively	37	37
Additional paid-in capital	772,473	763,688
Accumulated other comprehensive loss	(2,825)	(2,623)
Accumulated deficit	(414,329)	(402,162)
Total stockholders' equity	355,356	358,940
Total liabilities and stockholders' equity	\$ 429,210	\$ 434,199

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
<b>Revenues:</b>				
Product revenue	\$ 19,692	\$ 14,785	\$ 38,979	\$ 35,441
Service revenue	10,552	8,548	19,131	17,358
Collaboration and license revenue	629	92	997	178
Grant revenue	156	75	378	75
Total revenues	31,029	23,500	59,485	53,052
<b>Costs of goods sold and services:</b>				
Cost of product revenue	7,236	9,921	14,269	20,667
Cost of service and other revenue	4,655	4,868	9,152	9,115
Total costs of goods sold and services	11,891	14,789	23,421	29,782
Gross profit	19,138	8,711	36,064	23,270
<b>Operating expenses:</b>				
Research and development	5,946	6,625	10,666	13,659
Selling, general, and administrative	21,591	27,045	42,474	52,757
Other lease costs	1,162	—	1,938	—
Restructuring	—	—	(33)	—
Total operating expenses	28,699	33,670	55,045	66,416
Loss from operations	(9,561)	(24,959)	(18,981)	(43,146)
Interest income, net	3,886	552	7,335	604
Other expense, net	(154)	(358)	(146)	(575)
Loss before income taxes	(5,829)	(24,765)	(11,792)	(43,117)
Income tax (expense) benefit	(235)	(137)	(375)	62
Net loss	\$ (6,064)	\$ (24,902)	\$ (12,167)	\$ (43,055)
Net loss per common share, basic and diluted	\$ (0.16)	\$ (0.67)	\$ (0.33)	\$ (1.17)
Weighted-average common shares outstanding, basic and diluted	37,494	36,922	37,411	36,887

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Net loss	\$ (6,064)	\$ (24,902)	\$ (12,167)	\$ (43,055)
Other comprehensive loss:				
Foreign currency translation	(244)	(1,447)	(202)	(2,644)
Total other comprehensive loss	(244)	(1,447)	(202)	(2,644)
Comprehensive loss	\$ (6,308)	\$ (26,349)	\$ (12,369)	\$ (45,699)

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

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

Three Months Ended June 30, 2023						
Common stock						
	Shares	Value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total stockholders' equity
Balance at March 31, 2023	37,424	\$ 37	\$ 768,141	\$ (2,581)	\$ (408,265)	\$ 357,332
Issuance of common stock under stock plans, including tax effects	142	—	139	—	—	139
Stock-based compensation expense	—	—	4,193	—	—	4,193
Foreign currency translation	—	—	—	(244)	—	(244)
Net loss	—	—	—	—	(6,064)	(6,064)
Balance at June 30, 2023	37,566	\$ 37	\$ 772,473	\$ (2,825)	\$ (414,329)	\$ 355,356
Three Months Ended June 30, 2022						
Common stock						
	Shares	Value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total stockholders' equity
Balance at March 31, 2022	36,899	\$ 37	\$ 750,742	\$ (756)	\$ (323,615)	\$ 426,408
Issuance of common stock under stock plans, including tax effects	76	—	211	—	—	211
Stock-based compensation expense	—	—	5,186	—	—	5,186
Foreign currency translation	—	—	—	(1,447)	—	(1,447)
Net loss	—	—	—	—	(24,902)	(24,902)
Balance at June 30, 2022	36,975	\$ 37	\$ 756,139	\$ (2,203)	\$ (348,517)	\$ 405,456
Six Months Ended June 30, 2023						
Common stock						
	Shares	Value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total stockholders' equity
Balance at December 31, 2022	37,280	\$ 37	\$ 763,688	\$ (2,623)	\$ (402,162)	\$ 358,940
Issuance of common stock under stock plans, including tax effects	286	—	690	—	—	690
Stock-based compensation expense	—	—	8,095	—	—	8,095
Foreign currency translation	—	—	—	(202)	—	(202)
Net loss	—	—	—	—	(12,167)	(12,167)
Balance at June 30, 2023	37,566	\$ 37	\$ 772,473	\$ (2,825)	\$ (414,329)	\$ 355,356
Six Months Ended June 30, 2022						
Common stock						
	Shares	Value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total stockholders' equity
Balance at December 31, 2021	36,768	\$ 37	\$ 745,936	\$ 441	\$ (305,462)	\$ 440,952
Issuance of common stock under stock plans, including tax effects	207	—	1,190	—	—	1,190
Stock-based compensation expense	—	—	9,013	—	—	9,013
Foreign currency translation	—	—	—	(2,644)	—	(2,644)
Net loss	—	—	—	—	(43,055)	(43,055)
Balance at June 30, 2022	36,975	\$ 37	\$ 756,139	\$ (2,203)	\$ (348,517)	\$ 405,456

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

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

	Six Months Ended June 30,	
	2023	2022
Cash flows from operating activities:		
Net loss	\$ (12,167)	\$ (43,055)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	2,845	2,790
Credit losses on accounts receivable	324	581
Foreign currency losses	205	—
Operating lease right-of-use asset amortization	1,002	925
Stock-based compensation expense	8,095	9,013
Deferred income taxes	343	—
Loss on disposal of fixed assets	—	6
Changes in assets and liabilities:		
Accounts receivable	(5,750)	3,479
Inventory	(1,181)	180
Prepaid expenses and other current assets	(527)	960
Other non-current assets	(965)	2
Accounts payable	(631)	(3,220)
Accrued compensation and benefits, accrued expenses, and other current liabilities	(1,326)	(4,387)
Deferred revenue	1,666	6,228
Operating lease liabilities	(730)	(3,128)
Other non-current liabilities	(72)	(9)
Net cash used in operating activities	<u>(8,869)</u>	<u>(29,635)</u>
Cash flows from investing activities:		
Purchases of property and equipment	(784)	(6,454)
Proceeds from RADx grant on assets purchased	—	520
Net cash used in investing activities	<u>(784)</u>	<u>(5,934)</u>
Cash flows from financing activities:		
Proceeds from common stock issued under stock plans	777	1,190
Payments for employee taxes withheld on stock-based compensation awards	(87)	—
Net cash provided by financing activities	<u>690</u>	<u>1,190</u>
Net decrease in cash, cash equivalents, and restricted cash	(8,963)	(34,379)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(163)	(776)
Cash, cash equivalents, and restricted cash at beginning of period	341,337	399,042
Cash, cash equivalents, and restricted cash at end of period	<u>\$ 332,211</u>	<u>\$ 363,887</u>
Supplemental disclosure of cash flow information:		
Cash paid for taxes	\$ 502	\$ —
Operating lease right-of-use assets obtained in exchange for lease liabilities	\$ —	\$ 22,376
Shares received as consideration under product sales agreement (Note 3)	<u>\$ 1,000</u>	<u>\$ —</u>

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

**QUANTERIX CORPORATION**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**(unaudited)**

**Note 1. Organization and Nature of Business**

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

The Company also provides contract research services for customers through its 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, the Company has completed over 2,000 projects for more than 450 customers from all over the world using its Simoa platforms.

**Note 2. Significant Accounting Policies**

***Basis of Presentation***

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

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

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

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

***Use of Estimates***

The preparation of the Consolidated Financial Statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts of assets, liabilities, revenues, and expenses reported and disclosures in the financial statements and accompanying notes. Such estimates include, but are not limited to, revenue recognition, valuation of inventory, leases, valuation of intangible and other long-lived assets, recoverability of deferred tax assets, ongoing impairment reviews, and stock-based compensation expense. The Company bases its estimates on historical experience, known trends, market specific information, or other relevant factors it believes to be reasonable.

On an ongoing basis, management evaluates its estimates and changes in estimates are recorded in the period in which they become known. Actual results may differ from these estimates.

### **Foreign Currency**

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

Foreign currency transaction gains (losses) are included in other income (expense), net on the Consolidated Statements of Operations. Foreign exchange losses were not material during the six months ended June 30, 2023, and were \$0.4 million during the six months ended 2022.

### **Principles of Consolidation**

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

In accordance with Accounting Standards Codification ("ASC") 810 – *Consolidation*, the Company assesses the terms of its investment interests in entities to determine if any meet the definition of a variable interest entity ("VIE") and require consolidation into its Consolidated Financial Statements. Refer to Note 15 – *Variable Interest Entities* for further discussion.

### **Presentation of Restricted Cash**

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

	<b>As of June 30,</b>	
	<b>2023</b>	<b>2022</b>
Cash and cash equivalents	\$ 329,525	\$ 361,293
Restricted cash (1)	2,686	2,594
Cash, cash equivalents, and restricted cash	<u>\$ 332,211</u>	<u>\$ 363,887</u>

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

### **Recent Accounting Pronouncements**

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

### Note 3. Revenue and Related Matters

#### Disaggregated Revenue

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

	Three Months Ended June 30, 2023				Three Months Ended June 30, 2022			
	North America	EMEA	Asia Pacific	Total	North America	EMEA	Asia Pacific	Total
Product revenue								
Instruments	\$ 1,042	\$ 971	\$ 1,473	\$ 3,486	\$ 2,473	\$ 2,127	\$ 1,004	\$ 5,604
Consumable and other products	9,811	4,547	1,848	16,206	4,719	3,588	874	9,181
Total	\$ 10,853	\$ 5,518	\$ 3,321	\$ 19,692	\$ 7,192	\$ 5,715	\$ 1,878	\$ 14,785
Service revenue								
Service-type warranties	\$ 1,559	\$ 753	\$ 153	\$ 2,465	\$ 1,320	\$ 688	\$ 124	\$ 2,132
Research services	6,321	711	453	7,485	5,511	316	8	5,835
Other services	372	219	11	602	317	237	27	581
Total	\$ 8,252	\$ 1,683	\$ 617	\$ 10,552	\$ 7,148	\$ 1,241	\$ 159	\$ 8,548
Collaboration and license revenue	\$ 629	\$ —	\$ —	\$ 629	\$ 43	\$ 49	\$ —	\$ 92
Grant revenue	\$ 156	\$ —	\$ —	\$ 156	\$ 75	\$ —	\$ —	\$ 75
<b>Total revenues</b>	<b>\$ 19,890</b>	<b>\$ 7,201</b>	<b>\$ 3,938</b>	<b>\$ 31,029</b>	<b>\$ 14,458</b>	<b>\$ 7,005</b>	<b>\$ 2,037</b>	<b>\$ 23,500</b>

	Six Months Ended June 30, 2023				Six Months Ended June 30, 2022			
	North America	EMEA	Asia Pacific	Total	North America	EMEA	Asia Pacific	Total
Product revenue								
Instruments	\$ 3,186	\$ 2,952	\$ 2,607	\$ 8,745	\$ 4,638	\$ 4,173	\$ 3,015	\$ 11,826
Consumable and other products	17,268	9,487	3,479	30,234	13,552	8,014	2,049	23,615
Total	\$ 20,454	\$ 12,439	\$ 6,086	\$ 38,979	\$ 18,190	\$ 12,187	\$ 5,064	\$ 35,441
Service revenue								
Service-type warranties	\$ 3,116	\$ 1,459	\$ 288	\$ 4,863	\$ 2,603	\$ 1,347	\$ 216	\$ 4,166
Research services	11,510	945	568	13,023	11,607	447	21	12,075
Other services	754	476	15	1,245	601	448	68	1,117
Total	\$ 15,380	\$ 2,880	\$ 871	\$ 19,131	\$ 14,811	\$ 2,242	\$ 305	\$ 17,358
Collaboration and license revenue	\$ 997	\$ —	\$ —	\$ 997	\$ 43	\$ 83	\$ 52	\$ 178
Grant revenue	\$ 378	\$ —	\$ —	\$ 378	\$ 75	\$ —	\$ —	\$ 75
<b>Total revenues</b>	<b>\$ 37,209</b>	<b>\$ 15,319</b>	<b>\$ 6,957</b>	<b>\$ 59,485</b>	<b>\$ 33,119</b>	<b>\$ 14,512</b>	<b>\$ 5,421</b>	<b>\$ 53,052</b>

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

#### Product Revenue

##### UltraDx

On May 26, 2022, the Company and UltraDx Limited ("UltraDx"), a company formed by ARCH Venture Partners ("ARCH"), entered into an agreement (the "UltraDx Agreement"). Under the UltraDx Agreement, the Company agreed to supply UltraDx with HD-X instruments (both fully assembled and disassembled), assays and assay

components, and granted a co-exclusive license to manufacture, seek Chinese regulatory approval of (including performance of any necessary research and development activities), and commercialize, HD-X instruments assembled in China and related assays in the Chinese neurological in vitro diagnostic market. Refer to Note 13 – *Related Party Transactions* for a discussion of the related party relationships between Quanterix and these entities.

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

During the three months ended June 30, 2023, UltraDx completed the qualified preferred share financing and issued to the Company one million ordinary shares with a total fair value of \$1.0 million. Refer to Note 5 – *Fair Value of Financial Instruments* for the Company’s disclosures related to determining the fair value of the shares received. Also refer to Note 15 – *Variable Interest Entities* for additional information on the Company’s investment interests in UltraDx as a result of the share issuance.

During the three and six months ended June 30, 2023, the Company recognized \$1.4 million of revenue, which includes the one-time revenue from the receipt of the UltraDx shares. During the three and six months ended June 30, 2022, no revenue was recognized under the UltraDx Agreement.

### **Service Revenue**

#### *Eli Lilly and Company*

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

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

The Company recognized revenue from the Lilly Collaboration Agreement of \$1.5 million and \$3.0 million during the three and six months ended June 30, 2023, respectively, and \$2.7 million and \$5.4 million during the three and six months ended June 30, 2022, respectively.

## ***Collaboration and License Revenue***

### ***Abbott Laboratories***

On September 29, 2020, the Company and Abbott Laboratories (“Abbott”) entered into a Non-Exclusive License Agreement (the “Abbott License Agreement”). Under 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 patent (the “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 2020. Abbott also agreed to pay the Company milestone fees, subject to the achievement by Abbott of certain development, regulatory, and commercialization milestones and low single-digit royalties on net sales of licensed products.

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

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

### ***Grant Revenue***

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

#### ***NIH Grant***

On September 21, 2022, the Company and the National Institutes of Health (the “NIH”) entered into a contract (the “NIH Grant”) with a total award value of \$1.7 million. The NIH is an agency of the U.S. Department of Health and Human Services and granted the Company funding in support of the development of certain point-of-care diagnostic technologies through collaborative efforts. Grant funding is to be used solely for activities related to the point-of-care diagnostic device development project and the contract period runs through August 2025. Receipt of the award value occurs throughout the term of the contract period and after the Company submits for reimbursement of activities related to the grant. As of June 30, 2023, the Company had not received any of the award value.

During the three and six months ended June 30, 2023, grant revenue recognized and research and development expenses incurred were immaterial.

#### ***ADDF Grant***

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

During the three and six months ended June 30, 2023 and 2022, grant revenue recognized and research and development expenses incurred were immaterial.

### *RADx Grant*

On September 29, 2020, the Company entered into a contract with the NIH under its Rapid Acceleration of Diagnostics (“RADx”) program (the “RADx Grant”), with a total award value of \$18.2 million. The RADx Grant was to accelerate the continued development, scale-up, and deployment of the novel SARS-CoV-2 antigen detection test using the Company’s Simoa technology. Grant funding was used to expand assay kit manufacturing capacity and commercial deployment readiness, and the contract ran through the final milestone on May 31, 2022. Receipt of the award value occurred throughout the term of the contract period and after the Company submitted for reimbursement of activities related to the grant. During the three months ended June 30, 2022, the Company received \$0.5 million which represented the final and total funding value of the \$18.2 million award.

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

### *Contract Assets and Liabilities*

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

### *Deferred Revenue*

The Company refers to contract liabilities as deferred revenue on the Consolidated Balance Sheets. During the six months ended June 30, 2023 and 2022, the Company recognized \$4.9 million and \$3.6 million of revenue, respectively related to its deferred revenue balance at January 1 of each such period.

### *Remaining Performance Obligations*

As of June 30, 2023, the aggregate amount of transaction price allocated to performance obligations that have not yet been satisfied, or are partially satisfied, was \$11.7 million.

Of the performance obligations not yet satisfied or partially satisfied, \$10.4 million is expected to be recognized as revenue in the next 12 months, with the remainder expected to be recognized within the 24 months thereafter. The \$10.4 million principally consists of amounts billed for undelivered services related to initial and extended service-type warranties and research services.

### *Costs to Obtain a Contract*

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

	2023	2022
Balance at December 31 of prior year	\$ 377	\$ 440
Deferral of costs to obtain a contract	335	632
Amortization of costs to obtain a contract	(333)	(662)
Balance at June 30	<u>\$ 379</u>	<u>\$ 410</u>

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

**Note 4. Allowance for Credit Losses**

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

Customers are assessed for credit worthiness upfront through a credit review, which includes analysis of customers’ financial statements when a credit rating is not available.

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

	2023	2022
Balance at December 31 of prior year	\$ 118	\$ 419
Provision for expected credit losses	516	581
Write-offs and recoveries collected	(192)	—
Balance at June 30	<u>\$ 442</u>	<u>\$ 1,000</u>

**Note 5. Fair Value of Financial Instruments**

***Recurring Fair Value Measurements***

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

<u>As of June 30, 2023</u>	<u>Total</u>	<u>Quoted prices in active markets (Level 1)</u>	<u>Significant other observable inputs (Level 2)</u>	<u>Significant unobservable inputs (Level 3)</u>
<b>Financial assets:</b>				
Cash equivalents - money market funds	\$ 312,986	\$ 312,986	\$ —	\$ —
<b>Total Financial Assets</b>	<b><u>\$ 312,986</u></b>	<b><u>\$ 312,986</u></b>	<b><u>\$ —</u></b>	<b><u>\$ —</u></b>

<u>As of December 31, 2022</u>	<u>Total</u>	<u>Quoted prices in active markets (Level 1)</u>	<u>Significant other observable inputs (Level 2)</u>	<u>Significant unobservable inputs (Level 3)</u>
<b>Financial assets:</b>				
Cash equivalents - money market funds	\$ 306,097	\$ 306,097	\$ —	\$ —
<b>Total Financial Assets</b>	<b><u>\$ 306,097</u></b>	<b><u>\$ 306,097</u></b>	<b><u>\$ —</u></b>	<b><u>\$ —</u></b>

***Nonrecurring Fair Value Measurements***

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

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

As of June 30, 2023 and December 31, 2022, the carrying value of the Company's Level 3 financial assets was \$1.3 million and \$0.3 million, respectively. There were no changes in the carrying value of these assets during the three and six months ended June 30, 2023 and 2022. These assets are included in other non-current assets on the Consolidated Balance Sheets. Refer to Note 15 – *Variable Interest Entities* for further discussion.

**Other Fair Value Disclosures**

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

**Note 6. Inventory**

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

	June 30, 2023	December 31, 2022
Raw materials	\$ 4,966	\$ 5,509
Work in process	5,520	3,362
Finished goods	7,670	7,915
Total inventory	<u>\$ 18,156</u>	<u>\$ 16,786</u>

**Note 7. Accrued Expenses and Other Current Liabilities**

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

	June 30, 2023	December 31, 2022
Accrued professional services	\$ 1,853	\$ 1,409
Accrued royalties	1,167	815
Accrued tax liabilities	918	172
Accrued in-transit inventory	594	21
Other accrued expenses	2,245	2,716
Total accrued expenses and other current liabilities	<u>\$ 6,777</u>	<u>\$ 5,133</u>

**Note 8. Stock-Based Compensation**

**Stock Options**

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

	Number of shares	Weighted-average exercise price per share	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding at December 31, 2022	2,188	\$ 20.69	8.1	\$ 4,273
Granted	1,006	14.91		
Exercised	(44)	6.74		
Cancelled	(355)	17.11		
Outstanding at June 30, 2023	<u>2,795</u>	<u>\$ 19.28</u>	<u>8.2</u>	<u>\$ 18,118</u>
Exercisable at June 30, 2023	<u>918</u>	<u>\$ 24.67</u>	<u>6.0</u>	<u>\$ 3,740</u>
Vested and expected to vest at June 30, 2023	<u>2,795</u>	<u>\$ 19.28</u>	<u>8.2</u>	<u>\$ 18,118</u>

**Restricted Stock Units**

Restricted stock unit (“RSU”) activity for the six months ended June 30, 2023 is presented below (in thousands, except per share and contractual life amounts):

	Number of shares	Weighted-average grant date fair value per share	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Unvested RSUs at December 31, 2022	1,188	\$ 21.18	9.6	\$ 16,455
Granted	737	14.58		
Vested	(171)	30.87		
Cancelled	(223)	17.37		
Unvested RSUs at June 30, 2023	<u>1,531</u>	<u>\$ 17.47</u>	<u>9.3</u>	<u>\$ 34,515</u>
Expected to convert at June 30, 2023	<u>1,531</u>	<u>\$ 17.47</u>	<u>9.3</u>	<u>\$ 34,515</u>

**Employee Stock Purchase Plan (“ESPP”)**

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

The 2017 ESPP provides for six-month offering periods commencing and ending as follows: March 1 through August 31, and September 1 through February 28. During the six months ended June 30, 2023, employees purchased 70 thousand shares of the Company’s common stock pursuant to the 2017 ESPP.

**Stock-Based Compensation Expense**

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Cost of product revenue	\$ 200	\$ 137	\$ 387	\$ 225
Cost of service and other revenue	258	205	608	371
Research and development	405	482	775	880
Selling, general, and administrative	3,330	4,362	6,325	7,537
Total stock-based compensation	<u>\$ 4,193</u>	<u>\$ 5,186</u>	<u>\$ 8,095</u>	<u>\$ 9,013</u>

As of June 30, 2023, there was \$39.8 million of total unrecognized stock-based compensation expense related to unvested RSUs and stock options, which is expected to be recognized over the remaining weighted-average vesting period of 2.9 years.

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
<b>Stock Options:</b>				
Risk-free interest rate	3.5% - 4.2%	2.7% - 3.2%	3.5% - 4.2%	1.4% - 3.2%
Expected dividend yield	—	—	—	—
Expected term (in years)	5.0 - 5.1	5.7 - 5.8	5.0 - 5.1	5.7 - 5.8
Expected volatility	80.9% - 82.1%	55.1% - 56.2%	71.1% - 82.1%	55.0% - 56.2%
Weighted-average grant date fair value	\$ 11.95	\$ 13.47	\$ 9.62	\$ 14.11
<b>Employee Stock Purchase Plan:</b>				
Risk-free interest rate	5.2%	1.1%	5.2%	0.7% - 1.1%
Expected dividend yield	—	—	—	—
Expected term (in years)	0.5	0.5	0.5	0.5
Expected volatility	72.8%	55.7%	72.8% - 82.5%	51.9% - 55.7%
Weighted-average grant date fair value	\$ 2.25	\$ 4.62	\$ 2.24	\$ 4.76

**Note 9. Net Loss Per Share**

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
<b>Numerator:</b>				
Net loss	\$ (6,064)	\$ (24,902)	\$ (12,167)	\$ (43,055)
<b>Denominator:</b>				
Weighted average common shares outstanding	37,494	36,922	37,411	36,887
Net loss per share, basic and diluted	\$ (0.16)	\$ (0.67)	\$ (0.33)	\$ (1.17)

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Common stock and RSUs	1,607	928	1,557	759
Stock options	2,891	2,578	2,810	2,383
Total anti-dilutive shares	4,498	3,506	4,367	3,142

**Note 10. Income Taxes**

The Company's effective tax rates were 4.0% and 3.2% for the three and six months ended June 30, 2023, respectively, and 0.0% for each of the three and six months ended June 30, 2022. The income tax provision and effective tax rate is driven primarily by a valuation allowance in the United States, partially offset by income taxes in foreign jurisdictions.

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

**Note 11. Goodwill**

During the third quarter of 2022, the Company identified certain indicators of impairment, including a significant decline in the Company's stock price, actions taken under the Restructuring Plan (refer to Note 14 - *Restructuring*), and a reduction of forecasted sales and profitability. As a result, the Company performed a goodwill impairment test and determined its goodwill was impaired as the carrying amount of the Company's sole reporting unit exceeded its estimated fair value. The Company concluded that its entire goodwill balance was impaired and recognized an \$8.2 million non-cash impairment charge during the third quarter of 2022.

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

**Note 12. Commitments and Contingencies**

***Purchase Commitments***

*Stratec*

During the year ended December 31, 2022, the Company and Stratec Consumables GmbH ("Stratec") entered into an amendment to the supply agreement with Stratec (as amended, the "Stratec Supply Agreement"), related to the supply of discs used in Simoa bead-based instruments. As part of the Stratec Supply Agreement, the Company agreed to purchase a total of 515,000 discs to be shipped at various points starting in 2022 and continuing through 2024 at an agreed purchase price per disc. In 2022, Stratec shipped 75,000 discs to the Company and Stratec is required to ship no less than 220,000 discs in 2023. The total purchase commitment under the Stratec Supply Agreement is \$3.7 million.

*Other Purchase Commitments*

The Company purchases 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's total purchase commitments under these agreements as of June 30, 2023 was \$2.6 million.

***License Agreements***

*Harvard University*

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

Refer to Note 13 – *Related Party Transactions* for a discussion of a related party relationship with Harvard.

*Tufts University*

In June 2007, the Company and Tufts University ("Tufts") entered into a license agreement (the "Tufts License Agreement") for certain intellectual property owned by Tufts. The Tufts License Agreement, which was subsequently amended, is exclusive and sub-licensable, and will continue in effect on a country-by-country basis as long as there is a

valid claim of a licensed patent in a country. The Company is contractually obligated to pay license and maintenance fees that are creditable against royalties, in addition to low single-digit royalties on direct sales and services, and a royalty on sublicense income. The Company recorded royalty expense related to the Tufts License Agreement of \$0.4 million and \$0.8 million during the three and six months ended June 30, 2023, respectively and \$0.4 million and \$0.7 million during the three and six months ended June 30, 2022, respectively. This royalty expense is recorded in cost of product revenue on the Consolidated Statements of Operations.

Refer to Note 13 – *Related Party Transactions* for a discussion of a related party relationship with Tufts.

### **Legal Contingencies**

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

### **Leases**

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

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

<b>Maturity of lease liabilities</b>	<b>As of June 30, 2023</b>
2023 (remainder)	\$ 3,487
2024	7,064
2025	7,228
2026	7,408
2027	7,641
2028	7,880
Thereafter	15,741
Total lease payments	\$ 56,449
Less: imputed interest	13,085
Total operating lease liabilities	\$ 43,364

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

### **Note 13. Related Party Transactions**

In June 2007, the Company and Tufts entered into the Tufts License Agreement for certain intellectual property owned by Tufts (refer to Note 12 - *Commitments and Contingencies*). A member of the Company's Board of Directors was previously affiliated with Tufts. This Board member continues to receive compensation from Tufts on a formulaic basis based on royalties and license payments the Company makes to Tufts. At June 30, 2023 and December 31, 2022, open payable balances to Tufts were immaterial.

A member of the Company's Board of Directors is affiliated with Harvard and Mass General Brigham. Revenue recorded from sales of products and services to Harvard and its affiliates and to Mass General Brigham and its affiliates totaled \$0.5 million and \$0.7 million for the three and six months ended June 30, 2023, respectively, and was immaterial for the three and six months ended June 30, 2022.

Additionally, in August 2022, the Company and Harvard entered into the Harvard License Agreement for certain intellectual property owned by Harvard (refer to Note 12 – *Commitments and Contingencies*). Harvard is obligated to pay a portion of the payments received from the Company under the Harvard License Agreement to a member of the Company’s Board of Directors.

Cost of product revenue and operating expenses with Harvard and its affiliates and Mass General Brigham and its affiliates for the three and six months ended June 30, 2023 and 2022 was immaterial. At June 30, 2023 and December 31, 2022, open payables to and receivable balances from Harvard and Mass General Brigham were immaterial.

As discussed in Note 3 – *Revenue and Related Matters*, on May 26, 2022, the Company and UltraDx, a company formed by ARCH, entered into the UltraDx Agreement to supply certain instruments and to grant certain licenses. At contract inception, the Company determined that UltraDx was a related party because a member of the Company’s Board of Directors was affiliated with ARCH and UltraDx. As of June 7, 2023, this individual was no longer a member of the Company’s Board of Directors. Cost of goods sold for both the three and six months ended June 30, 2023 were immaterial. At June 30, 2023 and December 31, 2022, there were no open payable balances to UltraDx and open receivable balances from UltraDx were \$0.4 million and zero, respectively.

#### Note 14. Restructuring

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

As a result of the Restructuring Plan, the Company performed an impairment assessment of its goodwill, long-lived assets, including operating lease right-of-use assets, and intangibles. The assessments resulted in the Company recording an impairment charge of \$25.6 million during the year ended December 31, 2022. The impairment charge included (1) \$16.3 million associated with the operating lease right-of-use asset and related property and equipment at leased facilities, (2) \$8.2 million of goodwill (refer to Note 11 – *Goodwill*), and (3) \$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 and six months ended June 30, 2023. There were no material changes to the Restructuring Plan or the exit and disposal costs in 2023.

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

	<b>Severance and Employee Benefit Costs</b>
Balance at December 31, 2022	\$ 328
Accrual adjustments	(33)
Cash payments	(16)
Foreign currency translation	5
Balance at June 30, 2023	<u>\$ 284</u>

The Company did not have any restructuring activities during the six months ended June 30, 2022.

**Note 15. Variable Interest Entities**

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

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

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

As of June 30, 2023 and December 31, 2022, the carrying value of the Company’s investment interests in VIEs was \$1.3 million and \$0.3 million, respectively, which are recorded in other non-current assets on the Consolidated Balance Sheets. Refer to Note 5 – *Fair Value of Financial Instruments* for the Company’s related valuation disclosures. Maximum exposure to losses related to these VIEs is limited to their carrying value and the Company does not have any future funding commitments to these VIEs.

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

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

### Overview

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

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

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

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

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

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

We also provide contract research services for customers 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 the United Arab Emirates. In addition, Uman sells Nf-L antibodies and Nf-L ELISA kits directly, and in conjunction with us and another distributor, worldwide. We have an extensive base of customers in academic and governmental research institutions, as well as pharmaceutical, biotechnology, and contract research companies.

As of June 30, 2023, we had cash and cash equivalents of \$329.5 million. Since our inception, we have incurred annual net losses. Our net losses were \$6.1 million and \$12.2 million for the three and six months ended June 30, 2023 and \$24.9 million and \$43.1 million for the three and six months ended June 30, 2022, respectively. As of June 30, 2023, we had an accumulated deficit of \$414.3 million and stockholders' equity of \$355.4 million.

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

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

### **Recent Business Developments**

In July 2023, we launched LucentAD, a blood-based biomarker test to assist in the evaluation of patients experiencing cognitive symptoms consistent with the early signs of Alzheimer's disease. The test has not been cleared or approved by the FDA.

On September 21, 2022, we entered into a contract with the National Institutes of Health (the "NIH") with a total award value of \$1.7 million (the "NIH Grant"). The NIH is an agency of the U.S. Department of Health and Human Services and under the NIH Grant granted us funding in support of the development of certain point-of-care diagnostic technologies through collaborative efforts. Grant funding is to be used solely for activities related to the point-of-care diagnostic device development project and the contract period runs through August 2025. Receipt of the award value occurs throughout the term of the contract period and after we submit for reimbursement of activities related to the grant. As of June 30, 2023, we had not received any of the award value.

During the three and six months ended June 30, 2023, grant revenue recognized and research and development expense incurred were immaterial.

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

During the three and six months ended June 30, 2023 and 2022, grant revenue recognized and research and development expense incurred were immaterial.

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

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

We recognized revenue from the Lilly Collaboration Agreement of \$1.5 million and \$3.0 million during the three and six months ended June 30, 2023, respectively, and \$2.7 million and \$5.4 million during the three and six months ended June 30, 2022, respectively.

### **Restructuring and Strategic Re-Alignment**

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

As a result of the Restructuring Plan, we performed an impairment assessment of our goodwill, long-lived assets, including operating lease right-of-use assets, and intangibles. The assessments resulted in us recording an impairment charge of \$25.6 million during the year ended December 31, 2022. The impairment charge included (1) \$16.3 million associated with the right-of-use asset and property and equipment at leased facilities, (2) \$8.2 million of goodwill (refer to Note 11 – *Goodwill* in the Notes to Consolidated Financial Statements), and (3) \$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 and six months ended June 30, 2023. There were no material changes to the Restructuring Plan or the exit and disposal costs in 2023.

Overall, as a result of the Restructuring Plan, we expect to realize estimated annualized operating expense savings of approximately \$25 million.

**Comparison of Results of Operations for the Three Months Ended June 30, 2023 and 2022 (in thousands, except percentages):**

	Three Months Ended June 30,				Increase (Decrease)	
	2023	% of revenue	2022	% of revenue	Amount	%
<b>Revenues:</b>						
Product revenue	\$ 19,692	63 %	\$ 14,785	63 %	\$ 4,907	33 %
Service revenue	10,552	34 %	8,548	37 %	2,004	23 %
Collaboration and license revenue	629	2 %	92	— %	537	584 %
Grant revenue	156	1 %	75	— %	81	108 %
Total revenues	31,029	100 %	23,500	100 %	7,529	32 %
<b>Cost of goods sold and services:</b>						
Cost of product revenue	7,236	23 %	9,921	42 %	(2,685)	(27)%
Cost of service revenue	4,655	15 %	4,868	21 %	(213)	(4)%
Total costs of goods sold and services	11,891	38 %	14,789	63 %	(2,898)	(20)%
Gross profit	19,138	62 %	8,711	37 %	10,427	120 %
<b>Operating expenses:</b>						
Research and development	5,946	19 %	6,625	28 %	(679)	(10)%
Selling, general, and administrative	21,591	70 %	27,045	115 %	(5,454)	(20)%
Other lease costs	1,162	4 %	—	— %	1,162	—
Restructuring	—	— %	—	— %	—	—
Total operating expenses	28,699	92 %	33,670	143 %	(4,971)	(15)%
Loss from operations	(9,561)	(31)%	(24,959)	(106)%	15,398	62 %
Interest income, net	3,886	13 %	552	2 %	3,334	(604)%
Other expense, net	(154)	— %	(358)	(2)%	204	(57)%
Loss before income taxes	(5,829)	(19)%	(24,765)	(105)%	18,936	76 %
Income tax expense, net	(235)	(1)%	(137)	(1)%	(98)	72 %
Net loss	\$ (6,064)	(18)%	\$ (24,902)	(106)%	\$ 18,838	76 %

**Revenues**

Total revenues increased \$7.5 million, or 32%, to \$31.0 million for the three months ended June 30, 2023, compared to \$23.5 million for the three months ended June 30, 2022.

Product revenue of \$19.7 million for the three months ended June 30, 2023 consisted of instrument sales of \$3.5 million and sales of consumables and other products of \$16.2 million. This represented an increase of \$4.9 million, or 33%, as compared to product revenue of \$14.8 million for the three months ending June 30, 2022, which consisted of \$5.6 million in instrument sales and \$9.2 million in sales of consumables and other products. The increase in product revenue resulted primarily from (1) increased sales of consumables, (2) increased average selling prices, and (3) a one-time increase from the receipt of ordinary shares from UltraDx with a fair value of \$1.0 million that was accounted as variable consideration under the UltraDx Agreement (as a Level 3 financial asset with minimal market activity or other data available, the fair value was determined primarily using the third-party purchase price of similar instruments issued by UltraDx). These increases were partially offset by lower instrument sales due to reduced demand in certain markets. We expect this instrument trend to continue for the remainder of 2023.

Service revenue was \$10.6 million for the three months ended June 30, 2023, compared to \$8.5 million for the three months ended June 30, 2022, an increase of \$2.1 million, or 23%, primarily due to increased Accelerator Laboratory revenue, partially offset by lower revenue recognized from the Lilly Collaboration Agreement.

Collaboration and license revenue was \$0.6 million for the three months ended June 30, 2023, compared to \$0.1 million for the three months ended June 30, 2022, an increase of \$0.5 million, or 584%. This was due to a one-time increase from the expiration of a previously paid for option to expand the scope of the Abbott License Agreement.

Grant revenue was \$0.2 million for the three months ended June 30, 2023, compared to \$0.1 million for the three months ended June 30, 2022.

#### ***Cost of Goods Sold and Services***

Cost of goods sold and services decreased \$2.9 million, or 20%, to \$11.9 million for the three months ended June 30, 2023 compared to \$14.8 million for the three months ended June 30, 2022, primarily due to decreased cost of product revenue.

Cost of product revenue decreased \$2.7 million, or 27%, to \$7.2 million for the three months ended June 30, 2023, compared to \$9.9 million for the three months ended June 30, 2022, as a result of improved inventory management and lower instrument sales. Cost of service revenue decreased \$0.2 million, or 4%, to \$4.7 million for the three months ended June 30, 2023, compared to \$4.9 million for the three months ended June 30, 2022 as a result of decreased lab services expenses.

#### ***Research and Development***

Research and development expense decreased \$0.7 million, or 10%, to \$5.9 million for the three months ended June 30, 2023, as compared to \$6.6 million for the three months ended June 30, 2022, primarily due to the reduction in headcount in connection with the Restructuring Plan.

#### ***Selling, General, and Administrative***

Selling, general and administrative expense decreased \$5.4 million, or 20%, to \$21.6 million for the three months ended June 30, 2023, as compared to \$27.0 million for the three months ended June 30, 2022, primarily due to the reduction in headcount in connection with the Restructuring Plan. Included within selling, general, and administrative expense are \$1.6 million and \$1.9 million of shipping and handling costs for product sales for the three months ended June 30, 2023 and 2022, respectively.

#### ***Other Lease Costs***

During the three months ended June 30, 2023, we incurred other lease costs of \$1.2 million. As part of the Restructuring Plan, we are not utilizing the leased office and laboratory facilities in Bedford, Massachusetts and are evaluating alternatives, including sub-leasing the facilities. Other lease costs include amortization of the related operating lease right-of-use assets and other leased facility operating expenses from periods after the impairment and the determination that the facilities would not be utilized. There were no similar charges for the three months ended June 30, 2022.

#### ***Interest Income, Net***

Interest income, net was \$3.9 million for the three months ended June 30, 2023, as compared to \$0.6 million for the three months ended June 30, 2022, primarily due to higher interest rates earned on cash and cash equivalents.

#### ***Other Expense, Net***

Other expense, net was (\$0.2) million in the three months ended June 30, 2023, as compared to (\$0.4) million in the three months ended June 30, 2022.

### Income Tax Expense, Net

Income tax expense, net was (\$0.2) million for the three months ended June 30, 2023, as compared to (\$0.1) million for the three months ended June 30, 2022, consisting primarily of a provision recorded on the operating results of our foreign subsidiaries.

### Comparison of Results of Operations for the Six Months Ended June 30, 2023 and 2022 (in thousands, except percentages):

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

	Six Months Ended June 30,				Increase (Decrease)	
	2023	% of revenue	2022	% of revenue	Amount	%
<b>Revenues:</b>						
Product revenue	\$ 38,979	65 %	\$ 35,441	67 %	\$ 3,538	10 %
Service revenue	19,131	32 %	17,358	33 %	1,773	10 %
Collaboration and license revenue	997	2 %	178	— %	819	460 %
Grant revenue	378	1 %	75	— %	303	404 %
Total revenue	59,485	100 %	53,052	100 %	6,433	12 %
<b>Cost of goods sold and services:</b>						
Cost of product revenue	14,269	24 %	20,667	39 %	(6,398)	(31)%
Cost of service revenue	9,152	15 %	9,115	17 %	37	0 %
Total costs of goods sold and services	23,421	39 %	29,782	56 %	(6,361)	(21)%
Gross profit	36,064	61 %	23,270	44 %	12,794	55 %
<b>Operating expenses:</b>						
Research and development	10,666	18 %	13,659	26 %	(2,993)	(22)%
Selling, general, and administrative	42,474	71 %	52,757	99 %	(10,283)	(19)%
Other lease costs	1,938	3 %	—	— %	1,938	—
Restructuring	(33)	— %	—	— %	(33)	—
Total operating expenses	55,045	92 %	66,416	125 %	(11,371)	(17)%
Loss from operations	(18,981)	(31)%	(43,146)	(81)%	24,165	56 %
Interest income, net	7,335	12 %	604	1 %	6,731	(1,114)%
Other expense, net	(146)	— %	(575)	(1)%	429	(75)%
Loss before income taxes	(11,792)	(19)%	(43,117)	(81)%	31,325	73 %
Income tax (expense) benefit, net	(375)	(1)%	62	— %	(437)	(705)%
Net loss	\$ (12,167)	(18)%	\$ (43,055)	(81)%	\$ 30,888	72 %

### Revenues

Total revenues increased \$6.4 million, or 12%, to \$59.5 million for the six months ended June 30, 2023, compared to \$53.1 million for the six months ended June 30, 2022.

Product revenue of \$39.0 million for the six months ended June 30, 2023 consisted of instrument sales of \$8.8 million and sales of consumables and other products of \$30.2 million. This represented an increase of \$3.5 million, or 10%, as compared to product revenue of \$35.4 million for the six months ending June 30, 2022, which consisted of \$11.8 million in instrument sales and \$23.6 million in sales of consumables and other products. The increase in product revenue resulted primarily from (1) increased sales of consumables, (2) increased average selling prices, and (3) a one-time increase from the receipt of ordinary shares of UltraDx with a fair value of \$1.0 million that was accounted for as variable consideration under the UltraDx Agreement (as a Level 3 financial asset with minimal market activity or other data available, the fair value was determined primarily using the third-party purchase price of similar instruments issued by UltraDx). These increases were partially offset by lower instrument sales due to reduced demand in certain markets. We expect this instrument trend to continue for the remainder of 2023.

Service revenue was \$19.1 million for the six months ended June 30, 2023, compared to \$17.4 million for the six months ended June 30, 2022, an increase of \$1.7 million, or 10%, primarily due to increased Accelerator Laboratory revenue, partially offset by lower revenue recognized from the Lilly Collaboration Agreement.

Collaboration and license revenue was \$1.0 million for the six months ended June 30, 2023, compared to \$0.2 million for the six months ended June 30, 2022, an increase of \$0.8 million, or 460%. This was primarily due to a one-time increase from the expiration of a previously paid for option to expand the scope of the Abbott License Agreement.

Grant revenue was \$0.4 million for the six months ended June 30, 2023, compared to \$0.1 million for the six months ended June 30, 2022.

#### ***Cost of Goods Sold and Services***

Cost of goods sold and services decreased \$6.4 million, or 21%, to \$23.4 million for the six months ended June 30, 2023 compared to \$29.8 million for the six months ended June 30, 2022, primarily due to improved inventory management and lower instrument sales.

Cost of product revenue decreased \$6.4 million, or 31%, to \$14.3 million for the six months ended June 30, 2023, compared to \$20.7 million for the six months ended June 30, 2022, as a result of improved inventory management and lower instrument sales. The increase in cost of service revenue was immaterial for the six months ended June 30, 2023 compared to the six months ended June 30, 2022.

#### ***Research and Development***

Research and development expense decreased \$3.0 million, or 22%, to \$10.7 million for the six months ended June 30, 2023, as compared to \$13.7 million for the six months ended June 30, 2022, primarily due to the reduction in headcount in connection with the Restructuring Plan.

#### ***Selling, General, and Administrative***

Selling, general and administrative expense decreased \$10.3 million, or 19%, to \$42.5 million for the six months ended June 30, 2023, as compared to \$52.8 million for the six months ended June 30, 2022, primarily due to the reduction in headcount in connection with the Restructuring Plan. Included within selling, general and administrative expense are \$3.5 million and \$3.6 million of shipping and handling costs for product sales for the six months ended June 30, 2023 and 2022, respectively.

#### ***Other Lease Costs***

During the six months ended June 30, 2023, we incurred other lease costs of \$1.9 million. As part of the Restructuring Plan, we are not utilizing the leased office and laboratory facilities in Bedford, Massachusetts and are evaluating alternatives, including sub-leasing the facilities. Other lease costs include the amortization of the related operating lease right-of-use assets and other leased facility operating expenses from periods after the impairment and the determination that the facilities would not be utilized. There were no similar charges for the six months ended June 30, 2022.

#### ***Interest Income, Net***

Interest income, net was \$7.3 million for the six months ended June 30, 2023, as compared to \$0.6 million for the six months ended June 30, 2022, due to higher interest rates earned on cash and cash equivalents.

#### ***Other Expense, Net***

Other expense, net was (\$0.1) million for the six months ended June 30, 2023, as compared to (\$0.6) million for the six months ended June 30, 2022, primarily due to changes in foreign exchange rates.

### ***Income Tax (Expense) Benefit, Net***

Income tax (expense) benefit, net was (\$0.4) million for the six months ended June 30, 2023, as compared to \$0.1 million for the six months ended June 30, 2022, primarily due to recording a provision for the operating results of our foreign subsidiaries.

### **Liquidity and Capital Resources**

Our principal sources of liquidity are cash, cash equivalents, and funds generated from sales of our products and services. As of June 30, 2023, we had cash and cash equivalents of \$329.5 million. Historically we have also financed our operations through equity offerings and borrowings from credit facilities.

#### ***Cash Flows***

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

	<b>Six Months Ended June 30,</b>		<b>Increase (Decrease)</b>	
	<b>2023</b>	<b>2022</b>	<b>Amount</b>	<b>%</b>
Net cash used in operating activities	\$ (8,869)	\$ (29,635)	\$ 20,766	70 %
Net cash used in investing activities	(784)	(5,934)	5,150	87 %
Net cash provided by financing activities	690	1,190	(500)	42 %
Net decrease in cash, cash equivalents, and restricted cash	<u>\$ (8,963)</u>	<u>\$ (34,379)</u>	<u>\$ 25,416</u>	<u>74 %</u>

#### ***Net Cash Used in Operating Activities***

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

Net cash used in operating activities was \$8.9 million during the six months ended June 30, 2023 which primarily consisted of the net loss of \$12.2 million, offset by non-cash charges of \$8.1 million of stock-based compensation expense, \$2.8 million of depreciation and amortization expense, and non-cash lease expense of \$1.0 million. Cash used as a result of changes in operating assets and liabilities of \$9.5 million was primarily due to an increase in accounts receivable of \$5.8 million, a decrease in operating lease liabilities of \$1.6 million, a decrease in accrued compensation and benefits, other accrued expenses and other current liabilities of \$1.3 million and an increase in inventory of \$1.2 million. These decreases were primarily offset by an increase in deferred revenue of \$1.7 million and \$0.9 million received on the tenant improvement allowance associated with our leased facilities in Bedford, Massachusetts.

Net cash used in operating activities was \$29.6 million during the six months ended June 30, 2022. The net cash used in operating activities primarily consisted of the net loss of \$43.1 million, offset by non-cash charges of \$9.0 million of stock-based compensation expense, \$2.8 million of depreciation and amortization expense, and \$1.4 million received on the tenant improvement allowance associated with our leased facility in Bedford, Massachusetts.

#### ***Net Cash Used in Investing Activities***

Our primary investing activities consist of capital expenditures for the purchase of equipment to support our expanding infrastructure and work force. We expect to continue to incur additional capital expenditures related to these efforts in future periods. Cash used towards capital expenditures can be partially offset by proceeds from grants with

third parties to purchase assets (refer to the section titled “Grant Revenue” in Note 3 – *Revenue and Related Matters* in the Notes to Consolidated Financial Statements for more information).

We used \$0.8 million and \$5.9 million in cash in investing activities during the six months ended June 30, 2023 and June 30, 2022, respectively, for purchases of property and equipment. The purchases during the six months ended June 30, 2022 were partially offset by \$0.5 million in grant proceeds under the RADx Grant.

#### ***Net Cash Provided by Financing Activities***

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

Financing activities provided \$0.7 million and \$1.2 million of cash during the six months ended June 30, 2023 and June 30, 2022, respectively, from the proceeds of common stock issued.

#### ***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 consisted, and we expect that they will continue to consist, of sales and marketing expenses, research and development expenses, working capital, and general corporate expenses.

We believe cash generated from product and services sales along with our current cash and cash equivalents will be sufficient to meet our anticipated operating cash requirements for at least 12 months from the date of this Quarterly Report on Form 10-Q. In the future, we expect our operating and capital expenditures to increase as we increase headcount, expand our sales 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. Actual results could vary materially and negatively as a result of a number of factors, including the factors discussed in the section titled “Part I, Item 1A. Risk Factors” of our Annual Report on Form 10-K.

We have based our estimates on assumptions that may 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 but not limited to:

- continued market acceptance of our products and services and the ability of our products to meet our customers’ expectations;
- the cost and timing of establishing additional sales, marketing, and distribution capabilities;
- the extent to which we achieve 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 and services. We also may have to reduce marketing, customer support or other resources devoted to our products, or cease operations.

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

#### ***Contractual Obligations and Commitments***

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

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

#### **Critical Accounting Policies and Estimates**

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

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

#### **Related Party Transactions**

Refer to Note 13 – *Related Party Transactions* in the Notes to Consolidated Financial Statements included in this Quarterly Report on Form 10-Q for a full description of related party transactions.

#### **Non-GAAP Financial Measures**

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

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
GAAP gross profit	\$ 19,138	\$ 8,711	\$ 36,064	\$ 23,270
Shipping and handling costs	(1,623)	(1,868)	(3,451)	(3,649)
Non-GAAP gross profit	\$ 17,515	\$ 6,843	\$ 32,613	\$ 19,621
GAAP revenue	\$ 31,029	\$ 23,500	\$ 59,485	\$ 53,052
GAAP gross margin (gross profit as % of revenue)	61.7%	37.1%	60.6%	43.9%
Non-GAAP gross margin (non-GAAP gross profit as % of revenue)	56.4%	29.1%	54.8%	37.0%
GAAP total operating expenses	\$ 28,699	\$ 33,670	\$ 55,045	\$ 66,416
Shipping and handling costs	(1,623)	(1,868)	(3,451)	(3,649)
Non-GAAP total operating expenses	\$ 27,076	\$ 31,802	\$ 51,594	\$ 62,767
GAAP loss from operations	\$ (9,561)	\$ (24,959)	\$ (18,981)	\$ (43,146)
Non-GAAP loss from operations	\$ (9,561)	\$ (24,959)	\$ (18,981)	\$ (43,146)

**Recent Accounting Pronouncements**

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

**Item 3. Quantitative and Qualitative Disclosures About Market Risk**

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

**Item 4. Controls and Procedures**

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

Management has been actively engaged in the implementation of remediation efforts to address the material weaknesses, as well as other identified areas of risk. For a complete description of management’s remediation plan, see the section titled “Part II, Item 9A. Controls and Procedures” in our Annual Report on Form 10-K, as may be updated by Part I. Item 4. “Controls and Procedures” of our subsequently filed Quarterly Reports on Form 10-Q. For updates on management’s remediation plan as of June 30, 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 and principal accounting officer), to allow timely decisions regarding required disclosures. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our disclosure controls and procedures are designed to provide a reasonable assurance of achieving their objectives. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures as of June 30, 2023. Because we commenced implementing efforts to remediate the material weaknesses in our internal control over financial reporting in March 2023 and we have not had a sufficient period of time to test the operating effectiveness of our internal control over financial reporting, which we view as an integral part of our disclosure controls and procedures, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective at a reasonable assurance level as of June 30, 2023.

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

#### ***Management's Implementation of Remediation Plan***

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

- we have hired a Corporate Controller and are actively continuing to hire additional personnel with public company experience who have the appropriate level of expertise in the respective areas of accounting, SEC financial reporting, and associated internal controls commensurate with the type, volume, and complexity of our accounting operations and reporting requirements;
- we have engaged accounting advisory consultants to provide additional depth and breadth in our period end closes, technical accounting, financial reporting capabilities, and internal controls compliance 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 engaged a third-party service provider who has performed an assessment of our internal control design and operation and provided us recommendations to enhance the effectiveness of such controls;
- we have engaged a third-party consultant who assessed our current enterprise resource planning system and identified opportunities to enhance our use of the system through automating certain controls and processes, for which development of system enhancements are actively underway; and
- we have engaged an accounting advisory consultant 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 the first quarter of 2023 and will continue throughout fiscal year 2023.

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

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

***Changes in Internal Control over Financial Reporting***

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

## PART II — OTHER INFORMATION

### Item 1. Legal Proceedings

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

### Item 1A. Risk Factors

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

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

### Item 2. Unregistered Sales of Equity Securities 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

#### *Amendments to Bylaws*

On August 4, 2023, our Board of Directors approved and adopted amended and restated bylaws (the “Restated Bylaws”), which became effective the same day. The amendments effected by the Restated Bylaws:

- Address matters relating to Rule 14a-19 under the Securities Exchange Act of 1934 as amended, including (i) requiring that we disregard any proxies or votes for a stockholder’s proposed nominees if, after such stockholder provides notice pursuant to Rule 14a-19(b), such stockholder subsequently fails to comply with the requirements of Rule 14a-19(a)(2) or (3); and (ii) adding an obligation for any stockholder that provides notice pursuant to Rule 14a-19(b) to deliver to us, no later than five business days prior to the applicable meeting date, reasonable evidence that the requirements of Rule 14a-19(a)(3) have been satisfied; and
- Modify the provisions relating to adjournment procedures for stockholder meetings to reflect recent amendments to the Delaware General Corporation Law.

The foregoing description of the Restated Bylaws does not purport to be complete and is qualified in its entirety by reference to the full text of the Restated Bylaws filed as [Exhibit 3.2 to this Quarterly Report on Form 10-Q](#), which is incorporated herein by reference.

*Securities Trading Plans of Directors and Executive Officers*

During the three months ended June 30, 2023, none of our directors or officers adopted or terminated any contract, instruction or written plan for the purchase or sale of our securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) or any “non-Rule 10b5-1 trading arrangement” (as defined in Item 408(c) of Regulation S-K).

**Item 6. Exhibits**

<b>Exhibit Number</b>	<b>Exhibit Description</b>	<b>Filed Herewith</b>	<b>Incorporated by Reference herein from Form or Schedule</b>	<b>Filing Date</b>	<b>SEC File/Reg. Number</b>
3.1	<a href="#">Amended and Restated Certificate of Incorporation.</a>		8-K	12/15/2017	001-38319
3.2	<a href="#">Restated Bylaws.</a>	X			
31.1	<a href="#">Certification of the Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</a>	X			
31.2	<a href="#">Certification of the Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</a>	X			
32.1	<a href="#">Certifications of the Principal Executive Officer and Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</a>	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: August 8, 2023

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

Dated: August 8, 2023

By: /s/ Michael A. Doyle  
Michael A. Doyle  
Chief Financial Officer  
(principal financial officer and principal  
accounting officer)

**QUANTERIX CORPORATION**

**RESTATED BYLAWS**

**(effective August 4, 2023)**

*ARTICLE I - STOCKHOLDERS*

*Section 1. Annual Meeting.*

An annual meeting of the stockholders, for the election of directors to succeed those whose terms expire and for the transaction of such other business as may properly come before the meeting, shall be held at such place, on such date, and at such time as the Board of Directors shall fix. The Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but instead shall be held solely by means of remote communication as provided under the Delaware General Corporation Law.

*Section 2. Special Meetings.*

Special meetings of the stockholders of the Corporation may be called only by the Board of Directors acting pursuant to a resolution adopted by a majority of the Whole Board. For the purposes of these Restated Bylaws, the term "Whole Board" shall mean the total number of authorized directors whether or not there exist any vacancies in previously authorized directorships. Special meetings of the stockholders may be held at such place within or without the State of Delaware as may be stated in such resolution. The Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but instead shall be held solely by means of remote communication as provided under the Delaware General Corporation Law. Business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting.

*Section 3. Notice of Meetings.*

Notice of the place, if any, date, and time of all meetings of the stockholders, and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting, shall be given, not less than ten (10) nor more than sixty (60) days before the date on which the meeting is to be held, to each stockholder entitled to vote at such meeting, except as otherwise provided herein or required by law (meaning, here and hereinafter, as required from time to time by the Delaware General Corporation Law or the Certificate of Incorporation of the Corporation, as amended and restated from time to time).

When a meeting is adjourned to another place, if any, date or time (including an adjournment taken to address a technical failure to convene or continue a meeting using remote communication), notice need not be given of the adjourned meeting if the place, if any, date and time thereof, and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting, are (i) announced at the meeting at which the adjournment is taken, (ii) displayed, during the time scheduled for the meeting, on the same electronic network used to enable stockholders and proxy holders to participate in the meeting by means of remote communication or (iii) set forth in the notice of meeting given in accordance with this Section; provided, however, that if the date of any adjourned meeting is more than thirty (30) days after the date for which the meeting was originally noticed, or if a new record date is fixed for the adjourned meeting, notice of the place, if any, date, and time of the adjourned meeting, and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting, shall be given in conformity herewith. At any adjourned meeting, any business may be transacted which might have been transacted at the original meeting.

*Section 4. Quorum.*

At any meeting of the stockholders, the holders of a majority of the voting power of all of the shares of the stock entitled to vote at the meeting, present in person or by proxy, shall constitute a quorum for all purposes, unless or except to the extent that the presence of a larger number may be required by law or by rules of any stock exchange upon which the Corporation's securities are listed. Where a separate vote by a class or classes is required, a majority of the voting power of the shares of such class or classes present in person or represented by proxy shall constitute a quorum entitled to take action with respect to that vote on that matter.

If a quorum shall fail to attend any meeting, the chairman of the meeting may adjourn the meeting to another place, if any, date, or time.

*Section 5. Organization and Conduct of Business.*

The Chairman of the Board of Directors or, in his or her absence, the Chief Executive Officer of the Corporation or, in his or her absence, the President or, in his or her absence, such person as the Board of Directors may have designated, shall call to order any meeting of the stockholders and shall preside at and act as chairman of the meeting. In the absence of the Secretary of the Corporation, the secretary of the meeting shall be such person as the chairman of the meeting appoints. The chairman of any meeting of stockholders shall determine the order of business and the procedures at the meeting, including such regulation of the manner of voting and the conduct of discussion as he or she deems to be appropriate. The chairman of any meeting of stockholders shall have the power to adjourn the meeting to another place, if any, date and time. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting.

*Section 6. Notice of Stockholder Business and Nominations.*

*A. Annual Meetings of Stockholders.*

Nominations of persons for election to the Board of Directors and the proposal of business to be considered by the stockholders may be made at an annual meeting of stockholders (a) pursuant to the Corporation's notice of meeting or proxy materials with respect to such meeting, (b) by or at the direction of the Board of Directors or (c) by any stockholder of the Corporation who was a stockholder of record at the time of giving of notice provided for in this Section, who is entitled to vote at the meeting and who complies with the notice procedures set forth in this Section.

*B. Special Meetings of Stockholders.*

Only such business shall be conducted at a special meeting of stockholders as shall have been brought before the meeting pursuant to the notice of meeting given pursuant to Section 2 above. The notice of such special meeting shall include the purpose for which the meeting is called. Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected (a) by or at the direction of the Board of Directors or (b) provided that the Board of Directors has determined that directors shall be elected at such meeting, by any stockholder of the Corporation who is a stockholder of record at the time of giving of notice provided for in this Section, who shall be entitled to vote at the meeting and who complies with the notice procedures set forth in this Section.

*C. Certain Matters Pertaining to Stockholder Business and Nominations.*

(1) For nominations or other business to be properly brought before an annual meeting by a stockholder pursuant to clause (c) of paragraph A of this Section or a special meeting pursuant to paragraph B of this Section, (1) the stockholder must have given timely notice thereof in writing to the Secretary of the Corporation, (2) such other business must otherwise be a proper matter for stockholder action under the Delaware General Corporation Law, (3) if the stockholder, or the beneficial owner on whose behalf any such proposal or nomination is made, has provided the Corporation with a Solicitation Notice, as that term is defined in this paragraph, such stockholder or beneficial owner must, in the case of a proposal, have delivered a proxy statement and form of proxy to holders of at least the percentage of the Corporation's voting shares required under applicable law to carry any such proposal, or, in the case of a nomination or nominations, have delivered a proxy statement and form of proxy to holders of a percentage of the Corporation's voting shares reasonably believed by such stockholder or beneficial holder to be sufficient to elect the nominee or nominees proposed to be nominated by such stockholder, and must, in either case, have included in such materials the Solicitation Notice and (4) if no Solicitation Notice relating thereto has been timely provided pursuant to this Section, the stockholder or beneficial owner proposing such business or nomination must not have solicited a number of proxies sufficient to have required the delivery of such a Solicitation Notice under this Section.

To be timely, a stockholder's notice pertaining to an annual meeting shall be delivered to the Secretary at the principal executive offices of the Corporation not less than ninety (90) or more than one-hundred and twenty (120) days prior to the first anniversary (the "Anniversary") of the date of the preceding year's annual meeting; provided, however, that in the event that the date of the annual meeting is more than thirty (30) days before or more than thirty (30) days after the Anniversary, notice by the stockholder to be timely must be so delivered not earlier than the close of business on the one-hundred and twentieth (120th) day prior to such annual meeting and not later than the close of business on the later of the ninetieth (90th) day prior to such annual meeting or the close of business on the tenth (10th) day following the day on which public announcement of the date of such meeting is first made by the Corporation. Such stockholder's notice for an annual meeting or a special meeting shall set forth:

(a) as to each person whom the stockholder proposes to nominate for election or reelection as a director:

(i) all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors, or is otherwise required, in each case, pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Exchange Act") (including such person's written consent to being named in the proxy statement as a nominee and to serving as a director if elected);

(ii) a description of all direct and indirect compensation and other material monetary agreements, arrangements and understandings during the past three years, and any other material relationships, between or among such stockholder and beneficial owner, if any, and their respective affiliates and associates, on the one hand, and each proposed nominee, and his or her respective affiliates and associates, on the other hand, including, without limitation, all information that would be required to be disclosed pursuant to Item 404 of Regulation S-K promulgated under the Securities Act of 1933, as amended, if the stockholder making the nomination and any beneficial owner on whose behalf the nomination is made, if any, or any affiliate or associate thereof, were the "registrant" for purposes of such rule and the nominee were a director or executive officer of such registrant;

(iii) to the extent known by the stockholder, the name and address of any other securityholder of the Corporation who owns, beneficially or of record, any securities of the Corporation and who supports any nominee proposed by such stockholder; and

(iv) with respect to each nominee for election or reelection to the Board of Directors, include a completed and signed questionnaire, representation and agreement required by paragraph D of this Article;

(b) as to any other business that the stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, including the text of any resolutions proposed for consideration, the reasons for conducting such business at the meeting, any material interest in such business of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made, and to the extent known by the stockholder, the name and address of any other securityholder of the Corporation who owns, beneficially or of record, any securities of the Corporation and who supports any matter such stockholder intends to propose; and

(c) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made:

(i) the name and address of such stockholder, as they appear on the Corporation's books, and of such beneficial owner;

(ii) (A) the class or series and number of shares of the Corporation which are, directly or indirectly, owned beneficially and of record by such stockholder and such beneficial owner, (B) any option, warrant, convertible security, stock appreciation right, or similar right with an exercise or conversion privilege or a settlement payment or mechanism at a price related to any class or series of shares of the Corporation or with a value derived in whole or in part from the value of any class or series of shares of the Corporation, whether or not such instrument or right shall be subject to settlement in the underlying class or series of capital stock of the Corporation or otherwise (a "Derivative Instrument") directly or indirectly owned beneficially by such stockholder and any other direct or indirect opportunity to profit or share in any profit derived from any increase or decrease in the value of shares of the Corporation, (C) any proxy, contract, arrangement, understanding, or relationship pursuant to which such stockholder has a right to vote any shares of any security of the Corporation, (D) any short interest in any security of the Corporation (for purposes of these Bylaws, a person shall be deemed to have a short interest in a security if such person directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has the opportunity to profit or share in any profit derived from any decrease in the value of the subject security), (E) any rights to dividends on the shares of the Corporation owned beneficially by such stockholder that are separated or separable from the underlying shares of the Corporation, (F) any proportionate interest in shares of the Corporation or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which such stockholder is a general partner or, directly or indirectly, beneficially owns an interest in a general partner, and (G) any performance-related fees (other than an asset-based fee) that such stockholder is entitled to based on any increase or decrease in the value of shares of the Corporation or Derivative Instruments, if any, as of the date of such notice, including without limitation any such interests held by members of such

stockholder's immediate family sharing the same household (which information shall be supplemented by such stockholder and beneficial owner, if any, not later than ten (10) days after the record date for the meeting to disclose such ownership as of the record date; provided that if such date is after the date of the meeting, not later than the day prior to the meeting);

(iii) any other information relating to such stockholder and beneficial owner, if any, that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for, as applicable, the proposal and/or for the election of directors in a contested election pursuant to Regulation 14A under the Exchange Act and the rules and regulations promulgated thereunder;

(iv) a description of all agreements, arrangements and understandings between such stockholder and beneficial owner, if any, and any other person or persons (including their names) in connection with the proposal of such business by such stockholder; and

(v) a statement whether or not either such stockholder or beneficial owner intends or is part of a group which intends (A) to deliver a proxy statement and form of proxy to holders of, in the case of a proposal, at least the percentage of the Corporation's voting shares required under applicable law to carry the proposal or, in the case of a nomination or nominations, a sufficient number of holders of the Corporation's voting shares to elect such nominee or nominees (an affirmative statement of such intent, a "Solicitation Notice"), and (B) to solicit proxies or votes in support of any proposed director nominees in accordance with Rule 14a-19 under the Exchange Act.

(2) Notwithstanding anything in the second sentence of paragraph C(1) of this Section to the contrary, in the event that the number of directors to be elected to the Board of Directors of the Corporation is increased and there is no public announcement by the Corporation naming all of the nominees for director or specifying the size of the increased Board of Directors at least fifty-five (55) days prior to the Anniversary (or, if the annual meeting is held more than thirty (30) days before or thirty (30) days after the Anniversary, at least fifty-five (55) days prior to such annual meeting), a stockholder's notice required by this Section shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be delivered to the Secretary at the principal executive office of the Corporation not later than the close of business on the tenth (10th) day following the day on which such public announcement is first made by the Corporation.

(3) In the event the Corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder may nominate a person or persons (as the case may be), for election to such position(s) as specified in the Corporation's notice of meeting, if the stockholder's notice required by paragraph C(1) of this Section shall be delivered to the Secretary at the principal executive offices of the Corporation not earlier than

the ninetieth (90th) day prior to such special meeting nor later than the close of business on the later of the sixtieth (60th) day prior to such special meeting, or the tenth (10th) day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting.

*D. General.*

(1) Only such persons who are nominated in accordance with the procedures set forth in this Section shall be eligible to serve as directors and only such business shall be conducted at a meeting of stockholders as shall have been brought before the meeting in accordance with the procedures set forth in this Section. Except as otherwise provided by law or these Bylaws, the chairman of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance herewith, to declare that such defective proposal or nomination shall be disregarded.

(2) For purposes of this Section, “public announcement” shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act.

(3) Notwithstanding the foregoing provisions of this Section, a stockholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder with respect to the matters set forth herein. Nothing in this Section shall be deemed to affect any rights (i) of stockholders to request inclusion of proposals in the Corporation’s proxy statement pursuant to Rule 14a-8 under the Exchange Act or (ii) of the holders of shares of any series of Preferred Stock to elect directors under specified circumstances.

(4) In addition to the requirements set forth elsewhere in these Bylaws, to be eligible to be a nominee for election or reelection as a director of the Corporation, a person must deliver, in accordance with the time periods prescribed for delivery of notice under Section 6(C)(1) of this Article, to the Secretary of the Corporation at the principal executive offices of the Corporation a completed and signed questionnaire with respect to the background and qualification of such person and the background of any other person or entity on whose behalf the nomination is being made (which questionnaire shall be provided by the Secretary upon written request) and a written representation and agreement (in the form provided by the Secretary upon written request) that such person (i) is not and will not become a party to (A) any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity as to how such person, if elected as a director of the Corporation, will act or vote on any issue or question (a “Voting Commitment”) that has not been disclosed to the Corporation or (B) any Voting Commitment that could limit or interfere with such person’s ability to comply, if elected as a director of the Corporation, with such person’s fiduciary duties under applicable law, (ii) is not and will not become a party to any agreement, arrangement or understanding with any person or

entity other than the Corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with service or action as a director that has not been disclosed therein, and (iii) in such person's individual capacity and on behalf of any person or entity on whose behalf the nomination is being made, would be in compliance, if elected as a director of the Corporation, and will comply with, applicable law and all applicable publicly disclosed corporate governance, code of conduct and ethics, conflict of interest, corporate opportunities, trading and any other policies and guidelines of the Corporation applicable to directors.

(5) Notwithstanding the foregoing provisions of this Section, unless otherwise required by law, if the stockholder (or a qualified representative of the stockholder) does not appear at the annual or special meeting of stockholders of the Corporation to make its nomination or propose any other matter, such nomination shall be disregarded and such other proposed matter shall not be transacted, even if proxies in respect of such vote have been received by the Corporation. For purposes of this Section, to be considered a "qualified representative" of the stockholder, a person must be a duly authorized officer, manager or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders, and such person must produce such writing or electronic transmission, or a reliable reproduction of the writing or electronic transmission, at the commencement of the meeting of stockholders.

(6) Without limiting the other provisions and requirements of this Section, unless otherwise required by law, if any stockholder (A)(i) provides notice pursuant to Rule 14a-19(b) under the Exchange Act and (ii) subsequently fails to comply with the requirements of Rule 14a-19(a)(2) and Rule 14a-19(a)(3) under the Exchange Act or (B) notifies the Corporation that such stockholder no longer intends to solicit proxies in accordance with Rule 14a-19 under the Exchange Act, then the Corporation shall disregard any proxies or votes solicited for such stockholder's nominees. Upon request by the Corporation, if any stockholder provides notice pursuant to Rule 14a-19(b) under the Exchange Act, such stockholder shall deliver to the Corporation, no later than five business days prior to the meeting of stockholders, reasonable evidence that it has met the requirements of Rule 14a-19(a)(3) under the Exchange Act.

#### *Section 7. Proxies and Voting.*

At any meeting of the stockholders, every stockholder entitled to vote may vote in person or by proxy authorized by an instrument in writing or by a transmission permitted by law filed in accordance with the procedure established for the meeting. Any copy, facsimile telecommunication or other reliable reproduction of the writing or transmission created pursuant to this Section may be substituted or used in lieu of the original writing or transmission for any and all purposes for which the original writing or transmission could be used, provided that such copy, facsimile telecommunication or other reproduction shall be a complete reproduction of the entire original writing or transmission.

All voting, including on the election of directors but excepting where otherwise required by law, may be by voice vote. Any vote not taken by voice shall be taken by ballots, each of which shall state the name of the stockholder or proxy voting and such other information as may be required under the procedure established for the meeting. The Corporation may, and to the extent required by law, shall, in advance of any meeting of stockholders, appoint one or more inspectors to act at the meeting and make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at a meeting of stockholders, the person presiding at the meeting may, and to the extent required by law, shall, appoint one or more inspectors to act at the meeting. Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of his or her ability. Every vote taken by ballots shall be counted by a duly appointed inspector or inspectors.

Except as otherwise provided in the terms of any class or series of Preferred Stock of the Corporation, all elections at any meeting of stockholders shall be determined by a plurality of the votes cast, and except as otherwise required by law, these Bylaws or the rules of any stock exchange upon which the Corporation's securities are listed, all other matters determined by stockholders at a meeting shall be determined by a majority of the votes cast affirmatively or negatively.

*Section 8. Action Without Meeting.*

Any action required or permitted to be taken by the stockholders of the Corporation may be effected only at a duly called annual or special meeting of stockholders of the Corporation and may not be effected by written consent.

*Section 9. Stock List.*

A complete list of stockholders entitled to vote at any meeting of stockholders, arranged in alphabetical order for each class of stock and showing the address of each such stockholder and the number of shares registered in his or her name, shall be open to the examination of any such stockholder for a period of at least ten (10) days prior to the meeting in the manner provided by law.

The stock list shall also be open to the examination of any stockholder during the whole time of the meeting as provided by law. Such list shall presumptively determine the identity of the stockholders entitled to examine such stock list and to vote at the meeting and the number of shares held by each of them.

*ARTICLE II - BOARD OF DIRECTORS*

*Section 1. General Powers, Number, Election, Tenure, Qualification and Chairman.*

A. The business and affairs of the Corporation shall be managed by or under the direction of its Board of Directors.

B. Subject to the rights of the holders of shares of any series of Preferred Stock then outstanding to elect additional directors under specified circumstances, the number of directors shall be fixed from time to time exclusively by the Board of Directors pursuant to a resolution adopted by a majority of the Whole Board.

C. Subject to the rights of the holders of shares of any series of Preferred Stock then outstanding to elect additional directors under specified circumstances, the Board of Directors of the Corporation shall be divided into three classes, with the term of office of the first class to expire at the first annual meeting of stockholders following the initial classification of directors, the term of office of the second class to expire at the second annual meeting of stockholders following the initial classification of directors, and the term of office of the third class to expire at the third annual meeting of stockholders following the initial classification of directors. At each annual meeting of stockholders, directors elected to succeed those directors whose terms expire, other than directors elected by the holders of shares of any series of Preferred Stock under specified circumstances, shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after their election and until their successors are duly elected and qualified, and if authorized by a resolution of the Board of Directors, directors may be elected to fill any vacancy on the Board of Directors, regardless of how such vacancy shall have been created. The Board of Directors is authorized to assign members of the Board already in office to such classes as it may determine at the time the classification of the Board of Directors becomes effective.

D. The Chairman of the Board and any Vice Chairman appointed to act in the absence of the Chairman, if any, shall be elected by and from the Board of Directors. The Chairman of the Board shall preside at all meetings of the Board of Directors and stockholders at which he or she is present and shall have such authority and perform such duties as may be prescribed by these Bylaws or from time to time be determined by the Board of Directors.

*Section 2. Vacancies and Newly Created Directorships.*

Subject to the rights of the holders of shares of any series of Preferred Stock then outstanding, newly created directorships resulting from any increase in the authorized number of directors or any vacancies in the Board of Directors resulting from death, resignation, retirement, disqualification, removal from office or other cause shall, unless otherwise required by law or by resolution of the Board of Directors, be filled only by a majority vote of the directors then in office even though less than a quorum, or by a sole remaining director, and not by stockholders, and directors so chosen shall serve for a term expiring at the annual meeting of stockholders at which the term of office of the class to which they have been chosen expires or until such director's successor shall have been duly elected and qualified. No decrease in the authorized number of directors shall shorten the term of any incumbent director. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law, may exercise the powers of the full Board of Directors until the vacancy is filled.

*Section 3. Resignation and Removal.*

Any director may resign at any time upon notice given in writing or by electronic transmission to the Corporation at its principal place of business or to the Chairman of the Board, Chief Executive Officer, President or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event. Subject to the rights of the holders of shares of any series of Preferred Stock then outstanding, any director, or the entire Board of Directors, may be removed from office at any time only for cause and only by the affirmative vote of the holders of at least seventy-five percent (75%) of the voting power of all of the then outstanding shares of capital stock of the Corporation entitled to vote at an election of directors, voting together as a single class.

*Section 4. Regular Meetings.*

Regular meetings of the Board of Directors shall be held at such place or places, on such date or dates, and at such time or times as shall have been established by the Board of Directors and publicized among all directors. A notice of each regular meeting shall not be required.

*Section 5. Special Meetings.*

Special meetings of the Board of Directors may be called by the Chairman of the Board of Directors or the Chief Executive Officer, and shall be called by the Secretary if requested by a majority of the Whole Board, and shall be held at such place, on such date, and at such time as he or she or they shall fix. Notice of the place, date, and time of each such special meeting shall be given to each director by whom it is not waived by mailing written notice not less than five (5) days before the meeting or orally, by telegraph, telex, cable, telecopy or electronic transmission given not less than twenty-four (24) hours before the meeting. Unless otherwise indicated in the notice thereof, any and all business may be transacted at a special meeting.

*Section 6. Quorum.*

At any meeting of the Board of Directors, a majority of the total number of the Whole Board shall constitute a quorum for all purposes. If a quorum shall fail to attend any meeting, a majority of those present may adjourn the meeting to another place, date, or time, without further notice or waiver thereof.

*Section 7. Action by Consent.*

Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors may be taken without a meeting, if all members of the Board consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of

proceedings of the Board. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

*Section 8. Participation in Meetings By Conference Telephone.*

Members of the Board of Directors, or of any committee thereof, may participate in a meeting of such Board or committee by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other and such participation shall constitute presence in person at such meeting.

*Section 9. Conduct of Business.*

At any meeting of the Board of Directors, business shall be transacted in such order and manner as the Board may from time to time determine, and all matters shall be determined by the vote of a majority of the directors present, except as otherwise provided herein or required by law.

*Section 10. Powers.*

The Board of Directors may, except as otherwise required by law, exercise all such powers and do all such acts and things as may be exercised or done by the Corporation, including, without limiting the generality of the foregoing, the unqualified power:

- (1) To declare dividends from time to time in accordance with law;
- (2) To purchase or otherwise acquire any property, rights or privileges on such terms as it shall determine;
- (3) To authorize the creation, making and issuance, in such form as it may determine, of written obligations of every kind, negotiable or non-negotiable, secured or unsecured, to borrow funds and guarantee obligations, and to do all things necessary in connection therewith;
- (4) To remove any officer of the Corporation with or without cause, and from time to time to devolve the powers and duties of any officer upon any other person for the time being;
- (5) To confer upon any officer of the Corporation the power to appoint, remove and suspend subordinate officers, employees and agents;
- (6) To adopt from time to time such stock, option, stock purchase, bonus or other compensation plans for directors, officers, employees and agents of the Corporation and its subsidiaries as it may determine;

- (7) To adopt from time to time such insurance, retirement, and other benefit plans for directors, officers, employees and agents of the Corporation and its subsidiaries as it may determine; and,
- (8) To adopt from time to time regulations, not inconsistent with these Bylaws, for the management of the Corporation's business and affairs.

*Section 11. Compensation of Directors.*

Unless otherwise restricted by the Certificate of Incorporation, the Board of Directors shall have the authority to fix the compensation of the directors. The directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or paid a stated salary or paid other compensation as director. No such payment shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed compensation for attending committee meetings and payment of their expenses, if any, of attendance at each committee meeting.

*ARTICLE III - COMMITTEES*

*Section 1. Committees of the Board of Directors.*

The Board of Directors, by a vote of a majority of the Board of Directors, may from time to time designate committees of the Board, with such lawfully delegable powers and duties as it thereby confers, to serve at the pleasure of the Board and shall, for those committees and any others provided for herein, elect a director or directors to serve as the member or members, designating, if it desires, other directors as alternate members who may replace any absent or disqualified member at any meeting of the committee. Any such committee, to the extent provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation to the fullest extent authorized by law. In the absence or disqualification of any member of any committee and any alternate member in his or her place, the member or members of the committee present at the meeting and not disqualified from voting, whether or not he or she or they constitute a quorum, may by unanimous vote appoint another member of the Board of Directors to act at the meeting in the place of the absent or disqualified member.

*Section 2. Conduct of Business.*

Each committee may determine the procedural rules for meeting and conducting its business and shall act in accordance therewith, except as otherwise provided herein or required by law. Adequate provision shall be made for notice to members of all meetings; one-third (1/3) of the members of any committee shall constitute a quorum unless the committee shall consist of one (1) or two (2) members, in which event one (1) member shall constitute a quorum; and all matters shall be

determined by a majority vote of the members present. Action may be taken by any committee without a meeting if all members thereof consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of the proceedings of such committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

#### ARTICLE IV - OFFICERS

##### *Section 1. Enumeration.*

The officers of the Corporation shall consist of a Chief Executive Officer, President, Chief Financial Officer, Treasurer, Secretary and such other officers as the Board of Directors or the Chief Executive Officer may determine, including, but not limited to, one or more Vice Presidents, Assistant Treasurers and Assistant Secretaries. The salaries of officers elected by the Board of Directors shall be fixed from time to time by the Board of Directors or by such officers as may be designated by resolution of the Board of Directors.

##### *Section 2. Election.*

The Chief Executive Officer, President, Chief Financial Officer, Treasurer and Secretary shall be elected annually by the Board of Directors at their first meeting following the annual meeting of the stockholders. The Board of Directors or the Chief Executive Officer may, from time to time, elect or appoint such other officers as it or he or she may determine, including, but not limited to, one or more Vice Presidents, Assistant Treasurers and Assistant Secretaries.

##### *Section 3. Qualification.*

No officer need be a director. Two or more offices may be held by any one person. If required by vote of the Board of Directors, an officer shall give bond to the Corporation for the faithful performance of his or her duties, in such form and amount and with such sureties as the Board of Directors may determine. The premiums for such bonds shall be paid by the Corporation.

##### *Section 4. Tenure and Removal.*

Each officer elected or appointed by the Board of Directors shall hold office until the first meeting of the Board of Directors following the next annual meeting of the stockholders and until his or her successor is elected or appointed and qualified, or until he or she dies, resigns, is removed or becomes disqualified, unless a shorter term is specified in the vote electing or appointing said officer. Each officer appointed by the Chief Executive Officer shall hold office until his or her successor is elected or appointed and qualified, or until he or she dies, resigns, is removed or becomes disqualified, unless a shorter term is specified by any agreement or other instrument appointing such officer. Any officer may resign by notice given in writing or by electronic transmission of his or her resignation to the Chief Executive Officer, the President, or the Secretary, or to the Board of Directors at a meeting

of the Board. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event. Any officer elected or appointed by the Board of Directors may be removed from office with or without cause only by vote of a majority of the directors. Any officer appointed by the Chief Executive Officer may be removed with or without cause by the Chief Executive Officer or by vote of a majority of the directors then in office.

*Section 5. Chief Executive Officer.*

The Chief Executive Officer shall be the chief executive officer of the Corporation and shall, subject to the direction of the Board of Directors, have the responsibility for the general management and control of the business and affairs of the Corporation. Unless otherwise provided by resolution of the Board of Directors, in the absence of the Chairman of the Board, the Chief Executive Officer shall preside at all meetings of the stockholders and, if a director, meetings of the Board of Directors. The Chief Executive Officer shall have general supervision and direction of all of the other officers (other than the Chairman of the Board or any Vice Chairman), employees and agents of the Corporation. The Chief Executive Officer shall also have the power and authority to determine the duties of all officers, employees and agents of the Corporation, shall determine the compensation of any officers whose compensation is not established by the Board of Directors and shall have the power and authority to sign all stock certificates, contracts and other instruments of the Corporation which are authorized.

*Section 6. President.*

Except for meetings at which the Chief Executive Officer or the Chairman of the Board, if any, presides, the President shall, if present, preside at all meetings of stockholders, and if a director, at all meetings of the Board of Directors. The President shall, subject to the control and direction of the Chief Executive Officer and the Board of Directors, have and perform such powers and duties as may be prescribed by these Bylaws or from time to time be determined by the Chief Executive Officer or the Board of Directors. The President shall have power to sign all stock certificates, contracts and other instruments of the Corporation which are authorized. In the absence of a Chief Executive Officer, the President shall be the chief executive officer of the Corporation and shall, subject to the direction of the Board of Directors, have responsibility for the general management and control of the business and affairs of the Corporation and shall have general supervision and direction of all of the officers (other than the Chairman of the Board or any Vice Chairman or the Chief Executive Officer), employees and agents of the Corporation.

*Section 7. Vice Presidents.*

The Vice Presidents, if any, in the order of their election, or in such other order as the Board of Directors or the Chief Executive Officer may determine, shall have and perform the powers and duties of the President (or such of the powers and duties as the Board of Directors or the Chief Executive Officer may determine) whenever the President is absent or unable to act. The Vice Presidents, if

any, shall also have such other powers and duties as may from time to time be determined by the Board of Directors or the Chief Executive Officer.

*Section 8. Chief Financial Officer, Treasurer and Assistant Treasurers.*

The Chief Financial Officer shall, subject to the control and direction of the Board of Directors and the Chief Executive Officer, be the chief financial officer of the Corporation and shall have and perform such powers and duties as may be prescribed in these Bylaws or be determined from time to time by the Board of Directors and the Chief Executive Officer. All property of the Corporation in the custody of the Chief Financial Officer shall be subject at all times to the inspection and control of the Board of Directors and the Chief Executive Officer. The Chief Financial Officer shall have the responsibility for maintaining the financial records of the Corporation. The Chief Financial Officer shall make such disbursements of the funds of the Corporation as are authorized and shall render from time to time an account of all such transactions and of the financial condition of the Corporation.

Unless the Board of Directors has designated another person as the Corporation's Treasurer, the Chief Financial Officer shall also be the Treasurer. Unless otherwise voted by the Board of Directors, the Treasurer (if different than the Chief Financial Officer) and each Assistant Treasurer, if any, shall have and perform the powers and duties of the Chief Financial Officer whenever the Chief Financial Officer is absent or unable to act, and may at any time exercise such of the powers of the Chief Financial Officer, and such other powers and duties, as may from time to time be determined by the Board of Directors, the Chief Executive Officer or the Chief Financial Officer.

*Section 9. Secretary and Assistant Secretaries.*

The Board of Directors or the Chief Executive Officer shall appoint a Secretary and, in his or her absence, an Assistant Secretary. Unless otherwise directed by the Board of Directors, the Secretary or, in his or her absence, any Assistant Secretary, shall attend all meetings of the directors and stockholders and shall record all votes of the Board of Directors and stockholders and minutes of the proceedings at such meetings. The Secretary or, in his or her absence, any Assistant Secretary, shall notify the directors of their meetings, and shall have and perform such other powers and duties as may from time to time be determined by the Board of Directors. If the Secretary or an Assistant Secretary is elected but is not present at any meeting of directors or stockholders, a temporary Secretary may be appointed by the directors or the Chief Executive Officer at the meeting.

*Section 10. Bond.*

If required by the Board of Directors, any officer shall give the Corporation a bond in such sum and with such surety or sureties and upon such terms and conditions as shall be satisfactory to the Board of Directors, including without limitation a bond for the faithful performance of the duties of his or her office and for the restoration to the Corporation of all books, papers, vouchers, money and other property of whatever kind in his or her possession or under his or her control and belonging to the Corporation.

*Section 11. Action with Respect to Securities of Other Corporations.*

Unless otherwise directed by the Board of Directors or the Chief Executive Officer, the Chief Executive Officer, the President, the Chief Financial Officer or the Treasurer shall have power to vote and otherwise act on behalf of the Corporation, in person or by proxy, at any meeting of stockholders of or with respect to any action of stockholders of any other corporation in which this Corporation may hold securities and otherwise to exercise any and all rights and powers which this Corporation may possess by reason of its ownership of securities in such other corporation.

*ARTICLE V - STOCK*

*Section 1. Certificated and Uncertificated Stock.*

Shares of the Corporation's stock may be certificated or uncertificated, as provided under the General Corporation Law of the State of Delaware, and shall be entered in the books of the Corporation and registered as they are issued. Any certificates representing shares of stock shall be in such form as the Board of Directors shall prescribe, certifying the number and class of shares of the stock owned by the stockholder. Any certificates issued to a stockholder of the Corporation shall bear the name of the Corporation and shall be signed by any two (2) authorized officers of the Corporation. Any or all of the signatures on the certificate may be by facsimile.

*Section 2. Transfers of Stock.*

Transfers of stock shall be made only upon the transfer books of the Corporation kept at an office of the Corporation or by transfer agents designated to transfer shares of the stock of the Corporation. Except where a certificate is issued in accordance with Section 4 of this Article of these Bylaws or in the case of uncertificated shares, an outstanding certificate for the number of shares involved shall be surrendered for cancellation before a new certificate is issued therefor.

*Section 3. Record Date.*

In order that the Corporation may determine the stockholders entitled to notice of any meeting of stockholders, or to receive payment of any dividend or other distribution or allotment of any rights or to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date on which the resolution fixing the record date is adopted and which record date shall not be more than sixty (60) nor less than ten (10) days before the date of any meeting of stockholders, nor more than sixty (60) days prior to the time for such other action as hereinbefore described. If the Board of Directors so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board of Directors determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of and to vote at a meeting of stockholders shall be at the

close of business on the day next preceding the day on which notice is given or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held, and, for determining stockholders entitled to receive payment of any dividend or other distribution or allotment of rights or to exercise any rights of change, conversion or exchange of stock or for any other purpose, the record date shall be at the close of business on the day on which the Board of Directors adopts a resolution relating thereto.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance with the foregoing provisions of this Section 3 at the adjourned meeting.

*Section 4. Lost, Stolen or Destroyed Certificates.*

In the event of the loss, theft or destruction of any certificate of stock, the Corporation may issue a new certificate of stock or uncertificated shares in place of any certificate previously issued by the Corporation pursuant to such regulations as the Board of Directors may establish concerning proof of such loss, theft or destruction and concerning the giving of a satisfactory bond or bonds of indemnity.

*Section 5. Regulations.*

The issue, transfer, conversion and registration of certificates of stock shall be governed by such other regulations as the Board of Directors may establish.

*Section 6. Interpretation.*

The Board of Directors shall have the power to interpret all of the terms and provisions of these Bylaws, which interpretation shall be conclusive.

*ARTICLE VI - NOTICES*

*Section 1. Notices.*

If mailed, notice to stockholders shall be deemed given when deposited in the mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the Corporation. Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders may be given by electronic transmission in the manner provided in Section 232 of the Delaware General Corporation Law.

*Section 2. Waiver of Notice.*

A written waiver of any notice, signed by a stockholder or director, or waiver by electronic transmission by such person, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to the notice required to be given to such person. Neither the business nor the purpose of any meeting need be specified in such a waiver. Attendance at any meeting shall constitute waiver of notice except attendance for the express purpose of objecting at the beginning of the meeting to the transaction of business because the meeting is not lawfully called or convened.

*ARTICLE VII -INDEMNIFICATION OF DIRECTORS AND OFFICERS*

*Section 1. Right to Indemnification.*

Each person who was or is made a party or is threatened to be made a party to or is otherwise involved (including, without limitation, as a witness) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director or an officer of the Corporation or is or was serving at the request of the Corporation as a director, officer, or trustee of another corporation, or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit plan (hereinafter an "Indemnitee"), whether the basis of such proceeding is alleged action in an official capacity as a director, officer or trustee or in any other capacity while serving as a director, officer or trustee, shall be indemnified and held harmless by the Corporation to the fullest extent permitted by the Delaware General Corporation Law, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), against all expense, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such Indemnitee in connection therewith; provided, however, that, except as provided in Section 3 of this Article with respect to proceedings to enforce rights to indemnification or an advancement of expenses or as otherwise required by law, the Corporation shall not be required to indemnify or advance expenses to any such Indemnitee in connection with a proceeding (or part thereof) initiated by such Indemnitee unless such proceeding (or part thereof) was authorized by the Board of Directors of the Corporation.

*Section 2. Right to Advancement of Expenses.*

In addition to the right to indemnification conferred in Section 1 of this Article, an Indemnitee shall also have the right to be paid by the Corporation the expenses (including attorney's fees) incurred in defending any such proceeding in advance of its final disposition; provided, however, that, if the Delaware General Corporation Law requires, an advancement of expenses incurred by an Indemnitee in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such Indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such Indemnitee,

to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that such Indemnitee is not entitled to be indemnified for such expenses under this Section 2 or otherwise.

*Section 3. Right of Indemnitees to Bring Suit.*

If a claim under Section 1 or 2 of this Article is not paid in full by the Corporation within sixty (60) days after a written claim has been received by the Corporation, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be twenty (20) days, the Indemnitee may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim. To the fullest extent permitted by law, if successful in whole or in part in any such suit, or in a suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Indemnitee shall also be entitled to be paid the expenses of prosecuting or defending such suit. In (i) any suit brought by the Indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the Indemnitee to enforce a right to an advancement of expenses) it shall be a defense that, and (ii) in any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that, the Indemnitee has not met any applicable standard for indemnification set forth in the Delaware General Corporation Law. Neither the failure of the Corporation (including its directors who are not parties to such action, a committee of such directors, independent legal counsel, or its stockholders) to have made a determination prior to the commencement of such suit that indemnification of the Indemnitee is proper in the circumstances because the Indemnitee has met the applicable standard of conduct set forth in the Delaware General Corporation Law, nor an actual determination by the Corporation (including its directors who are not parties to such action, a committee of such directors, independent legal counsel, or its stockholders) that the Indemnitee has not met such applicable standard of conduct, shall create a presumption that the Indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the Indemnitee, be a defense to such suit. In any suit brought by the Indemnitee to enforce a right to indemnification or to an advancement of expenses hereunder, or brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the Indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article or otherwise shall be on the Corporation.

*Section 4. Non-Exclusivity of Rights.*

The rights to indemnification and to the advancement of expenses conferred in this Article shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, the Corporation's Certificate of Incorporation as amended from time to time, these Bylaws, any agreement, any vote of stockholders or disinterested directors or otherwise.

*Section 5. Insurance.*

The Corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust

or other enterprise against any expense, liability or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the Delaware General Corporation Law.

*Section 6. Indemnity Agreements.*

The Corporation may enter into indemnity agreements with the persons who are members of its Board of Directors from time to time, and with such officers, employees and agents of the Corporation and with such officers, directors, employees and agents of subsidiaries as the Board of Directors may designate, such indemnity agreements to provide in substance that the Corporation will indemnify such persons as contemplated by this Article, and to include any other substantive or procedural provisions regarding indemnification as are not inconsistent with Delaware law. The provisions of such indemnity agreements shall prevail to the extent that they limit or condition or differ from the provisions of this Article.

*Section 7. Indemnification of Employees and Agents of the Corporation.*

The Corporation may, to the extent authorized from time to time by the Board of Directors, grant rights to indemnification and to the advancement of expenses to any employee or agent of the Corporation to the fullest extent of the provisions of this Article with respect to the indemnification and advancement of expenses of directors and officers of the Corporation.

*Section 8. Nature of Rights.*

The rights conferred upon Indemnitees in this Article shall be contract rights and such rights shall continue as to an Indemnitee who has ceased to be a director, officer, employee, agent or trustee and shall inure to the benefit of the Indemnitee's heirs, executors and administrators. Any amendment, alteration or repeal of this Article that adversely affects any right of an Indemnitee or its successors shall be prospective only and shall not limit, eliminate, or impair any such right with respect to any proceeding involving any occurrence or alleged occurrence of any action or omission to act that took place prior to any such amendment, alteration or repeal.

*Section 9. Severability.*

If any word, clause, provision or provisions of this Article shall be held to be invalid, illegal or unenforceable for any reason whatsoever: (i) the validity, legality and enforceability of the remaining provisions of this Article (including, without limitation, each portion of any section of this Article containing any such provision held to be invalid, illegal or unenforceable, that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby; and (ii) to the fullest extent possible, the provisions of this Article (including, without limitation, each such portion of any section of this Article containing any such provision held to be invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable.

## ARTICLE VIII - CERTAIN TRANSACTIONS

### Section 1. *Transactions with Interested Parties.*

No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association, or other organization in which one or more of its directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or committee thereof which authorizes the contract or transaction or solely because the votes of such director or officer are counted for such purpose, if:

(a) The material facts as to his or her relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; or

(b) The material facts as to his or her relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified, by the Board of Directors, a committee thereof, or the stockholders.

### Section 2. *Quorum.*

Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

## ARTICLE IX - MISCELLANEOUS

### Section 1. *Facsimile Signatures.*

In addition to the provisions for use of facsimile signatures elsewhere specifically authorized in these Bylaws, facsimile signatures of any officer or officers of the Corporation may be used whenever and as authorized by the Board of Directors or a committee thereof.

### Section 2. *Corporate Seal.*

The Board of Directors may provide a suitable seal, containing the name of the Corporation, which seal shall be in the charge of the Secretary. If and when so directed by the Board of Directors

or a committee thereof, duplicates of the seal may be kept and used by the Treasurer or by an Assistant Secretary or Assistant Treasurer.

*Section 3. Reliance upon Books, Reports and Records.*

Each director, each member of any committee designated by the Board of Directors, and each officer of the Corporation shall, in the performance of his or her duties, be fully protected in relying in good faith upon the books of account or other records of the Corporation and upon such information, opinions, reports or statements presented to the Corporation by any of its officers or employees, or committees of the Board of Directors so designated, or by any other person as to matters which such director or committee member reasonably believes are within such other person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Corporation.

*Section 4. Fiscal Year.*

Except as otherwise determined by the Board of Directors from time to time, the fiscal year of the Corporation shall end on the last day of December of each year.

*Section 5. Time Periods.*

In applying any provision of these Bylaws which requires that an act be done or not be done a specified number of days prior to an event or that an act be done during a period of a specified number of days prior to an event, calendar days shall be used, the day of the doing of the act shall be excluded, and the day of the event shall be included.

*Section 6. Pronouns.*

Whenever the context may require, any pronouns used in these Bylaws shall include the corresponding masculine, feminine or neuter forms.

*ARTICLE X - AMENDMENTS*

The Board of Directors is expressly empowered to adopt, amend or repeal these Bylaws. Any adoption, amendment or repeal of these Bylaws by the Board of Directors shall require the approval of a majority of the Whole Board. The stockholders shall also have power to adopt, amend or repeal these Bylaws; provided, that in addition to any vote of the holders of any class or series of stock of the Corporation required by law, the Restated Certificate of Incorporation, these Bylaws or any Preferred Stock, the affirmative vote of the holders of at least seventy-five percent (75%) of the voting power of all of the then outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required for the stockholders to adopt, amend or repeal any provision of these Bylaws; provided, however, that if the Board of Directors recommends that stockholders approve such

adoption, amendment or repeal, such adoption, amendment or repeal shall only require, in addition to any vote of the holders of any class or series of the capital stock of the Corporation required by law, the Restated Certificate of Incorporation, these Bylaws or any Preferred Stock, the affirmative vote of the holders of the majority of the voting power of all of the then outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class.

## 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: August 8, 2023

/s/ Masoud Toloue

Masoud Toloue

President and Chief Executive Officer

(principal executive officer)

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## 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: August 8, 2023

/s/ Michael A. Doyle

Michael A. Doyle

Chief Financial Officer

(principal financial officer and principal accounting officer)

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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 June 30, 2023 (the “Form 10-Q”) of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: August 8, 2023

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

Dated: August 8, 2023

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

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