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

FORM 10-Q

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

For the quarterly period ended September 30, 2023

☐ 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: 001-40443

Singular Genomics Systems, Inc.
(Exact name of Registrant as specified in its charter)

Delaware	**81-2948451**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**

3010 Science Park Road
San Diego, California 92121
(858) 333-7830
(Registrant's address of principal executive offices and telephone number, including area code)

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

Title of each class	**Trading Symbol**	**Name of each exchange on which registered**
Common Stock, $0.0001 par value per share	OMIC	Nasdaq Global Select Market

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

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

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

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

There were 73,384,510 shares of common stock, $0.0001 par value, outstanding as of October 31, 2023.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This filing contains forward-looking statements. All statements other than statements of historical facts contained in this report, including statements regarding our future results of operations and financial position, future revenue, business strategy, prospects, products, research and development costs, timing and likelihood of success, as well as plans and objectives of management for future operations, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that are in some cases beyond our control and may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

The words “anticipate,” “believe,” contemplate,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “might,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “will” or “would” or the negative of these terms or other similar expressions are intended to identify forward-looking statements. Forward-looking statements contained in this report include, but are not limited to, statements about:

- estimates of our addressable market, market growth, future revenue, expenses, capital requirements and our needs for additional financing;
- our ability to timely and successfully complete the development and implement our commercialization plan for the G4, PX and our product pipeline;
- the implementation of our business model and strategic plans for the G4, PX and our product pipeline;
- our expectations regarding the rate and degree of market acceptance of the G4, PX and our product pipeline;
- our ability to compete with competitive companies and technologies in our industry;
- our ability to manage and grow our business and commercialize the G4, PX and our product pipeline;
- our ability to develop and commercialize new products and product enhancements;
- the impact of downward macroeconomic pressures on our business;
- our ability to establish and maintain intellectual property protection for our products or avoid or defend claims of infringement;
- our ability to fulfill our contractual commitments;
- the performance of third-party manufacturers and suppliers;
- our ability to effectively manufacture our products;
- the potential effects of government regulation;
- our ability to hire and retain key personnel and to manage our future growth effectively;
- our ability to obtain additional financing on favorable terms to us or at all;
- our expectations regarding use of proceeds from our initial public offering;
- the impact of local, regional, national and international economic conditions and events;
- our expectations about market trends; and
- our expectations regarding the period during which we will qualify as an emerging growth company under the JOBS Act.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in the section titled “Risk Factors” elsewhere in this report. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely on forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, advancements, discoveries, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, except as required by law, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this report to conform these statements to actual results or to changes in our expectations.

You should read this report and the documents that we reference in this report and have filed with the SEC as exhibits to this report with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

Summary of Material Risks Associated with Our Business

Our business is subject to a number of risks that if realized could materially affect our business, prospects, operating results and financial condition. These risks are discussed more fully in the "Risk Factors" section of this Quarterly Report on Form 10-Q. These risks include the following:

- Our limited operating history makes it difficult to evaluate our future prospects and the risks and challenges we may encounter.
- We have incurred significant losses since inception, we expect to incur significant losses in the future and we may not be able to generate sufficient revenue to achieve and maintain profitability.
- We have only recently generated revenue and have very limited history in developing and commercializing our products or technology, which makes it difficult to evaluate our prospects and predict our future performance.
- The life sciences technology market is highly competitive. If we fail to compete effectively, our business and operating results will suffer.
- If we are sued for infringing, misappropriating or otherwise violating intellectual property rights of third parties, such litigation could be costly and time-consuming and could prevent or delay us from developing or commercializing our products.
- We could have disputes with contractual counterparties regarding our or their performance under those contracts, we could be unable to fulfill such contractual commitments, or our contractual obligations may exceed our current expectations.
- If our products fail to achieve early customer and scientific acceptance, we may not be able to achieve broader market acceptance for our products, and our revenues and prospects may be harmed.
- We expect to be highly dependent upon revenue generated from the sale of the G4 and future products, and any delay or failure by us to successfully develop and commercialize the G4 or future products could have a substantial adverse effect on our business and results of operations.
- Our business will depend significantly on research and development spending by academic institutions and other research institutions, and any reduction in spending could limit demand for our products and adversely affect our business, results of operations, financial condition and prospects.
- Our operating results may fluctuate significantly in the future, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.
- We have only launched one commercial product, the G4, and we may not be able to successfully develop or commercially launch the PX or any other products as planned.
- The G4 is sold as a research-use-only product; changes in the regulatory landscape could affect the market for such a product.
- If we are unable to obtain and maintain sufficient intellectual property protection for our products and technology, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products may be impaired.
- We may require substantial additional funding, which may not be available to us on acceptable terms, or at all, and, if not available, may require us to delay, scale back or cease our product development programs or operations.

Trademarks and Trade Names

Singular Genomics®, G4™ and PX™ and our other logos and trademarks are the property of Singular Genomics Systems, Inc. All other brand names or trademarks appearing in this Quarterly Report are the property of their respective holders. Our use or display of other parties' trademarks, trade dress or products in this Quarterly Report does not imply that we have a relationship with, or the endorsement or sponsorship of, the trademark or trade dress owners.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

Singular Genomics Systems, Inc.
Balance Sheets
(In thousands, except share and par value amounts)

	September 30, 2023	December 31, 2022
	(Unaudited)	
Assets		
Current assets:		
Cash and cash equivalents	$ 33,301	$ 74,266
Short-term investments	157,416	170,310
Accounts receivable	399	913
Inventory	13,420	18,221
Prepaid expenses and other current assets	6,259	4,722
Total current assets	210,795	268,432
Right-of-use lease assets	58,474	45,896
Property and equipment, net	13,426	10,784
Restricted cash	1,711	1,711
Other noncurrent assets	112	1,152
Total assets	$ 284,518	$ 327,975
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 2,432	$ 3,099
Accrued expenses	5,063	4,583
Lease liabilities, current	7,706	6,323
Other current liabilities	252	113
Total current liabilities	15,453	14,118
Lease liabilities, noncurrent	59,124	42,456
Long-term debt, net of issuance costs	10,175	10,065
Other noncurrent liabilities	739	1,015
Total liabilities	85,491	67,654
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Series A common stock equivalent convertible preferred stock, $0.0001 par value; 7,000 shares authorized, 2,500 shares issued and outstanding at September 30, 2023 and December 31, 2022	-	-
Common stock, $0.0001 par value; 400,000,000 shares authorized, 73,343,510 and 71,854,688 shares outstanding at September 30, 2023 and December 31, 2022, respectively	7	7
Additional paid-in capital	513,580	503,926
Accumulated other comprehensive loss	(214)	(837)
Accumulated deficit	(314,346)	(242,775)
Total stockholders' equity	199,027	260,321
Total liabilities and stockholders' equity	$ 284,518	$ 327,975

See accompanying notes to these unaudited financial statements.

Singular Genomics Systems, Inc.
Statements of Operations
(Unaudited)
(In thousands, except share and per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Revenue	$ 462	$ -	$ 1,830	$ -
Cost of revenue	527	-	1,931	-
Gross margin	(65)	-	(101)	-
Operating expenses:				
Research and development	11,220	12,732	36,074	35,439
Selling, general and administrative	13,254	11,962	41,345	35,518
Total operating expenses	24,474	24,694	77,419	70,957
Loss from operations	(24,539)	(24,694)	(77,520)	(70,957)
Other income (expense):				
Interest expense	(285)	(211)	(814)	(520)
Interest and other income	2,464	1,115	6,763	1,699
Total other income	2,179	904	5,949	1,179
Net loss	$ (22,360)	$ (23,790)	$ (71,571)	$ (69,778)
Net loss per share:				
Basic and diluted net loss per share	$ (0.31)	$ (0.33)	$ (0.99)	$ (0.98)
Weighted-average shares used to compute basic and diluted net loss per share	73,178,822	71,216,292	72,541,979	71,001,441

See accompanying notes to these unaudited financial statements.

Singular Genomics Systems, Inc.
Statements of Comprehensive Loss
(Unaudited)
(In thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net loss	$ (22,360)	$ (23,790)	$ (71,571)	$ (69,778)
Other comprehensive loss:				
Unrealized gain (loss) on available-for-sale securities	114	(405)	623	(1,280)
Comprehensive loss	$ (22,246)	$ (24,195)	$ (70,948)	$ (71,058)

See accompanying notes to these unaudited financial statements.

Singular Genomics Systems, Inc.
Statements of Preferred Stock and Stockholders' Equity
(Unaudited)
(In thousands, except share data)

	Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
Balance at December 31, 2022	2,500	$ -	71,854,688	$ 7	$ 503,926	$ (837)	$ (242,775)	$ 260,321
Vesting of common stock issued for early exercise of stock options	-	-	121,799	-	97	-	-	97
Issuance of common stock in connection with exercise of stock options	-	-	19,479	-	13	-	-	13
Stock-based compensation	-	-	-	-	3,081	-	-	3,081
Unrealized gain on available-for-sale marketable securities	-	-	-	-	-	446	-	446
Net loss	-	-	-	-	-	-	(23,633)	(23,633)
Balance at March 31, 2023	2,500	$ -	71,995,966	$ 7	$ 507,117	$ (391)	$ (266,408)	$ 240,325
Vesting of common stock issued for early exercise of stock options	-	-	118,889	-	112	-	-	112
Issuance of common stock in connection with exercise of stock options	-	-	3,302	-	-	-	-	-
Issuance of common stock in connection with vesting of restricted stock units	-	-	140,913	-	-	-	-	-
Issuance of common stock in connection with Employee Stock Purchase Plan	-	-	825,411	-	624	-	-	624
Stock-based compensation	-	-	-	-	2,842	-	-	2,842
Unrealized gain on available-for-sale marketable securities	-	-	-	-	-	63	-	63
Net loss	-	-	-	-	-	-	(25,578)	(25,578)
Balance at June 30, 2023	2,500	$ -	73,084,481	$ 7	$ 510,695	$ (328)	$ (291,986)	$ 218,388
Vesting of common stock issued for early exercise of stock options	-	-	117,236	-	91	-	-	91
Issuance of common stock in connection with vesting of restricted stock units	-	-	141,793	-	-	-	-	-
Stock-based compensation	-	-	-	-	2,794	-	-	2,794
Unrealized gain on available-for-sale marketable securities	-	-	-	-	-	114	-	114
Net loss	-	-	-	-	-	-	(22,360)	(22,360)
Balance at September 30, 2023	2,500	$ -	73,343,510	$ 7	$ 513,580	$ (214)	$ (314,346)	$ 199,027

	Preferred Stock		Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Capital	Loss	Deficit	Equity
Balance at December 31, 2021	-	$ -	72,438,742	$ 7	$ 488,200	$ (138)	$ (151,896)	$ 336,173
Exchange of common stock for Series A common stock equivalent convertible preferred stock	2,500	-	(2,500,000)	-	-	-	-	-
Vesting of common stock issued for early exercise of stock options	-	-	505,322	-	344	-	-	344
Issuance of common stock in connection with exercise of stock options	-	-	65,399	-	34	-	-	34
Stock-based compensation	-	-	-	-	3,566	-	-	3,566
Unrealized loss on available-for-sale marketable securities	-	-	-	-	-	(629)	-	(629)
Net loss	-	-					(22,006)	(22,006)
Balance at March 31, 2022	2,500	$ -	70,509,463	$ 7	$ 492,144	$ (767)	$ (173,902)	$ 317,482
Vesting of common stock issued for early exercise of stock options	-	-	219,743	-	151	-	-	151
Issuance of common stock in connection with exercise of stock options	-	-	162,644	-	62	-	-	62
Issuance of common stock in connection with Employee Stock Purchase Plan	-	-	174,019	-	489	-	-	489
Stock-based compensation	-	-	-	-	3,605	-	-	3,605
Unrealized loss on available- for-sale marketable securities	-	-	-	-	-	(246)	-	(246)
Net loss	-	-	-	-	-	-	(23,982)	(23,982)
Balance at June 30, 2022	2,500	$ -	71,065,869	$ 7	$ 496,451	$ (1,013)	$ (197,884)	$ 297,561
Vesting of common stock issued for early exercise of stock options	-	-	156,397	-	109	-	-	109
Issuance of common stock in connection with exercise of stock options	-	-	84,260	-	51	-	-	51
Stock-based compensation	-	-	-	-	3,399	-	-	3,399
Unrealized loss on available- for-sale marketable securities	-	-	-	-	-	(405)	-	(405)
Net loss	-	-					(23,790)	(23,790)
Balance at September 30, 2022	2,500	$ -	71,306,526	$ 7	$ 500,010	$ (1,418)	$ (221,674)	$ 276,925

See accompanying notes to these unaudited financial statements.

Singular Genomics Systems, Inc.
Statements of Cash Flows
(Unaudited)
(In thousands)

	Nine Months Ended September 30,	
	2023	**2022**
Operating activities		
Net loss	$ (71,571)	$ (69,778)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	8,717	10,570
Amortization of right-of-use lease assets	3,036	2,601
Depreciation	2,533	1,710
Long-lived asset impairment	1,900	-
Lease incentives received	1,840	-
Amortization of premium on short-term investments	(46)	2,031
Accretion of debt issuance costs	110	126
Changes in operating assets and liabilities:		
Accounts receivable	514	-
Inventory	(940)	(13,793)
Prepaid expenses and other current assets	312	(463)
Other noncurrent assets	1,040	(910)
Accounts payable	(1,314)	467
Accrued expenses	370	1,202
Other current liabilities	139	20
Lease liabilities	(1,422)	(960)
Other noncurrent liabilities	37	-
Net cash used in operating activities	(54,745)	(67,177)
Investing activities		
Purchases of short-term investments	(129,099)	(139,211)
Maturities of short-term investments	122,846	84,674
Sales of short-term investments	19,987	19,004
Purchases of property and equipment	(578)	(4,204)
Net cash provided (used) by investing activities	13,156	(39,737)
Financing activities		
Proceeds from issuance of common stock under employee stock purchase plan	624	489
Proceeds from issuance of common stock under equity incentive plans	13	147
Repurchases of common stock under equity incentive plans	(13)	(485)
Net cash provided by financing activities	624	151
Net increase (decrease) in cash and cash equivalents and restricted cash	(40,965)	(106,763)
Cash and cash equivalents and restricted cash, beginning of year	75,977	201,736
Cash and cash equivalents and restricted cash, end of year	$ 35,012	$ 94,973
Supplemental disclosure for cash activities		
Interest paid	$ 777	$ 374
Supplemental disclosure for non-cash activities		
Lease liability recognized upon lease modifications during the period	$ 19,475	$ -
Inventory transferred to property and equipment	$ 6,498	$ 104
Purchases of inventory included in accounts payable	$ 647	$ -
Vesting of common stock issued for early exercise of stock options	$ 300	$ 604
Reduction of lease liability for lease termination	$ -	$ 334
Purchases of property and equipment included in accounts payable	$ -	$ 160
Purchases of inventory included in accrued expenses	$ 110	$ -
Initial lease liability recognized upon lease commencements during the period	$ -	$ 43,231
Initial lease liability recognized upon adoption of ASC 842	$ -	$ 7,074
Noncurrent deposit transferred to property and equipment	$ -	$ 759

See accompanying notes to these unaudited financial statements.

Singular Genomics Systems, Inc.
Notes to Financial Statements
(Unaudited)

1. Business

Description of Business

Singular Genomics Systems, Inc. (the "Company") is a life science technology company that develops next-generation sequencing and multiomics technologies. The commercially available G4 Sequencing Platform is a powerful, highly versatile benchtop genomic sequencer designed to produce fast and accurate results. In addition, the Company commenced development of the PX system, which leverages the Company's proprietary sequencing technology, applying it as an *in situ* readout to look at RNA and proteins in single cells and tissue. The Company's mission is to empower researchers and clinicians to advance science and medicine.

The Company was incorporated in the state of Delaware in June 2016 and has its principal operations in San Diego, California.

Liquidity and Capital Resources

The Company has incurred net losses since inception and, as of September 30, 2023 and December 31, 2022, had an accumulated deficit of $314.3 million and $242.8 million, respectively. The Company has a limited operating history, and the revenue and income potential of the Company's business are unproven. From incorporation in June 2016 through September 30, 2023, substantially all of the Company's operations have been funded by the sales of equity securities and issuances of debt. As of September 30, 2023, the Company had cash, cash equivalents and short-term investments of $190.7 million. The Company believes that its cash, cash equivalents and short-term investments as of September 30, 2023 are sufficient to fund its operations for at least 12 months from the issuance date of the accompanying unaudited financial statements.

2. Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation and Use of Estimates

The accompanying unaudited financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP") for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, certain information and disclosures required by GAAP for annual financial statements have been omitted. In the opinion of management, all adjustments, consisting of normal recurring adjustments considered necessary for fair presentation, have been included. Interim financial results are not necessarily indicative of results anticipated for the full year.

The preparation of the Company's unaudited financial statements requires management to make estimates and assumptions that impact the reported amounts of assets, liabilities and expenses and the disclosure of contingent assets and liabilities in the Company's unaudited financial statements and accompanying notes. Although these estimates are based on the Company's knowledge of current events and actions it may undertake in the future, actual results may significantly differ from these estimates and assumptions. For the year ended December 31, 2022, significant estimates and assumptions include the value of lease liabilities and right-of-use lease assets. There were no changes to the Company's significant estimates and assumptions subsequent to December 31, 2022.

Summary of Significant Accounting Policies

During the nine months ended September 30, 2023, other than the policies described below, there were no changes to the Company's significant accounting policies as described in Note 2 to the audited financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2022.

Cash, Cash Equivalents and Restricted Cash

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the balance sheets (in thousands):

	September 30, 2023	December 31, 2022
Cash and cash equivalents	$ 33,301	$ 74,266
Restricted cash	1,711	1,711
Total	$ 35,012	$ 75,977

Short-term Investments

Short-term investments primarily consisted of treasury securities, corporate debt securities and asset-backed securities. The Company's investments in securities are classified as current as they are available for use in current operations. The following tables summarize the short-term investments held by the Company at September 30, 2023 and December 31, 2022 (in thousands):

	September 30, 2023		
	Amortized Cost	Gross Unrealized Losses	Estimated Fair Value
U.S. treasury securities	$ 136,704	$ (151)	$ 136,553
Corporate debt securities	20,409	(64)	20,345
Asset-backed securities	$ 517	$ 1	$ 518
Total	$ 157,630	$ (214)	$ 157,416

	December 31, 2022		
	Amortized Cost	Gross Unrealized Losses	Estimated Fair Value
U.S. treasury securities	$ 62,776	$ (244)	$ 62,532
Corporate debt securities	102,020	(553)	101,467
Asset-backed securities	$ 6,351	$ (40)	$ 6,311
Total	$ 171,147	$ (837)	$ 170,310

The following table summarizes the estimated fair value of contractual maturities of available-for-sale securities held by the Company at September 30, 2023 and December 31, 2022 (in thousands):

	September 30, 2023	December 31, 2022
Due within one year	$ 156,898	$ 155,920
Due after one but within five years	518	14,390
Total	$ 157,416	$ 170,310

As of September 30, 2023, the Company considered the nature and number of available-for-sale debt securities in an unrealized loss position. The Company reviews its portfolio of available-for-sale debt securities at least quarterly to determine if any investment is impaired, whether due to changes in credit risk or other potential valuation concerns. Unrealized losses on available-for-sale debt securities at September 30, 2023 were primarily due to increases in market interest rates. The Company does not intend to sell the available-for-sale debt securities that are in an unrealized loss position, and it is not more-likely-than-not that the Company will be required to sell these debt securities before recovery of their amortized cost bases, which may be at maturity. Based on the credit quality of the available-for-sale debt securities in an unrealized loss position, and the Company's estimates of future cash flows to be collected from those securities, the Company believes the unrealized losses are not credit losses. Accordingly, the Company did not record an allowance for credit losses related to its available-for-sale debt securities at September 30, 2023.

Revenue Recognition

The Company generates revenue from sales of products, which consist of its G4 instrument, related consumable flow cell kits and services. Revenue from instrument sales is recognized generally upon customer acceptance. Revenue from consumables sales is recognized generally upon shipment to the customer. Revenue from services, which are primarily comprised of assurance or extended warranty–type services, is recognized over the applicable service period.

Revenue is recorded net of discounts and sales taxes. The Company invoices its customers for instruments generally upon acceptance, for consumables generally on delivery, and for services generally in advance of the service period. Invoice terms are generally net 30 days. Cash received from customers in advance of revenue recognition is recorded as a contract liability. The Company's contracts with its customers generally do not include rights of return or a significant financing component.

The Company regularly enters into contracts that include a combination of products and services, which are distinct within the context of the contract and are accounted for as separate performance obligations. The transaction price is allocated to each performance obligation in proportion to its standalone selling price. Until the Company has sufficient volume of historical sales data for each performance obligation, the Company determines the standalone selling price using observable prices when available and with consideration of current market conditions, which is primarily based on prices set by management, adjusted for applicable discounts. The Company then recognizes revenue for each performance obligation as that performance obligations is satisfied, as discussed above.

During the nine months ended September 30, 2023, the Company recognized $1.6 million of revenue for instruments and $0.2 million of revenue for consumables and services. Contract liabilities, which consists of deferred revenue, as of September 30, 2023 and December 31, 2022 were $0.2 million and $0.1 million, respectively. As of September 30, 2023, $0.1 million of this balance was classified as current. Deferred revenue represents the value of performance obligations that have been invoiced but for which revenue has not yet been earned.

For the nine months ended September 30, 2023, all of the Company's revenue was generated within the United States. During this period, the Company's top three customers comprised approximately 50% of its revenue.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist of cash, cash equivalents and marketable securities. The Company invests its cash equivalents in highly rated money market funds. The Company's marketable securities consist of short-term investments in a variety of interest-bearing instruments, which have included U.S. government and agency securities, high-grade U.S. corporate bonds and asset-backed securities. Deposits may exceed federally insured limits, and the Company is exposed to credit risk on deposits with financial institutions to the extent account balances exceed the amount insured by the Federal Deposit Insurance Corporation ("FDIC"). The Company is monitoring ongoing events involving limited liquidity, defaults, non-performance or other adverse developments that affect financial institutions, including Silicon Valley Bank ("SVB"). On March 10, 2023, SVB was closed by the California Department of Financial Protection and Innovation, which appointed the FDIC as receiver, and all of SVB's deposits and substantially all of SVB's assets were transferred into a new entity, Silicon Valley Bridge Bank, N.A. ("SVBB"). On March 12, 2023, the Department of the Treasury, the Federal Reserve and the FDIC jointly released a statement that depositors at SVB would have access to their funds, even those in excess of the standard FDIC insurance limits, under a systemic risk exception. Such parties also announced, among other items, that SVBB had assumed the obligations and commitments of former SVB and that commitments to advance under existing credit agreements with former SVB will be honored by SVBB pursuant to the terms of such credit agreements. On March 27, 2023, First-Citizens Bank & Trust Company ("First Citizens Bank") assumed all of SVBB's obligations and commitments, and SVBB began operating as Silicon Valley Bank, a division of First Citizens Bank. Unless otherwise noted herein, all references to SVB or Silicon Valley Bank shall refer to Silicon Valley Bank, a division of First Citizens Bank. In light of the foregoing, the Company does not believe it has exposure to loss as a result of SVB's receivership. During the periods presented, the Company has not experienced any losses on its cash, restricted cash, cash equivalents or marketable securities.

Long-lived Asset Impairment

Long-lived assets consist primarily of right-of-use lease assets and property and equipment. During the nine months ended September 30, 2023, the Company identified an indicator of impairment of its long-lived assets due to a sustained decline in the trading price of the Company's common stock over the preceding year, resulting in the Company's market capitalization being below its net asset value. Although the Company is confident in the utility of its long-lived assets, and there have been no changes in their intended use, the implied cash flows based on the market capitalization of the Company indicated its long-lived assets may not be recoverable. In determining the fair value of its long-lived assets, the Company used a combination of discounted cash flows and observable market data. As a result of its fair value analysis, the Company recorded a $1.9 million impairment charge on its property and equipment as selling, general and administrative expense in the statement of operations during the nine months ended September 30, 2023. No impairment was recorded during the three months ended September 30, 2023 or during three and nine months ended September 30, 2022.

Recent Accounting Pronouncements—Adopted

In June 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-13, *Financial Instruments—Credit Losses: Measurement of Credit Losses on Financial Instruments*, which modifies the measurement and recognition of credit losses for most financial assets and certain other instruments. The new standard requires the use of forward-looking expected credit loss models based on historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount, which may result in earlier recognition of credit losses under the new standard. The new standard also requires that credit losses related to available-for-sale debt securities be recorded as an allowance through net loss rather than reducing the carrying amount under the prior, other-than-temporary-impairment model. The new standard must be adopted using the modified retrospective approach and was adopted by the Company starting January 1, 2023. The Company determined there was no cumulative-effect transition adjustment to the opening balance of accumulated deficit for recognition of credit losses upon adoption of this standard based on its assessment of the collectability of its outstanding accounts receivable and the composition and credit quality of its short-term investments.

3. Fair Value Measurements

For accounting purposes, fair value is defined as an exit price representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the accounting guidance establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1: Observable inputs such as quoted prices in active markets.

Level 2: Inputs, other than quoted prices in active markets, that are observable either directly or indirectly.

Level 3: Unobservable inputs where there is little or no market data, which require the reporting entity to develop its own assumptions.

When quoted market prices are available in active markets, the fair value of assets and liabilities is estimated within Level 1 of the valuation hierarchy. If quoted prices are not available, then fair values are estimated by using pricing models, quoted prices of assets and liabilities with similar characteristics, or discounted cash flows, within Level 2 of the valuation hierarchy. In cases where Level 1 or Level 2 inputs are not available, the fair values are estimated by using inputs within Level 3 of the hierarchy.

None of the Company’s assets or liabilities are recorded at fair value on a recurring basis other than cash, cash equivalents and short-term investments. No transfers between levels occurred during the periods presented. The fair value of short-term investments is based on market prices quoted on the last day of the fiscal period or other observable market inputs. Long-lived assets are measured at fair value for an impairment assessment based on Level 3 inputs (see Note 2), which is on a nonrecurring basis.

The following tables summarize the Company's assets measured at fair value on a recurring basis as of September 30, 2023 and December 31, 2022 (in thousands):

	September 30, 2023			
	Level 1	Level 2	Level 3	Total
Cash and cash equivalents:				
Cash	$ 2,528	$ -	$ -	$ 2,528
Money market funds	30,773	-	-	30,773
Total cash and cash equivalents	33,301	-	-	33,301
Short-term investments:				
U.S. Treasury securities	136,553	-	-	136,553
Corporate debt securities	-	20,345	-	20,345
Asset-backed securities	-	518	-	518
Total short-term investments	136,553	20,863	-	157,416
Total cash and cash equivalents and short-term investments	$ 169,854	$ 20,863	$ -	$ 190,717

	December 31, 2022			
	Level 1	Level 2	Level 3	Total
Cash and cash equivalents:				
Cash	$ 48,690	$ -	$ -	$ 48,690
Money market funds	25,576	-	-	25,576
Total cash and cash equivalents	74,266	-	-	74,266
Short-term investments:				
U.S. Treasury securities	62,532	-	-	62,532
Corporate debt securities	-	101,467	-	101,467
Asset-backed securities	-	6,311	-	6,311
Total short-term investments	62,532	107,778	-	170,310
Total cash and cash equivalents and short-term investments	$ 136,798	$ 107,778	$ -	$ 244,576

4. Inventory

Inventory consisted of the following (in thousands):

	September 30, 2023	December 31, 2022
Raw materials	$ 10,641	$ 14,508
Work in process	2,562	3,276
Finished goods	217	437
Total inventory	$ 13,420	$ 18,221

5. Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of the following (in thousands):

	September 30, 2023	December 31, 2022
Prepaid expenses	$ 2,991	$ 3,003
Interest receivable	2,932	1,099
Current deposits and other current assets	336	620
Total prepaid expenses and other current assets	$ 6,259	$ 4,722

6. Property and Equipment, Net

Property and equipment, net, consisted of the following (in thousands):

	Useful Life	September 30, 2023	December 31, 2022
Equipment	5 years	$ 12,589	$ 8,656
Computers and software	3 years	3,372	2,705
Leasehold improvements	14 years or less	2,244	2,127
Furniture and fixtures	5 years or less	660	1,854
Instruments at customer site	5 years	1,608	-
Total property and equipment, gross		20,473	15,342
Less: accumulated depreciation		(7,047)	(4,558)
Total property and equipment, net		$ 13,426	$ 10,784

Gross asset balances above reflect $1.9 million of long-lived asset impairment described in Note 2 to these unaudited financial statements.

Transfers of assets from inventory to property and equipment are transferred at standard cost and recognized at carrying value.

7. Accrued Expenses

Accrued expenses consisted of the following (in thousands):

	September 30, 2023	December 31, 2022
Accrued compensation and other employee benefits	$ 4,015	$ 3,580
Accrued research and development expenses	234	360
Accrued professional services	413	204
Accrued other expenses	401	439
Total accrued expenses	$ 5,063	$ 4,583

8. Long-term Debt

Silicon Valley Bank Loan

In November 2019, the Company entered into a loan and security agreement with SVB pursuant to which SVB agreed to lend to the Company up to $15.0 million in a series of term loans (the "2019 SVB Loan"). Contemporaneously, the Company borrowed $2.5 million in the first of three draw-downs available under the 2019 SVB Loan. In March 2020, the Company borrowed an additional $7.5 million as a second draw. The 2019 SVB Loan was to mature on September 1, 2023 and bore interest at an annual rate equal to the greater of (i) 0.65% above the prime rate or (ii) 5.90%. Payment on the 2019 SVB Loan was for interest only through September 30, 2021. In addition, a final payment equal to the original principal amount of each advance multiplied by 5.50% was to be due on the maturity date.

On September 30, 2021, the Company refinanced its 2019 SVB Loan. In connection with the refinancing, the Company entered into an amended and restated loan and security agreement (the "2021 SVB Loan," together with the 2022 SVB Loan Amendment (defined below), the "SVB Loan") with SVB. The 2021 SVB Loan provided for term loans in an aggregate principal amount of up to $35.5 million to be delivered in three tranches. The tranches consisted of: (i) a term loan advance to the Company in an aggregate principal amount of $10.5 million on the loan closing date (the "First Tranche"); (ii) an additional term loan advance available to the Company through September 30, 2022 in an aggregate principal amount of $15.0 million (the "Second Tranche"); and (iii) subject to SVB's approval, a right of the Company to request that SVB make an additional term loan advance in an aggregate principal amount of $10.0 million. The proceeds from the First Tranche were used to repay in full the then-existing indebtedness under the 2019 SVB Loan. The SVB Loan matures on September 1, 2026 and bears interest at an annual rate equal to the greater of (i) 0.75% plus the prime rate as reported in *The Wall Street Journal* and (ii) 4.00%. As of September 30, 2023, the SVB Loan bears interest at an annual rate of 9.25%. The SVB Loan has an initial interest-only period of 36 months, or until September 2024, from which point we are required to make interest and principal payments through the maturity date. In addition, a final payment (the "Final Payment Fee") equal to the original principal amount of each advance multiplied by 4.00% will be due on the maturity date. The Final Payment Fee is recorded in other noncurrent liabilities on the balance sheet. As of September 30, 2023, the SVB Loan is recorded as noncurrent.

The 2021 SVB Loan was accounted for as a debt modification, rather than an extinguishment, based on a comparison of the present value of the cash flows under the terms of the debt immediately before and after the amendment, which resulted in a change of such cash flows of less than 10%. Unamortized debt issuance costs as of the date of modification and incremental issuance costs incurred in connection with the 2021 SVB Loan will be amortized to interest expense using the effective interest method over the repayment term.

On September 30, 2022, the Company entered into an amendment to the 2021 SVB Loan (the "2022 SVB Loan Amendment"). The 2022 SVB Loan Amendment extended the period to draw down the additional tranches totaling $25.0 million from September 30, 2022 to March 31, 2024, provided that in order for the Company to access the Second Tranche availability the Company must achieve a six-month trailing revenue hurdle. The 2022 SVB Loan Amendment was accounted for as a debt modification, rather than an extinguishment, based on a comparison between the present value of the cash flows under the terms of the debt immediately before and after the amendment, which resulted in a change of such cash flows of less than 10%. Unamortized debt issuance costs as of the date of modification and incremental issuance costs incurred in connection with the 2022 SVB Loan Amendment will be amortized to interest expense using the effective interest method over the repayment term.

On March 10, 2023, SVB was closed by the California Department of Financial Protection and Innovation, which appointed the FDIC as receiver, and all of SVB's deposits and substantially all of SVB's assets were transferred into a new entity, Silicon Valley Bridge Bank, N.A. ("SVBB"). On March 12, 2023, the Department of the Treasury, the Federal Reserve and the FDIC jointly released a statement indicating that SVBB had assumed the obligations and commitments of former SVB. On March 27, 2023, First-Citizens Bank & Trust Company ("First Citizens Bank") assumed all of SVBB's obligations and commitments, and SVBB began operating as Silicon Valley Bank, a division of First Citizens Bank.

As of September 30, 2023 and December 31, 2022, the debt issuance costs related to the SVB Loan were $0.3 million and $0.4 million, respectively. The debt issuance costs are amortized to interest expense over the term of the loan using the effective interest method.

The SVB Loan and unamortized discount balances as of September 30, 2023 and December 31, 2022 are as follows (in thousands):

	September 30, 2023	December 31, 2022
Long-term debt	$ 10,500	$ 10,500
Less: issuance costs	(325)	(435)
Total long-term debt, net of issuance costs	$ 10,175	$ 10,065

Future minimum payments of outstanding principal and interest at the rate in effect as of September 30, 2023 under the SVB Loan are as follows (in thousands):

As of September 30, 2023		
2023 (3 months remaining)	$	165
2024		2,290
2025		5,886
2026		4,511
Total future minimum payments		12,852
Less: interest, Final Payment fee		(2,352)
Long-term debt		10,500
Less: issuance costs		(325)
Long-term debt, net of issuance costs	$	10,175

The Company is subject to customary affirmative and restrictive covenants under the SVB Loan. The Company's obligations under the SVB Loan are secured by a first priority security interest in substantially all of the Company's current and future assets, other than intellectual property. The Company has agreed not to encumber its intellectual property assets, except as permitted by the SVB Loan.

The SVB Loan provides for events of default customary for term loan facilities of this type, including but not limited to: non-payment; breaches or defaults in the performance of covenants or representations and warranties; bankruptcy and other insolvency events of the Company; and the occurrence of a material adverse change as defined in the SVB Loan. After the occurrence of an event of default, SVB may, among other remedies, accelerate the payment of all outstanding obligations.

As of September 30, 2023 and December 31, 2022, the Company was in compliance with all covenants under the SVB Loan and there had been no events of default.

9. Commitments and Contingencies

Columbia License Agreement

In 2016, the Company entered into an Exclusive License Agreement (the "License Agreement") with The Trustees of Columbia University ("Columbia"). Under the License Agreement, the Company acquired the exclusive right to use certain patents, materials and information. The License Agreement includes a number of diligence obligations which require that the Company use its commercially reasonable efforts to research, discover, develop and market certain products by certain specified dates. Under the License Agreement, the Company pays an annual license fee that increases each year, until it reaches a low six-digit fee for the fifth year, and for each subsequent year, for so long as the License Agreement remains in force. The license fee was immaterial for all periods presented. For any products within the scope of the License Agreement that the Company commercializes, the Company is required to pay royalties ranging from low to mid-single digits on net sales of certain covered products and low single-digit royalty rates on net sales of certain other products. The Company can credit the yearly annual license fee against any yearly royalty fees payable to Columbia. Additionally, if the Company receives any income in connection with any sublicenses, the Company must pay Columbia a high single-digit percentage of that income. Finally, the License Agreement provides for payments to Columbia based on the Company's achievement of certain development and commercialization milestones, which could total up to $3.9 million over the life of the License Agreement. As of September 30, 2023, the Company accrued $0.4 million related to these milestones. During the nine months ended September 30, 2023, the Company paid $0.1 million to Columbia pursuant to the terms of the License Agreement.

Operating Leases

Overview of Operating Leases

In November 2019, the Company entered into a lease agreement for office and laboratory space in San Diego, California (the "3033 Lease"). The Company gained access to the leased space and began recognizing rent expense under the 3033 Lease in May 2020. The Company has since amended the 3033 Lease, most recently in September 2023, which extended the term of the lease and provided a tenant improvement allowance of approximately $1.0 million. The term of the 3033 Lease will end in October 2036. The Company provided a standby letter of credit in the amount of $0.2 million as a security deposit during the term of the lease. As of September 30, 2023, $0.2 million was pledged as collateral for the letter of credit and recorded as restricted cash.

In June 2020, the Company entered into a lease agreement for office and laboratory space in San Diego, California (the "3010 Lease"). The Company gained access to the leased space and began recognizing rent expense under the 3010 Lease in April 2022. The Company has since amended the 3010 Lease, most recently in September 2023, which extended the term of the lease. The term of the 3010 Lease will end in October 2036. The Company provided a standby letter of credit in the amount of $0.4 million as a security deposit during the term of the lease. As of September 30, 2023, $0.4 million was pledged as collateral for the letter of credit and recorded as restricted cash.

In April 2021, the Company entered into a lease agreement for office and manufacturing space in San Diego, California (the "MR Lease"). The Company gained access to the leased space and began recognizing rent expense under the MR Lease in June 2021. The term of the MR Lease will end in July 2026.

In January 2022, the Company entered into a lease agreement (the "OAS Lease") with an affiliate of Alexandria Real Estate Equities, Inc. ("ARE") to lease two buildings to be constructed in connection with One Alexandria Square in La Jolla, California. In July 2023, the Company entered into an agreement to terminate the OAS Lease. Pursuant to this agreement, the OAS Lease terminated, effective September 13, 2023. In connection with the lease termination, ARE agreed to pay the Company lease termination payments of (a) approximately $1.8 million, which the Company received in September 2023, and (b) an additional amount of approximately $1.0 million to be paid by January 26, 2024. In addition, ARE refunded the Company approximately $1.1 million in prepaid base rent under the terms of the OAS Lease in September 2023 and agreed to return to the Company a letter of credit in the amount of approximately $1.1 million issued to ARE pursuant to the terms of the OAS Lease by November 12, 2023.

Accounting for Operating Leases

During the nine months ended September 30, 2023, the Company incurred $8.8 million of lease costs, of which $2.6 million was related to variable lease payments, which were primarily comprised of common area maintenance, and $6.1 million related to straight-line operating lease cost. During the three and nine months ended September 30, 2022, the Company incurred $6.4 million of lease costs, of which $0.1 million was related to the Company's short-term leases, and $1.8 million was related to variable lease payments, which were primarily comprised of common area maintenance, and $4.5 million related to straight-line operating lease cost.

During the three months ended September 30, 2023, in connection with the amendments of the 3010 Lease and 3033 Lease described above, the Company recorded additional lease liabilities of $19.5 million.

As of September 30, 2023, future minimum payments under the Company's non-cancelable operating leases are as follows (in thousands):

2023 (3 months remaining)	$	1,993
2024		8,094
2025		5,716
2026		8,607
2027		8,580
2028		8,837
Thereafter		79,058
Future non-cancelable minimum lease payments		120,885
Less: present value discount		(54,055)
Total lease liabilities		66,830
Less: current portion		7,706
Lease liabilities, noncurrent	$	59,124

Indemnification

As permitted under Delaware law and in accordance with the Company's bylaws, the Company indemnifies its officers and directors for certain events or occurrences while the officers or directors are or were serving in such capacity. The Company is also party to indemnification agreements with its officers and directors. The Company considers the fair value of the indemnification rights and agreements as minimal. Accordingly, the Company has not recorded any liabilities for these indemnification rights and agreements as of September 30, 2023 or December 31, 2022.

Other Contingencies

We are not currently a party to any material legal proceedings. From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. Regardless of outcome, litigation can have an adverse impact on us due to defense and settlement costs, diversion of management resources, negative publicity, reputational harm and other factors.

10. Preferred Stock

Series A Common Stock Equivalent Convertible Preferred Stock

In January 2022, the Company entered into an exchange agreement (the "Exchange Agreement") with Deerfield Private Design Fund IV, L.P. (the "Deerfield Holder"), pursuant to which the Deerfield Holder exchanged an aggregate of 2,500,000 shares of the Company's common stock held by the Deerfield Holder for 2,500 shares of a newly created class of non-voting preferred stock designated as Series A Common Stock Equivalent Convertible Preferred Stock. Additionally, in connection with the issuance of the Series A Common Stock Equivalent Convertible Preferred Stock, the Company filed a Certificate of Designation, Preferences and Rights of Series A Common Stock Equivalent Convertible Preferred Stock, par value $0.0001 per share, of the Company with the Secretary of State of the State of Delaware. Each outstanding share of Series A Common Stock Equivalent Convertible Preferred Stock is entitled to a *de minimis* liquidation preference of $0.0001 per share. The Series A Common Stock Equivalent Convertible Preferred Stock is convertible into 1,000 shares of common stock for each share of Series A Common Stock Equivalent Convertible Preferred Stock at the option of the holder. Additionally, the ability of a holder to convert non-voting Series A Common Stock Equivalent Convertible Preferred Stock into common stock is prohibited to the extent that, upon such conversion, such holder, its affiliates and other persons whose ownership of common stock would be aggregated with that of such holder for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, would exceed 4.9% of the total number of shares of common stock then outstanding.

The Company classifies Series A Common Stock Equivalent Convertible Preferred Stock as permanent equity on the balance sheet because it is not redeemable for cash or other assets of the Company and is not considered debt under ASC 480. There are no features of the Series A Common Stock Equivalent Convertible Preferred Stock that require bifurcation and separate accounting under ASC 815 *Derivatives and Hedging*. Series A Common Stock Equivalent Convertible Preferred Stock is considered a participating security for purposes of calculating earnings per share under ASC 260 because it participates in dividends ratably on an as-converted basis with common stock.

11. Stock Incentive Plans

2021 and 2016 Equity Incentive Plans

The Company's Board of Directors and stockholders adopted and approved the Company's 2021 Equity Incentive Plan (the "2021 Plan") in May 2021, which was amended in July 2022. The 2021 Plan replaced the Company's 2016 Equity Incentive Plan adopted in September 2016 (the "2016 Plan"); however, awards outstanding under the 2016 Plan will continue to be governed by their existing terms. The number of shares of the Company's common stock that were initially available for issuance under the 2021 Plan equaled the sum of 7,500,000 shares plus 585,720 shares that were then available for issuance under the 2016 Plan. The 2021 Plan provides for the following types of awards: incentive and nonqualified stock options, stock appreciation rights, restricted shares and restricted stock units. As of September 30, 2023, 5,689,209 shares of common stock remained available for future grants under the 2021 Plan.

The number of shares of common stock reserved for issuance under the 2021 Plan is increased automatically on the first day of each fiscal year, commencing in 2022 and ending in 2031, by a number equal to the lesser of: (i) 5% of the shares of common stock outstanding on the last day of the prior fiscal year; or (ii) the number of shares determined by the Company's Board of Directors. In general, to the extent that any awards under the 2021 Plan are forfeited, terminated, expired or lapsed without the issuance of shares, or if the Company reacquires the shares subject to awards granted under the 2021 Plan, those shares will again become available for issuance under the 2021 Plan, as will shares applied to pay the exercise or purchase price of an award or to satisfy tax withholding obligations related to an award.

Stock-based awards are governed by agreements between the Company and the recipients. Incentive stock options and nonqualified stock options may be granted under the 2021 Plan (and previously the 2016 Plan) at an exercise price of not less than 100% of the fair market value of the Company's common stock on the grant date. The grant date is the date the terms of the award are formally approved by the Company's Board of Directors or its designee.

In August 2022, the Company completed an exchange of 984,291 stock options owned by eligible non-executive employees with exercise prices ranging from $10.99 to $26.23 for the same number of stock options with an exercise price of $3.60. The requisite service period and the contractual term of the new options were not changed from the exchanged options, and the exchanged options were cancelled. The exercise price of $3.60 was the volume-weighted average price of the Company's common stock for the 20-day period immediately prior to the exchange. The exchange was treated as an option modification under GAAP, and the total incremental expense resulting from the exchange will be $1.2 million, of which $0.4 million was recognized in 2022, and the remaining will be recognized over a weighted-average period of approximately 2.6 years. The Company will continue to recognize the grant-date fair value of the exchanged options over the remaining service period.

Common stock reserved for future issuance under equity incentive plans consisted of the following as of September 30, 2023:

Stock options and restricted stock units issued and outstanding under all Plans	14,108,195
Authorized for future grants under the 2021 Plan	5,689,209
Authorized for future grants under the ESPP	773,699
Total as of September 30, 2023	20,571,103

The table above does not include 150,069 shares of common stock for early exercised stock options that remain subject to the Company's repurchase right.

Stock Option Activity

The following table summarizes stock option activity during the nine months ended September 30, 2023:

	Number of Options	Weighted-Average Exercise Price (per Share)	Weighted-Average Remaining Contract Term (in Years)	Aggregate Intrinsic Value (in Thousands)
Outstanding at December 31, 2022	9,637,022	$ 5.35		
Exercisable at December 31, 2022	4,066,881	4.17		
Granted	2,647,750	1.21		
Exercised	(23,479)	0.56		
Canceled or forfeited	(704,611)	6.35		
Outstanding at September 30, 2023	11,556,682	4.35	8.1	$ 39
Exercisable at September 30, 2023	5,596,954	4.53	7.4	$ 39

Options outstanding as of September 30, 2023 consist of stock options vested and expected to vest, assuming no forfeitures. Aggregate intrinsic value as of September 30, 2023 in the table above is the total in-the-money value of the options, which is the aggregate of the difference of each option with an exercise price lower than the Company's last closing stock price per share of $0.38 as of September 30, 2023.

The 2016 Plan allows for the early exercise of awards by plan participants, subject to the Company's right of repurchase at the lower of the original exercise price or fair market value for unvested awards. At September 30, 2023 and December 31, 2022, the Company had a liability for the cash received from the early exercise of stock options in the amount of $0.2 million and $0.5 million, respectively. The Company reduces the liability as the underlying stock options vest in accordance with the vesting terms of the awards or when the Company repurchases unvested awards.

As of September 30, 2023 and December 31, 2022, there were 150,069 and 526,660, respectively, of early exercised stock options that remain subject to the Company's repurchase right.

Restricted Stock Unit Activity

Restricted stock units ("RSUs") represent the right to receive common stock, subject to vesting for continued service to the Company. The following table summarizes RSU activity during the nine months ended September 30, 2023:

	Number of Units	Weighted-Average Grant Date Fair Value (per Unit)
Outstanding at December 31, 2022	-	$ -
Granted	2,969,850	1.60
Vested	(282,706)	1.78
Canceled	(135,631)	1.96
Outstanding at September 30, 2023	2,551,513	1.56

Employee Stock Purchase Plan

In May 2021, the Company's Board of Directors approved the 2021 Employee Stock Purchase Plan (the "ESPP"). A total of 730,000 shares of common stock were initially reserved for issuance under the ESPP. As of September 30, 2023, 773,699 shares of common stock remained available for future issuance under the ESPP. The price at which common stock is purchased by employees under the ESPP is equal to 85% of the fair market value of the Company's common stock on the first day of the offering period or purchase date, whichever is lower. The number of shares of common stock reserved for issuance under the ESPP is increased automatically on the first day of each fiscal year, commencing in 2022 and ending in 2041, by a number equal to the lesser of: (a) 1,460,000 shares of common stock (subject to proportionate adjustment in the event of a stock split, stock dividend, reverse stock split, etc.), (b) 1% of the total number of shares of common stock outstanding as of the last day of the prior fiscal year, or (c) a number of shares of common stock determined by the Company's Board of Directors.

During the nine months ended September 30, 2023 and 2022, 825,411 and 174,019 shares of common stock were issued under the ESPP, respectively.

Stock-based Compensation Summary

The classification of stock-based compensation expense is summarized as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Research and development	$ 949	$ 1,091	$ 2,847	$ 3,012
Selling, general and administrative	1,845	2,308	5,870	7,558
Total stock-based compensation expense	$ 2,794	$ 3,399	$ 8,717	$ 10,570

As of September 30, 2023, total unrecognized stock-based compensation expense was $22.5 million and is expected to be recognized over the weighted-average period of approximately 2.4 years.

The following table shows the weighted-average assumptions used to calculate the fair value of the stock option awards granted to employees and nonemployees using the Black-Scholes option pricing model during the periods below:

	Nine Months Ended September 30,	
Assumption	2023	2022
Expected volatility	73.55%	57.56%
Expected term (years)	5.3−6.1	5.2−6.1
Expected dividend yield	0.00%	0.00%
Risk-free interest rate	4.05%	1.98%

The fair value of RSUs is determined as the closing market price of our common stock on the grant date. The fair value of RSUs is recognized as stock-based compensation expense on a straight-line basis over the requisite service period of the award, which is generally the vesting period of the award.

12. Net Loss per Share

The Company's preferred stock was considered a participating security for purposes of calculating earnings per share because it had a right to participate in dividends with common stock. However, because the Company's preferred stock does not have a contractual obligation to share in the losses of the Company on a basis that is objectively determinable, it was excluded from the calculation of basic net loss per share.

The following common stock equivalents were excluded from the calculation of diluted net loss per share for the periods presented because their inclusion would have been anti-dilutive:

	September 30,	
	2023	**2022**
Employee stock options and RSUs issued and outstanding	14,108,195	9,659,301
Series A Common Stock Equivalent Convertible Preferred Stock	2,500,000	2,500,000
Common stock subject to the Company's repurchase right	150,069	654,487
Total	16,758,264	12,813,788

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 financial statements and the related notes to those statements included in Item 1 of this report. In addition to historical financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results and timing of selected events may differ materially from those anticipated in these forward-looking statements as a result of many factors, including, but not limited to, those discussed under the section titled "Risk Factors" elsewhere in this report. See the section titled "Special Note Regarding Forward-Looking Statements" elsewhere in this report.

Overview

We are a life science technology company that develops next-generation sequencing ("NGS") and multiomics technologies. The commercially available G4 Sequencing Platform (the "G4") is a powerful, highly versatile benchtop genomic sequencer designed to produce fast and accurate results. In addition, we commenced development of the PX system (the "PX"), which leverages our proprietary sequencing technology, applying it as an *in situ* readout to look at RNA and proteins in single cells and tissue. We are also actively evaluating additional product development and service-related opportunities to accelerate the introduction and commercialization of our multiomics technologies. Our mission is to empower researchers and clinicians to advance science and medicine.

We developed a unique and proprietary NGS technology, which we refer to as our Sequencing Engine. This Sequencing Engine is the platform technology for our products and core product tenets: power, speed, flexibility and accuracy. The core of our Sequencing Engine is comprised of unique and proprietary chemistry, including novel chemical compounds, polymers and enzymes. This chemistry is designed to produce high-accuracy sequencing and rapid cycle times that we believe can drive improvements in NGS. To take full advantage of our proprietary chemistry, we have developed and continue to develop purpose-built instrumentation consisting of high-speed, high-resolution imaging and innovative fluidic design. We believe that our Sequencing Engine, together with our proprietary innovations in molecular biology techniques, will enable differentiated applications in fast-growing markets, supported by our intellectual property portfolio.

The G4 is a benchtop next-generation sequencer designed to produce fast and accurate sequencing results. The G4 is designed to target the NGS market in particular applications that require power, speed, flexibility and accuracy. We believe the G4 will expand and accelerate the use of DNA sequencing across a wide range of applications, such as identifying cancer-associated genetic mutations, deep sequencing to detect minimum residual disease in circulating cell-free DNA, profiling the immune system, analyzing single-cell RNA transcription and rapidly sequencing exomes and whole genomes. We executed a three-step commercialization plan for the G4 consisting of the following: (i) collaborating with select partners to conduct beta pilot tests, which we completed in 2021; (ii) collaborating with potential customers in our early access program, which we concluded in the second quarter of 2022; and (iii) offering the G4 broadly to the market. We commercially launched the G4 in December of 2021, and we began recognizing revenue on sales of the G4 and its associated consumable products in the fourth quarter of 2022.

The PX is a development-stage multiomics platform that we designed to target the markets for single-cell, spatial analysis and proteomics and to potentially leverage our Sequencing Engine as a readout mechanism to provide a high-resolution view of biology at the single-cell and tissue level. We believe the PX could serve as a high-throughput, versatile platform capable of measuring levels of RNA transcription, protein expression and sequence specific information directly in cells and tissues. We also believe the PX could have broad application across many areas of biology, such as oncology, immunology and neurology. We are actively evaluating additional product development and service-related opportunities to accelerate the introduction and commercialization of our multiomics technologies.

Corporate and Financial Overview

Since we were incorporated in 2016, we have devoted substantially all of our resources to research and product development activities, initiating our commercialization plans, establishing and maintaining our intellectual property portfolio, hiring personnel, raising capital, building our commercial infrastructure and providing general and administrative support for these activities. Since our incorporation, we have incurred significant losses and negative cash flows from operations. During the nine months ended September 30, 2023, we incurred a net loss of $71.6 million and used $54.7 million of cash in our operations. As of September 30, 2023, we had an accumulated deficit of $314.3 million. We expect to continue to incur significant losses and do not expect positive cash flows from operations for the foreseeable future, and our net losses may fluctuate significantly from period to period depending on the timing of and expenditures on our commercialization and research and development activities.

On June 1, 2021, we closed our initial public offering ("IPO") in which we sold 11,730,000 shares of our common stock (including 1,530,000 shares that were offered and sold pursuant to the full exercise of the underwriters' option to purchase additional shares), resulting in net proceeds of approximately $237.2 million after deducting offering costs, underwriting discounts and commissions of $20.9 million.

From the date of our incorporation through September 30, 2023, we have financed our operations primarily through private placements of convertible preferred stock and convertible promissory notes and the net proceeds from our IPO. We have raised aggregate net proceeds of approximately $447.4 million, net of issuance costs, including $130.5 million that we raised through the issuance of convertible promissory notes in February 2021 (the "2021 Convertible Notes"), and including $10.5 million of advances on our SVB Loan (as defined in the "Indebtedness" section of the "Liquidity and Capital Resources" section below). As of September 30, 2023, we had cash, cash equivalents and short-term investments of $190.7 million.

We expect our expenses to be roughly flat in the near term and to increase in the longer term in connection with our operations and investments as we:

- continue to commercialize and enhance the G4;
- continue to develop our product pipeline;
- attract, hire and retain qualified personnel;
- expand our sales, marketing, service, support and distribution infrastructure to support our commercialization plans and engage in commercialization activities;
- build-out and expand our in-house manufacturing capabilities and engage in larger scale manufacturing activities;
- continue to engage in research and development of other products and enhancements;
- implement operational, financial and management information systems; and
- obtain, maintain, expand and protect our intellectual property portfolio.

Columbia License Agreement

In August 2016, we entered into an Exclusive License Agreement (the "License Agreement") with The Trustees of Columbia University ("Columbia"). The License Agreement includes a number of diligence obligations which require that we use our commercially reasonable efforts to research, discover, develop and market certain products by certain specified dates. Under the License Agreement, we pay an annual license fee that increases each year, until it reaches a low six-digit fee for the fifth year, and for each subsequent year, for so long as the License Agreement remains in force. For any products within the scope of the License Agreement that we commercialize, we are required to pay royalties ranging from low to mid-single digits on net sales of certain covered products and low single-digit royalty rates on net sales of certain other products. We can credit our yearly annual license fee against any yearly royalty fees payable to Columbia. Additionally, if we receive any income in connection with any sublicenses, we must pay Columbia a high single-digit percentage of that income. Finally, the License Agreement provides for payments to Columbia based on our achievement of certain development and commercialization milestones, which could total up to $3.9 million over the life of the License Agreement.

The Macroeconomic Environment

The global markets are facing downward pressure, extreme volatility, rising interest rates and disruptions in the capital and credit markets, reducing our ability to raise additional capital through equity, equity-linked or debt financings, which could negatively impact our short-term and long-term liquidity, access to capital markets, and our ability to operate in accordance with our operating plan, or at all.

The capital and credit markets may be adversely affected by the ongoing conflict between Russia and Ukraine, conflicts in the Middle East, and the possibility of a wider European or global conflict, global sanctions imposed in response thereto or an energy crisis, and other pressures including increasing interest rates. A severe or prolonged economic downturn, such as the global financial crisis, could result in a variety of risks to our business, including a weakened demand for our products and technologies and our ability to raise additional capital when needed on favorable terms, if at all. A weak or declining economy could strain our customers' budgets or cause delays in their payments to us. Any of the foregoing could harm our business and results of operations, and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business, results of operations, financial condition or our ability to raise capital.

In addition, we are exposed to credit risk on deposits at financial institutions to the extent our account balances exceed the amount insured by the Federal Deposit Insurance Corporation ("FDIC"). We are monitoring ongoing events involving limited liquidity, defaults, non-performance or other adverse developments that affect financial institutions, including Silicon Valley Bank ("SVB"). On March 10, 2023, SVB was closed by the California Department of Financial Protection and Innovation, which appointed the FDIC as receiver, and all of SVB's deposits and substantially all of SVB's assets were transferred into a new entity, Silicon Valley Bridge Bank, N.A. ("SVBB"). On March 12, 2023, the Department of the Treasury, the Federal Reserve and the FDIC jointly released a statement indicating that depositors at SVB would have access to their funds, even those in excess of the standard FDIC insurance limits, under a systemic risk exception. Such parties also announced, among other items, that SVBB had assumed the obligations and commitments of former SVB and that commitments to advance under existing credit agreements with former SVB will be honored by SVBB pursuant to the terms of such credit agreements. On March 27, 2023, First-Citizens Bank & Trust Company ("First Citizens Bank") assumed all of SVBB's obligations and commitments, and SVBB began operating as Silicon Valley Bank, a division of First Citizens Bank. Unless otherwise noted herein, all references to SVB or Silicon Valley Bank shall refer to Silicon Valley Bank, a division of First Citizens Bank. In light of the foregoing, we do not believe we have exposure to loss as a result of SVB's receivership.

Results and Components of Operations

The following table summarizes our results of operations for the periods indicated:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023	2022	$ Change	% Change	2023	2022	$ Change	% Change
	(in thousands)				(in thousands)			
Revenue	$ 462	$ -	$ 462	100%	$ 1,830	$ -	$ 1,830	100%
Cost of revenue	527	-	527	100%	1,931	-	1,931	100%
Gross margin	(65)	-	(65)	100%	(101)	-	(101)	100%
Operating expenses:								
Research and development	11,220	12,732	(1,512)	-12%	36,074	35,439	635	2%
Selling, general and administrative	13,254	11,962	1,292	11%	41,345	35,518	5,827	16%
Total operating expenses	24,474	24,694	(220)	-1%	77,419	70,957	6,462	9%
Loss from operations	(24,539)	(24,694)	155	-1%	(77,520)	(70,957)	(6,563)	9%
Other income (expense):								
Interest expense	(285)	(211)	(74)	35%	(814)	(520)	(294)	57%
Interest and other income	2,464	1,115	1,349	121%	6,763	1699	5,064	298%
Total other income	2,179	904	1,275	141%	5,949	1,179	4,770	405%
Net loss	$ (22,360)	$ (23,790)	$ 1,430	6%	$ (71,571)	$ (69,778)	$ (1,793)	-3%

Revenue, Cost of Revenue and Gross Margin

We generate revenue from the sale of our products, which consist of the G4 instrument, related consumable flow cell kits and services. Revenue from instrument sales is recognized generally upon customer acceptance. Once we generate sufficient history of successful customer acceptances for instruments, we intend to recognize revenue for instruments generally upon shipment to the customer. Revenue from consumables sales is recognized generally upon shipment to the customer. Revenue from services, which are primarily comprised of assurance or extended warranty–type services, is recognized over the applicable service period. When a single contract has multiple obligations, revenue is allocated to each of those performance obligations. This results in revenue being deferred for performance obligations to be satisfied in the future, such as services and discounted consumables.

Cost of revenue consists primarily of the direct costs of the materials and labor to build our products, overhead such as facilities and indirect labor that support manufacturing, shipping costs, and the labor and direct costs to install the G4. Cost of revenue also includes estimated costs to satisfy customary assurance-type warranties.

The following table summarizes our revenue, cost of revenue and gross margin for the periods indicated:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023	2022	$ Change	% Change	2023	2022	$ Change	% Change
	(in thousands)				(in thousands)			
Revenue	$ 462	$ -	$ 462	100%	$ 1,830	$ -	$ 1,830	100%
Cost of revenue	527	-	527	100%	1,931	-	1,931	100%
Gross margin	$ (65)	$ -	$ (65)	100%	$ (101)	$ -	$ (101)	100%

Three Months Ended September 30, 2023 and September 30, 2022

During the three months ended September 30, 2023, we recognized $0.3 million of revenue for instruments, approximately $0.1 million of revenue for consumables and approximately $0.1 million of revenue for services. We did not recognize any revenue for the three months ended September 30, 2022.

Our cost of revenue was approximately $0.5 million for the three months ended September 30, 2023, which was primarily related to the materials, labor and overhead to build and deliver the G4 instruments and consumables that were recognized as revenue during the period.

Our gross margin for the three months ended September 30, 2023 was impacted by additional incentives we provided to certain customers for their early adoption of the G4 sequencing platform, as well as higher direct costs for "white-glove" services to our initial customers. We expect our gross margins to be variable initially and to improve over time both as we phase-out incentives and enhanced services for early customers and as we increase our manufacturing efficiency.

Nine Months Ended September 30, 2023 and September 30, 2022

During the nine months ended September 30, 2023 we recognized $1.6 million of revenue for instruments and approximately $0.2 million of revenue for consumables and services. We did not recognize any revenue for the nine months ended September 30, 2022.

Our cost of revenue was approximately $1.9 million, which was primarily related to the materials, labor and overhead to build and deliver the G4 instruments and consumables that were recognized as revenue during the period.

Our gross margin for the nine months ended September 30, 2023 was impacted by additional incentives we provided to certain customers for their early adoption of the G4 sequencing platform, as well as higher direct costs for "white-glove" services to our initial customers. We expect our gross margins to be variable initially and to improve over time both as we phase-out incentives and enhanced services for early customers and as we increase our manufacturing efficiency.

Research and Development Expense

Research and development expenses consist primarily of the following: salaries, payroll taxes, employee benefits and stock-based compensation for personnel engaged in research and development activities; consultant fees; fees incurred under intellectual property license agreements; laboratory supplies and development compound materials; and allocated facilities, information technology and depreciation costs. Research and development costs are charged to expense as incurred.

We plan to continue to invest in our research and development efforts related to our product development pipeline and our proprietary technology. We expect our expenses to be roughly flat in the near term and to increase in the longer term in connection with hiring personnel and purchasing supplies and materials to support our research and development efforts.

The following table summarizes our research and development expense for the periods indicated:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023	2022	$ Change	% Change	2023	2022	$ Change	% Change
	(in thousands)				(in thousands)			
Research and development	$ 11,220	$ 12,732	$ (1,512)	-12%	$ 36,074	$ 35,439	$ 635	2%

Three Months Ended September 30, 2023 and September 30, 2022

Research and development expense decreased by $1.5 million, or 12%, for the three months ended September 30, 2023 compared to the same period in 2022. The decrease in the current period was due to a decrease of $0.4 million in employee compensation costs, excluding stock-based compensation, due to reduced headcount. Stock-based compensation expense decreased by approximately $0.2 million in the current period due to forfeitures of equity awards, offset by equity award grants to employees. Other decreases in the current period included $0.5 million related to decreased facilities and information technology costs and $0.4 million related to lower costs for general lab supplies and other research and development costs.

Nine Months Ended September 30, 2023 and September 30, 2022

Research and development expense increased by $0.6 million, or 2%, for the nine months ended September 30, 2023 compared to the same period in 2022. The increase in the current period was due to an increase of $0.6 million in employee compensation costs, excluding stock-based compensation, to support the development efforts of the G4 and related consumables and development of our product pipeline. Stock-based compensation expense decreased in the current period by approximately $0.2 million due to forfeitures of equity awards, offset by equity award grants to employees. Other increases in the current period included $1.0 million related to the expansion of our facilities and an increase in information technology costs, as well as $0.2 million related to an increase in depreciation. These increases were offset by a decrease in research and development materials and other general lab supply costs of $1.0 million.

Selling, General and Administrative Expense

Selling, general and administrative expenses consist primarily of the following: salaries, payroll taxes, employee benefits and stock-based compensation for personnel in our executive management, sales, finance, legal, administration and human resources functions; professional service fees, including for legal, accounting, patent, auditing and other services; allocated facilities, information technology and depreciation costs; long-lived asset impairment costs; and other costs to support our operations.

We plan to continue to invest in our personnel as we grow, particularly in the areas of sales and customer support. We expect our expenses to be roughly flat in the near term and to increase in the longer term.

The following table summarizes our selling, general and administrative expense for the periods indicated:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023	2022	$ Change	% Change	2023	2022	$ Change	% Change
	(in thousands)				(in thousands)			
Selling, general and administrative	$ 13,254	$ 11,962	$ 1,292	11%	$ 41,345	$ 35,518	$ 5,827	16%

Three Months Ended September 30, 2023 and September 30, 2022

Selling, general and administrative expenses increased by $1.3 million, or 11%, for the three months ended September 30, 2023 compared to the same period in 2022. The increase was due to an increase of $0.9 million in employee compensation costs, excluding stock-based compensation, to support our growth and commercialization. Stock-based compensation expense decreased by approximately $0.3 million in the current period due to forfeitures of equity awards, offset by equity award grants to employees. Other increases in the current period included $0.8 million related to increased facilities and information technology costs, $0.2 million related to an increase in depreciation and $0.2 million for other general administrative expenses. These amounts were offset by a decrease of $0.5 million in insurance premiums and outside consulting and legal costs.

Nine Months Ended September 30, 2023 and September 30, 2022

Selling, general and administrative expenses increased by $5.8 million, or 16%, for the nine months ended September 30, 2023 compared to the same period in 2022. The increase in the current period was due to a $1.9 million impairment charge on our property and equipment, which was triggered by the sustained decline in our market capitalization over the preceding year. The increase was also due to an increase of $3.6 million in employee compensation costs, excluding stock-based compensation, to support our growth and commercialization. Stock-based compensation expense decreased by approximately $1.5 million due to forfeitures of equity awards, offset by equity award grants to employees. Other increases in the current period included $2.4 million related to increased facilities and information technology costs, $0.6 million related to an increase in depreciation and $0.7 million for other general administrative expenses. These amounts were offset by a decrease of $1.9 million in insurance premiums and outside consulting and legal costs.

Other Income (Expense)

Other income (expense) primarily consists of interest income and interest expense.

Interest Expense—Interest expense consists of interest related to our SVB Loan, including amortization of debt issuance costs.

Interest and Other Income—Interest income consists of interest earned on cash, cash equivalents and short-term investments primarily from holdings in government notes, money market funds and corporate notes. Other income primarily includes certain tax credits received.

The following table summarizes our other income (expense) for the periods indicated:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023	2022	$ Change	% Change	2023	2022	$ Change	% Change
	(in thousands)				(in thousands)			
Interest expense	$ (285)	$ (211)	$ (74)	35%	$ (814)	$ (520)	$ (294)	57%
Interest and other income	2,464	1,115	1,349	121%	6,763	1,699	5,064	298%
Total other income	$ 2,179	$ 904	$ 1,275	141%	$ 5,949	$ 1,179	$ 4,770	405%

Three Months Ended September 30, 2023 and September 30, 2022

Other income increased by $1.3 million for the three months ended September 30, 2023 compared to the same period in 2022. The increase was primarily due to rising interest rates, resulting in an additional $1.4 million of interest income, offset by additional interest expense of $0.1 million.

Nine Months Ended September 30, 2023 and September 30, 2022

Other income increased by $4.8 million for the nine months ended September 30, 2023 compared to the same period in 2022. The increase was primarily due to rising interest rates, resulting in an additional $5.1 million of interest income, offset by additional interest expense of $0.3 million.

Liquidity and Capital Resources

Since we incorporated in June 2016, we have devoted substantially all of our resources to research and product development activities, initiating our commercialization plans, establishing and maintaining our intellectual property portfolio, hiring personnel, raising capital, building our commercial infrastructure and providing general and administrative support for these activities. Since our incorporation, we have incurred significant operating losses and negative cash flows from operations and have only recently recognized revenue from product sales. From our incorporation through September 30, 2023, we have financed our operations primarily through the net proceeds from our IPO, and private placements of convertible preferred stock and convertible promissory notes. We expect to continue to incur significant losses and do not expect positive cash flows from operations for the foreseeable future, and our net losses may fluctuate significantly from period to period depending on the timing of, and expenditures on, our commercialization and research and development activities. During the nine months ended September 30, 2023, we incurred a net loss of $71.6 million and used $54.7 million of cash in operations. As of September 30, 2023, we had an accumulated deficit of $314.3 million and had cash, cash equivalents and short-term investments of $190.7 million.

Our capital obligations include minimum lease payments of $2.0 million for the remainder of 2023, $8.1 million in 2024, $5.7 million in 2025 and $105.1 million thereafter. Our capital obligations also include minimum payments under our SVB Loan of $0.2 million for the remainder of 2023, $2.3 million in 2024, $5.9 million in 2025 and $4.5 million in 2026. Our capital obligations also include payments under our License Agreement with Columbia. Under the License Agreement, we will pay a low six-digit annual license fee for so long as the License Agreement remains in force. For any products within the scope of the License Agreement that we commercialize, we are required to pay royalties ranging from low to mid-single digits on net sales of certain covered products and low single digit royalty rates on net sales of certain other products. We can credit our yearly annual license fee against any yearly royalty fees payable to Columbia. Additionally, if we receive any income in connection with any sublicenses, we must pay Columbia a high single-digit percentage of that income. Finally, the License Agreement provides for payments to Columbia based on our achievement of certain development and commercialization milestones, which could total up to $3.9 million over the life of the License Agreement. Our leases and the License Agreement are further described in Note 9 to the unaudited financial statements contained elsewhere in this report. The SVB Loan is further described in Note 8 to the unaudited financial statements contained elsewhere in this report.

Our future capital requirements will depend on many factors including executing on our commercialization plans, continuing to invest in our research and development projects and other factors described in the section titled “Risk Factors” elsewhere in this report. Based on our current operating plan, we believe our existing cash, cash equivalents and short-term investments will enable us to fund our planned operations for at least 12 months from the issuance date of this report. We have based our estimate of capital requirements on assumptions that may prove to be incorrect, and, as we continue to face challenges and uncertainties, our available capital resources may be consumed more rapidly than currently expected due to a variety of factors, including those factors described in the section titled “Risk Factors” elsewhere in this report.

We may need to seek additional financing in the future to support our operations, research and development activities and commercialization plans. If we are unable to generate sufficient revenue to finance our cash requirements, if the maximum availability of $35.5 million under our SVB Loan is insufficient to finance our cash requirements, or if we are unable to raise additional capital or enter into financing agreements or arrangements when required on favorable terms, or at all, we may have to delay, reduce the scope of, or discontinue one or more development programs, delay potential commercialization or reduce the scope of our sales or marketing activities and pursue other cost cutting measures, including the reduction of headcount, scope of operations and planned capital expenditures, which may have a material adverse effect on our business, results of operations, financial condition or ability to fund our scheduled obligations on a timely basis or continue as a going concern. We can provide no assurance that we will ever be profitable or generate positive cash flow from operating activities or that, if we achieve profitability, we will be able to sustain it.

On July 19, 2022, we filed a shelf registration statement (the “Shelf Registration Statement”) on Form S-3 with the SEC (that was declared effective by the SEC on July 27, 2022), which permits us to offer up to $250 million of common stock, preferred stock, debt securities and warrants in one or more offerings and in any combination, including in units from time to time. Our Shelf Registration Statement is intended to provide us with additional flexibility to raise capital in the future for general corporate purposes. As part of this Shelf Registration Statement, we also filed a sales agreement prospectus covering “at the market” offerings, pursuant to which we may offer and sell up to $100 million of our common stock under a sales agreement (the “Sales Agreement”) with Cowen and Company, LLC. Through the date of this filing, we have not sold any shares of our common stock in “at the market” transactions pursuant to the Sales Agreement.

Cash Flows

The following table sets forth the sources and uses of cash, cash equivalents and restricted cash for each of the periods presented below:

	Nine Months Ended September 30,	
	2023	2022
	(in thousands)	
Net cash provided by (used in):		
Operating activities	$ (54,745)	$ (67,177)
Investing activities	13,156	(39,737)
Financing activities	624	151
Net increase (decrease) in cash and cash equivalents and restricted cash	$ (40,965)	$ (106,763)

Operating Activities

During the nine months ended September 30, 2023, cash used in operating activities was $54.7 million attributable to a net loss of $71.6 million and changes in working capital of $1.3 million, offset by non-cash charges of $16.3 million and cash lease incentives received of $1.8 million. Non-cash charges primarily consisted of $8.7 million of stock-based compensation expense, $3.0 million related to the amortization of the Company’s right-of-use lease assets, $2.5 million of depreciation and $1.9 million related to long-lived asset impairment.

During the nine months ended September 30, 2022, cash used in operating activities was $67.2 million attributable to a net loss of $69.8 million and changes in working capital of $14.4 million, offset by non-cash charges of $17.0 million. Non-cash charges primarily consisted of $10.6 million of stock-based compensation expense, $2.6 million related to the amortization of the Company's right-of-use lease assets, $2.0 million related to the amortization of premiums on the Company’s short-term investments and $1.7 million of depreciation.

Investing Activities

During the nine months ended September 30, 2023, cash provided by investing activities was $13.2 million, which related to proceeds from sales and maturities of available-for-sale securities of $142.8 million, offset by purchases of available-for-sale securities of $129.1 million and $0.6 million in payments for purchases of property and equipment.

During the nine months ended September 30, 2022, cash used in investing activities was $39.7 million, which related to purchases of available-for-sale securities of $139.2 million and $4.2 million in payments for purchases of property and equipment, offset by proceeds from sales and maturities of available-for-sale securities of $103.7 million.

Financing Activities

During the nine months ended September 30, 2023, cash provided by financing activities was approximately $0.6 million, which was primarily related to cash proceeds from the issuance of common stock under our employee stock purchase plan.

During the nine months ended September 30, 2022, cash provided by financing activities was approximately $0.2 million, which was primarily related to cash proceeds from the issuance of common stock under our employee stock purchase plan and in connection with exercises of stock options under our employee equity incentive plans, offset by equity repurchases.

Indebtedness

In November 2019, we entered into a loan and security agreement with SVB pursuant to which SVB agreed to lend us up to $15.0 million in a series of term loans (the "2019 SVB Loan"). We borrowed an aggregate of $10.0 million under the 2019 SVB Loan. The 2019 SVB Loan was to mature on September 1, 2023 and bore interest at an annual rate equal to the greater of (a) 0.65% above the prime rate or (b) 5.90%. Payment on the 2019 SVB Loan was for interest only through September 30, 2021. In addition, a final payment equal to the original principal amount of each advance multiplied by 5.50% was to be due on the maturity date.

In September 2021, we refinanced our 2019 SVB Loan. In connection with the refinancing, we entered into an Amended and Restated Loan and Security Agreement (the "2021 SVB Loan," together with the 2022 SVB Loan Amendment (defined below), the "SVB Loan") with SVB. The 2021 SVB Loan provided for term loans in an aggregate principal amount of up to $35.5 million to be delivered in three tranches. The tranches consisted of: (i) a term loan advance to us in an aggregate principal amount of $10.5 million on the loan closing date (the "First Tranche"); (ii) an additional term loan advance available to us through September 30, 2022 in an aggregate principal amount of $15.0 million (the "Second Tranche"); and (iii) subject to SVB's approval, our right to request that SVB make an additional term loan advance in an aggregate principal amount of $10.0 million. The proceeds from the First Tranche were used to repay in full the then-existing indebtedness under the 2019 SVB Loan. The SVB Loan matures on September 1, 2026 and bears interest at an annual rate equal to the greater of (i) 0.75% plus the prime rate as reported in The Wall Street Journal and (ii) 4.00%. As of September 30, 2023, the SVB Loan bears interest at an annual rate of 9.25%. The SVB Loan has an initial interest-only period of 36 months, or until September 2024, from which point we are required to make interest and principal payments through the maturity date. In addition, a final payment (the "Final Payment Fee") equal to the original principal amount of each advance multiplied by 4.00% will be due on the maturity date.

In September 2022, we entered into an amendment to the 2021 SVB Loan (the "2022 SVB Loan Amendment"). The 2022 SVB Loan Amendment extended the period to draw down the additional tranches totaling $25.0 million from September 30, 2022 to March 31, 2024, provided that in order for us to access the Second Tranche availability we must achieve a six-month trailing revenue hurdle.

As further described above in the section titled "The Macroeconomic Environment," SVBB assumed the obligations and commitments of SVB, and subsequently, on March 27, 2023, First Citizens Bank assumed all of SVBB's obligations and commitments and SVBB began operating as Silicon Valley Bank, a division of First Citizens Bank.

We are subject to customary affirmative and restrictive covenants under the SVB Loan. Our obligations under the SVB Loan are secured by a first priority security interest in substantially all of our current and future assets, other than intellectual property. We have agreed not to encumber our intellectual property assets, except as permitted by the SVB Loan. The SVB Loan provides for events of default customary for term loan facilities of this type, including but not limited to: non-payment; breaches or defaults in the performance of covenants or representations and warranties; bankruptcy and other insolvency events; and the occurrence of a material adverse change as defined in the SVB Loan. After the occurrence of an event of default, SVB may, among other remedies, accelerate payment of all obligations.

Critical Accounting Policies, Significant Judgments and Use of Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The preparation of financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, costs and expenses and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Changes in estimates are reflected in reported results for the period in which they become known. Actual results could differ significantly from the estimates made by our management.

There have been no material changes to our critical accounting policies and estimates as compared to the critical accounting policies and estimates disclosed in our Annual Report on Form 10-K for the year ended December 31, 2022.

Recent Accounting Pronouncements

A description of recent accounting pronouncements that may potentially impact our financial position, results of operations or cash flows is disclosed in Note 2 to our unaudited financial statements included elsewhere in this report.

Off–Balance Sheet Arrangements

Since our inception, we have not engaged in any off–balance sheet arrangements, as such term is defined in the rules and regulations of the Securities and Exchange Commission (the "SEC").

JOBS Act

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended (the "JOBS Act"). We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year in which we have more than $1.235 billion in annual gross revenue; (ii) the date we qualify as a "large accelerated filer" as defined in Rule 12b-2 under the Exchange Act of 1934, as amended (the "Exchange Act"), with at least $700 million of equity securities held by non-affiliates; (iii) the issuance, in any three-year period, by us of more than $1.0 billion in non-convertible debt securities; or (iv) December 31, 2026. As a result of this status, we have taken advantage of certain exemptions from various reporting requirements in this report that are applicable to other publicly traded entities that are not emerging growth companies and may elect to take advantage of other exemptions from reporting requirements in our future filings with the SEC. In particular, these exemptions include:

- the option to present only two years of audited financial statements and only two years of Management's Discussion and Analysis of Financial Condition and Results of Operations;
- not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act of 2002, as amended;
- not being required to submit certain executive compensation matters to stockholder advisory votes, such as "say-on-pay," "say-on-frequency," and "say-on-golden parachutes;" and
- not being required to disclose certain executive compensation-related items, such as the correlation between executive compensation and performance and comparisons of the chief executive officer's compensation to median employee compensation.

As a result, we do not know if some investors will find our common stock less attractive. The result may be a less active trading market for our common stock, and the price of our common stock may become more volatile.

In addition, Section 107 of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies. We have elected to avail ourselves of this exemption and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for private companies. Accordingly, the information contained herein may be different than the information you receive from other public companies.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

There were no substantial changes to our market risks during the quarter ended September 30, 2023 when compared to the disclosures in "Item 7A. Quantitative and Qualitative Disclosures About Market Risk" in our Annual Report on Form 10-K for the year ended December 31, 2022.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and our principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act as of the end of the period covered by this report. Based on that evaluation, our Principal Executive Officer and Principal Financial Officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and to provide reasonable assurance that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the period covered by this report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Disclosure Controls and Procedures

Our management, including our principal executive officer and principal financial officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Due to inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

We are not currently a party to any material legal proceedings. From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. Regardless of outcome, litigation can have an adverse impact on us due to defense and settlement costs, diversion of management resources, negative publicity, reputational harm and other factors.

Item 1A. Risk Factors

Investing in our common stock is speculative and involves a high degree of risk. You should consider and read carefully all of the risks and uncertainties described below, together with all of the other information contained in this report, including the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and the related notes, before investing in our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and/or operating results. If any of the following risks occur, our business, financial condition, results of operations and future growth prospects could be materially and adversely affected. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment. This report also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of a number of factors, including the risks described below. See "Special Note Regarding Forward-Looking Statements" elsewhere in this report.

Risks Related to Our Business and Industry

Our limited operating history makes it difficult to evaluate our future prospects and the risks and challenges we may encounter.

We operate in a highly competitive market characterized by rapid technological advances, frequent new product introductions, evolving industry standards and changing customer preferences. Our limited operating history makes it difficult to evaluate our future prospects and our ability to respond to our competitors, changes in our market and the risks and challenges we may encounter as we expand our business operations. If we fail to address the risks, uncertainties and difficulties that we face, including those described elsewhere in this "Risk Factors" section, our business, financial condition and results of operations could be adversely affected. We have encountered in the past, and will encounter in the future, risks and uncertainties frequently experienced by companies developing and introducing new products in competitive and rapidly changing markets. If our assumptions regarding the risks and uncertainties we use to plan and operate our business are incorrect or change, or if we do not address these risks and uncertainties successfully, our results of operations could differ materially from our expectations, and our business, financial condition and results of operations could be adversely affected.

We have incurred significant losses since inception, we expect to incur significant losses in the future and we may not be able to generate sufficient revenue to achieve and maintain profitability.

We have incurred significant losses since we were formed in 2016 and have only recently generated revenue. We expect to continue to incur significant losses for the foreseeable future as we expand our business operations, manufacture and commercialize the G4, continue to enhance and develop our products and implement our business plans and strategies. Our net loss for the nine months ended September 30, 2023 was $71.6 million and for the nine months ended September 30, 2022 was $69.8 million. As of September 30, 2023, we had an accumulated deficit of $314.3 million. We expect that our losses will continue for the foreseeable future as we continue to invest significant additional resources toward the commercialization of our products and ongoing research and development. We have experienced these losses and accumulated deficit primarily due to the investments we have made in developing our proprietary technologies and products, building our team and manufacturing capabilities and commercially launching our first product, the G4. Over the next several years, we expect to continue to incur significant expenses as we continue our research and development activities, continue to commercialize the G4, continue the development of our product pipeline, continue to build our sales and marketing organization and increase our manufacturing and commercialization capabilities. These efforts may prove to be more costly, or take longer, than we currently anticipate. Additionally, we may encounter unforeseen expenses, product development or manufacturing delays, declines in revenue or other unknown factors that may result in losses in future periods. We have only recently generated revenue, and we may never generate revenue sufficient to offset our expenses. In addition, as a public company, we have incurred and will incur significant legal, accounting, administrative, insurance and other expenses that we did not incur as a private company. To date, we have financed our operations principally from the sale of common stock, convertible preferred stock, convertible notes and the incurrence of other indebtedness. There can be no assurance that our revenue and gross margin will increase sufficiently such that our net losses decrease, or that we attain profitability, in the future. Further, our limited operating history makes it difficult to effectively plan for and model our operating expenses and our ability to generate revenue. Our ability to achieve and then sustain profitability is based on numerous factors, many of which are beyond our control, including the impact of market acceptance of our products, product development results and timing, offerings or actions taken by our competitors, our market penetration and margins and current and future litigation. We may never be able to generate sufficient revenue to achieve or sustain profitability, which could negatively impact the value of our common stock.

We have only recently generated revenue and have limited experience developing and commercializing our products or technology, which makes it difficult to evaluate our prospects and predict our future performance.

We commercially launched our first product, the G4, in December of 2021, and we began recognizing revenue on sales of the G4 in the fourth quarter of 2022. There can be no assurance that we will be able to generate sufficient revenue in the future to support our operations and plans. Our operations to date have been focused on developing and commercializing our technologies and products, including developing and commercializing the G4, PX and our product pipeline and product enhancements. The performance of our products in our beta pilot program and early access program may not be indicative of the performance our customers experience following commercial launch, and we may need to make modifications to improve our products. For example, we expect to make modifications to improve the reliability, quality and/or functionality of the G4 as we manufacture the G4 and in response to customer feedback, and we expect the G4 to improve in time as further units are sold. However, there can be no assurance that this will occur or that we will avoid delays in finalizing these improvements. There can be no assurance that we will be able to timely achieve market acceptance for the G4 in the future. We have limited experience manufacturing the G4 for commercial use, conducting sales and marketing activities at scale and managing customer support at the commercial level. Further, while we commenced the development of the PX, we have not completed its development and have no experience manufacturing or commercializing the PX. Consequently, predictions about our future success or viability are highly uncertain and hard to predict as a result of our limited operating history, the development stage of our products and our limited history commercializing our technologies or products. Our prospects must be considered in light of the uncertainties, risks, expenses, and difficulties frequently encountered by companies in their early stages of operations.

Further, we are transitioning from a company with a focus on research and development to a company capable of supporting both research and development and robust manufacturing and commercial activities, and we may not be successful in this transition. We have encountered in the past, and will encounter in the future, risks and uncertainties, delays and scientific setbacks frequently experienced by development stage companies with limited operating histories in competitive and rapidly changing industries, such as the genomics industry. If our assumptions regarding these risks and uncertainties, which we use to plan and operate our business, manufacturing and commercialization activities, are incorrect or change, or if we do not address these risks, delays or uncertainties successfully, our results of operations could differ materially from our expectations, and our business, financial condition and results of operations could be adversely affected.

The life sciences technology market is highly competitive. If we fail to compete effectively, our business and operating results will suffer.

We face significant competition in the life sciences technology market. More specifically, the NGS market is characterized by rapid technological changes, frequent new product introductions, established and emerging competition, extensive intellectual property disputes and litigation, price competition, aggressive marketing practices, evolving industry standards and changing customer preferences. Our primary competitors and potential competitors are large publicly traded companies or are divisions of large publicly traded companies, including 10x Genomics Inc., Becton, Dickinson and Company, Bio-Rad Laboratories, Inc., Illumina Inc., MissionBio Inc., Nanostring Technologies, Inc., Oxford Nanopore Technologies Inc., Pacific Biosciences Inc. and Thermo Fisher Scientific Inc. There are other companies, both established and early stage, such as Element Biosciences, Inc. and Ultima Genomics, Inc., who have begun commercializing NGS technologies and offering products to our target customers. We also face competition from companies and research institutes developing their own products or applications for omics research. This is particularly true for the largest research centers and laboratories who are continually testing and trying new technologies, whether from a third-party vendor or developed internally.

Our current competitors, including those who are large publicly traded companies, or are divisions of large publicly traded companies, enjoy a number of competitive advantages over us, including:

- greater name and brand recognition;
- greater financial and human resources;
- established and trusted commercial relationships with our target customers;
- broader product lines;
- superior product offerings, features or capabilities;
- greater pricing flexibility, including the ability to offer significant discounts and to bundle products and services;
- larger sales and customer service forces and more established distributor networks;
- substantial intellectual property portfolios;
- exclusive or long-term supply agreements with our target customers;
- approvals with the U.S. Food and Drug Administration (the “FDA”) that allow our competitors to market their products for additional uses;
- numerous scientific papers and publications supporting their technologies and product claims; and
- better established, larger scale and lower cost manufacturing capabilities.

We cannot assure investors that we can successfully compete with these competitors or that the G4, the PX or any other technologies and products we may develop can compete favorably with the offerings from such competitors. We also cannot assure investors that we can successfully defend our technologies and products from lawsuits filed by our competitors without significant expenses, the requirement to complete additional product and technology development, potential manufacturing or commercialization delays, or at all. Further, we cannot assure investors that we will be successful in the face of increasing competition from products and technologies introduced by our existing or future competitors, or developed by our customers internally. In addition, we cannot assure investors that our competitors do not have or will not develop products or technologies that currently or in the future will enable them to offer products with greater capabilities or at lower costs than ours or that are able to run comparable experiments at a lower total experiment cost. Many of our competitors have also been able to enter into long-term, exclusive agreements with major potential customers, often by offering favorable pricing and other terms. Until these agreements expire, our ability to place our products with these customers will be limited. Even after exclusive agreements expire, we may not be able to compete with the terms offered by our competitors in their efforts to extend exclusive relationships with these major potential customers. Any failure to compete effectively could materially and adversely affect our business, financial condition and operating results.

If our products fail to achieve early customer and scientific acceptance, we may not be able to achieve broader market acceptance for our products, and our revenue and prospects may be harmed.

We cannot guarantee that customer experiences or reviews of the G4 from our customers will be favorable. Initial negative perception of the G4 by customers could irreparably damage our reputation and ability to successfully commercialize the G4, PX or any of our other future products. Further, the life sciences scientific community is comprised of a small number of early adopters and key opinion leaders ("KOLs") who significantly influence the rest of the community and the marketplace in general. The success of life sciences products is due, in large part, to acceptance by the scientific community and their adoption of certain products as best practice in the applicable field of research. The current system of academic and scientific research views publishing in a peer-reviewed journal as a measure of success. In such journal publications, the researchers will describe not only their discoveries, but also the methods and typically the products used to fuel such discoveries. Mentions in peer-reviewed journal publications are a good barometer for the general acceptance of our products as best practices. Ensuring that early adopters and KOLs publish research involving the use of our products is critical to ensuring our products gain widespread acceptance and market growth. Continuing to maintain good relationships with such KOLs is vital to growing the acceptance of our products in the marketplace. If early adopters and KOLs do not favorably describe the use of our products, do not compare our products favorably to existing products and technologies, or negatively describe the use and operation of our products in publications, it may drive potential customers away from our products and prevent broader market acceptance of our products, which could harm our business, financial condition and results of operations.

We expect to be highly dependent upon revenue generated from the sale of the G4 and future products, and any delay or failure by us to successfully develop and commercialize the G4, PX or other future products could have a substantial adverse effect on our business and results of operations.

We have commercially launched the G4 and began recognizing revenue on sales of the G4 in the fourth quarter of 2022. We commenced development of the PX, which is a platform that we designed to target the markets for single-cell, spatial analysis and proteomics. We are actively evaluating additional product development and service-related opportunities to accelerate the introduction and commercialization of our multiomics technologies. As a result, we expect to generate substantially all of our revenue in the near term from the sale of the G4. There can be no assurance of the following: that the G4 will meet the expectations of our customers, including those relating to cost, reliability, performance and features, or otherwise gain market acceptance; that we can manufacture the G4 in commercial quantities; that we will be able to successfully commercialize the G4; or that we will be able to service and maintain the G4 products that we have sold. Further, there is no assurance that we will be able to successfully complete the development of, or commercialize, the PX or any other future products or product enhancements we elect to pursue. To date, we have limited experience simultaneously designing, testing, manufacturing and selling products and there can be no assurances we will be successful in doing so or doing so on our intended timelines. In addition, as technologies change in the life sciences research tools marketplace in general, and in the omics technologies marketplace specifically, we will be expected to upgrade or adapt our products in order to keep up with the latest technology. Further, our competitors may offer or develop products or technologies that cause the G4, PX or other future products to not be commercially attractive to our customers.

Our future financial performance will be dependent on our ability to increase penetration and utilization in our existing markets.

Our financial performance will be driven by, and a key factor to our future success will be, the rate of commercial adoption of the G4 and future products. In addition, our financial performance will be dependent on our ability to increase customer utilization of our products, and thereby, increase sales of our consumables and any other associated products and services we offer. There is no assurance that we will be successful in demonstrating our product performance claims and value proposition to potential customers. There also is no assurance that our direct sales and marketing organization in the United States or our direct or distributor sales and marketing efforts in markets outside the United States will drive broad customer adoption of our products. Further, we may not be successful in increasing our customers' usage of our products, or their associated purchase of our consumables and other products and services. Any failure to establish a broad installed base of the G4, PX or other future products among our target customers, or failure to increase the usage of our products and the associated sales of our consumables and other products and services, will limit our revenue growth and harm our results of operations and financial performance.

Our business will depend significantly on research and development spending by academic institutions and other research institutions, and any reduction in spending could limit demand for our products and adversely affect our business, results of operations, financial condition and prospects.

We are initially targeting customers who are already familiar with genomic analysis, including academic institutions, genomic research centers/core labs and government laboratories, as well as pharmaceutical, clinical research organizations ("CROs"), biotechnology, consumer genomics, commercial molecular diagnostic laboratories and agrigenomics companies. We believe that a substantial amount of our sales revenue in the near term will be generated from sales to academic and other research institutions. Therefore, we expect much of these customers' funding will be, in turn, provided by various state, federal and international governmental agencies. As a result, the demand for the G4 and any other product or product enhancements we elect to develop in the future may depend in part upon the research and development budgets of these customers, which are impacted by factors beyond our control, such as:

- decreases in government funding of research and development;
- changes to programs that provide funding to research laboratories and institutions, including changes in the amount of funds allocated to different areas of research or changes that have the effect of increasing the length of the funding process;
- macroeconomic conditions and the political climate;
- scientists' and customers' opinions of the utility of new products or services;
- researchers' opinions of the utility of the G4 or any other product or product enhancements we elect to develop in the future;
- citation of the G4 or our other future products in published research;
- potential changes in the regulatory environment;
- differences in budgetary cycles, especially government- or grant-funded customers, whose cycles often coincide with government fiscal year ends;
- competitor product offerings or pricing;
- the effect of inflation on budgets of our potential customers;
- market acceptance of new technologies; and
- market driven pressures to consolidate operations and reduce costs.

In addition, various state, federal and international agencies that provide grants and other funding may be subject to stringent budgetary constraints that could result in spending reductions, reduced grant making, reduced allocations or budget cutbacks, which could jeopardize the ability of these customers, or the customers to whom they provide funding, to purchase our products. For example, congressional appropriations to the National Institutes of Health (the "NIH") have generally increased year-over-year for the last 20 years, but the NIH also experiences occasional year-over-year decreases in appropriations, including as recently as 2013. There is no guarantee that NIH appropriations will not decrease in the future. A decrease in the amount of, or delay in the approval of, appropriations to NIH or other similar United States or international organizations, such as the Medical Research Council in the United Kingdom, could result in fewer grants benefiting life sciences research. These reductions or delays could also result in a decrease in the aggregate amount of grants awarded for life sciences research or the redirection of existing funding to other projects or priorities, any of which in turn could cause our customers and potential customers to reduce or delay purchases of our products. Our operating results may fluctuate substantially due to any such reductions and delays. Any decrease in our customers' budgets or expenditures, or in the size, scope or frequency of their capital or operating expenditures, could materially and adversely affect our business, results of operations, financial condition and prospects.

Our operating results may fluctuate significantly in the future, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.

We have very limited operating history in manufacturing, commercializing and providing customer support for our first product, the G4, and have limited history in developing the PX and other products. As a result, our quarterly and annual operating results may fluctuate significantly as we commercialize and continue to enhance the G4 and begin or continue these new manufacturing, commercialization and customer support activities and continue the development of our product pipeline, which makes it difficult for us to predict our future operating results. These fluctuations may occur due to a variety of factors, many of which are outside of our control, including but not limited to:

- our ability to successfully manufacture and commercialize the G4 on our anticipated timelines and costs;
- our ability to develop and successfully manufacture and commercialize the PX or other products and technologies on our anticipated timelines and costs;
- the timing and cost of, and level of investment in, research and development, manufacturing and commercialization activities relating to our products and technologies, which may change from time to time;
- the level of demand for any products or product enhancements we are able to commercialize, particularly the G4 and any future products, which may vary significantly from period to period;
- market acceptance of our products, especially by early adopters and KOLs;
- our ability to drive adoption of our products and technologies, including the G4 and any future products, in our target markets and our ability to expand into any future target markets;
- the prices at which we will be able to sell our products and technologies;
- our ability to lower the cost of manufacturing our products and product enhancements;
- the availability and cost of components and raw materials;
- actions taken by our competitors, including new product introductions, pricing changes, product bundling and aggressive marketing practices;
- intellectual property disputes and litigation;
- the outcomes of and related rulings in litigation and administrative proceedings in which we may in the future become involved in;
- the operating performance and financial results of our competitors;
- the volume and mix of our sales between the G4 and other products and technologies, including consumables, or changes in the manufacturing or sales costs related to our products;
- the utilization of our instruments and the volume and mix of the sales of our consumables;
- the length of time of the sales cycle for purchases of our products and technologies, including the G4 and any future products;
- the timing and amount of expenditures that we may incur to develop, commercialize or acquire additional products and technologies or for other purposes, such as the expansion of our facilities;
- changes in governmental funding of life sciences research and development or changes that impact budgets or budget cycles;
- the timing of when we recognize revenue;
- future accounting pronouncements or changes in our accounting policies;
- the outcome of any future governmental investigations involving us, our industry or both;
- higher than anticipated service, replacement and warranty costs;
- the impact of recent macroeconomic conditions on our business, financial condition, liquidity and results of operations, including inflation, increasing interest rates and volatile market conditions, instability in the global banking system, and other global events, including the ongoing war in Ukraine and conflicts in the Middle East;
- the impact of pandemics such as the COVID-19 pandemic on the economy, our business and operations, investment in life sciences and research industries, and resources and operations of our customers, suppliers and distributors;
- general industry, economic and market conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors; and
- the other factors described in this “Risk Factors” section.

The cumulative effects of the factors discussed above could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If we are unable to commercialize products or generate sufficient revenue, or if our operating results fall below the expectations of analysts or investors or below any guidance we may provide, or if the guidance we provide is below the expectations of analysts or investors, it could cause the market price of our common stock to decline.

We expect to continue to incur substantial operating expenses in the future, which will negatively impact our ability to achieve or maintain profitability.

We have experienced net losses and negative cash flows from operations since our formation in 2016. As of September 30, 2023, we had an accumulated deficit of $314.3 million. Over the next several years, we expect to continue to incur significant expenses as we continue to build our sales and marketing organization, increase our manufacturing and commercialization capabilities, continue our research and development activities and continue the development and enhancement of our products. These efforts may prove to be more costly, or take longer, than we currently anticipate. We have only recently recognized revenue, and we may never generate revenue sufficient to offset our expenses. If our revenue does not eventually grow to a level that exceeds our expenses, we will not be able to achieve or maintain profitability. Additionally, we may encounter unexpected development delays, unforeseen expenses, operating delays, declines in revenue or other unknown factors that may result in losses in future periods. If we are unable to achieve and maintain sustained profitability, our business, results of operations, financial condition and prospects will be materially harmed.

Recent downward macroeconomic pressures, unfavorable market conditions and changing circumstances, some of which may be beyond our control, could adversely affect our business, financial condition, stock price and results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. Market conditions and changing circumstances, some of which may be beyond our control, could impair our ability to access our existing cash, cash equivalents and investments and to timely pay key vendors and others. For example, Silicon Valley Bank (“SVB”) was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation (“FDIC”) as receiver, and all of SVB’s deposits and substantially all of SVB’s assets were transferred into a new entity, Silicon Valley Bridge Bank, N.A. (“SVBB”). On March 12, 2023, the Department of the Treasury, the Federal Reserve and the FDIC jointly released a statement indicating that depositors at SVB would have access to their funds, even those in excess of the standard FDIC insurance limits, under a systemic risk exception. Such parties also announced, among other items, that SVBB had assumed the obligations and commitments of former SVB and that commitments to advance under existing credit agreements with former SVB will be honored pursuant to the terms of such credit agreements by SVBB. On March 27, 2023, First Citizens Bank assumed all of SVBB’s obligations and commitments and SVBB began operations as Silicon Valley Bank, a division of First Citizens Bank. While we only had a minimal amount of our cash directly at SVB, and, since that date, the FDIC has stated that all depositors of SVB will be made whole, and First Citizens Bank has assumed our deposits from SVB, there is no guarantee that the federal government would guarantee all depositors as they did with SVB depositors in the event of further bank closures, and continued instability in the global banking system may adversely impact our business and financial condition. In addition, in such circumstances, we might not be able to timely pay key vendors, our employees and others. Further, prior to these events we did not have a business relationship with First Citizens Bank or with SVB, a division of First Citizens Bank. Therefore, we may have conflicts with SVB regarding the interpretation of contractual obligations under the SVB Loan, including those relating to our ability to draw down additional capital. For example, in order for us to draw down on the Second Tranche, we must achieve a six-month trailing revenue hurdle and there must not be an event of default under the SVB Loan, each of which is determined by SVB in its sole discretion. Our ability to draw down on the Second Tranche under our SVB Loan by March 31, 2024 is highly uncertain. Our inability to satisfy or otherwise renegotiate this revenue hurdle, or any disagreement between us and SVB as to the interpretation of contractual provisions, could result in our inability to draw down on the Second Tranche under SVB Loan, any of which could negatively impact our financial condition.

Likewise, the capital and credit markets may be adversely affected by the ongoing conflict between Russia and Ukraine, conflicts in the Middle East, and the possibility of a wider European or global conflict, global sanctions imposed in response thereto or an energy crisis. A severe or prolonged economic downturn, such as the global financial crisis, could result in a variety of risks to our business, including a weakened demand for our products and technologies and our ability to raise additional capital when needed on favorable terms, if at all. A weak or declining economy could strain our customers’ budgets or cause delays in their payments to us. Any of the foregoing could harm our business and results of operations, and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business, results of operations, financial condition or our ability to raise capital. Further, our stock price may continue to decline due in part to the volatility of the stock market and any general economic downturn.

Risks Related to the Development and Commercialization of Our Products

Our efforts to manufacture and commercialize the G4 and to complete the development and commercially launch the PX or any future products may not be successful.

With respect to the G4, we completed our beta pilot program, have concluded our early access program, and have commercially launched the G4. We began recognizing revenue on sales of the G4 and its associated consumables in the fourth quarter of 2022. With respect to the PX, we are currently in an advanced prototype stage for the initial product. Our commercialization and product development plans for these products and other products or technologies we elect to pursue may not progress as planned or meet our expected timelines or may not be successful due to:

- the level of customer demand for the G4;
- the ability of our commercial products to regularly meet target specifications;
- our ability to manufacture and ship the G4 efficiently and at sufficient commercial scale to meet demand;
- delays in completing development of the PX or any future products, whether as a result of limited resources, changes in priorities or other factors;
- our ability to complete the development and manufacture of the PX or any future products, whether as a result of limited resources, changes in priorities or other factors;
- our inability to establish the capabilities and value proposition of our products with KOLs and early adopters in a timely fashion, including through information included in scientific publications and presentations;
- our inability to establish broad scientific acceptance of our products;
- potential litigation brought by our competitors against our products, technology or intellectual property;
- the impact of recent macroeconomic conditions on our business, financial condition, liquidity and results of operations, including inflation, increasing interest rates and volatile market conditions, instability in the global banking system, and global events, including the ongoing war in Ukraine and conflicts in the Middle East;
- the continued effect and lasting impact of pandemics similar to the COVID-19 pandemic and government responses thereto;
- our inability to overcome the long-term relationships, including exclusive agreements, that our competitors have established with our target customers;
- actions taken by our competitors, including new product introductions and the ability to offer significant discounts and to bundle products and services to our target customers;
- our customers' willingness and ability to adopt new products and workflows, including in light of commercial pressures applied by our competitors and pre-existing long-term contracts with our competitors;
- our ability to demonstrate that the G4, PX or any future products provide meaningful advantages over competing products and technologies;
- the prices we charge for the G4 and any other products and technologies;
- our ability to develop new products and workflows and solutions for customers, and the impact of our investments in product innovation and commercial growth;
- our ability to provide service and maintain the products we have sold;
- changing industry or market conditions, customer expectations or requirements;
- delays in building out our sales, customer support and marketing organization as needed for our commercial launch plans; and
- delays in ramping up manufacturing, including obtaining required materials and components from third-party suppliers, to meet expected or actual demand for our products.

We cannot assure you that we will be successful in addressing each of the risks and uncertainties that might affect the development and market acceptance of any products we commercialize. Initial negative perception of the G4 by customers could irreparably damage our reputation and ability to successfully commercialize the G4 or future products. In addition, as we continue to commercialize the G4, we will also need to continue to make corresponding improvements to other operational functions, such as our customer support, service and billing systems, compliance programs and our internal quality assurance programs. We cannot assure you that any increases in scale, required manufacturing improvements and quality assurance will be successfully implemented or that appropriate personnel will be available. To the extent any of our commercial plans and related activities are delayed, unsuccessful or more expensive than we currently anticipate, our financial results may be adversely impacted and we may never generate sufficient revenue to achieve and maintain profitability.

If we are unable to establish sales and marketing capabilities, we may not be successful in commercializing the G4 and any future products.

We have limited experience commercializing our products, and our ability to achieve profitability depends on being able to successfully commercialize the G4 and any future products. Although members of our management team have considerable industry experience, we are in the process of expanding our sales, marketing, distribution and customer service and support capabilities with the appropriate technical expertise. To perform sales, marketing, distribution, and customer service and support successfully, we will face a number of risks, including:

- our ability to attract, train, retain and manage the sales, marketing and customer service and support force necessary to commercialize and gain market acceptance for our products and train and support our customers in the use of our systems;
- our ability to adopt successful marketing and pricing strategies;
- the time and cost of establishing a specialized sales, marketing and customer service and support force; and
- our sales, marketing and customer service and support force may be unable to initiate and execute successful commercialization activities.

We may seek to enlist one or more third parties to assist with sales, distribution and customer service and support globally or in certain regions of the world. There is no guarantee, if we do seek to enter into such arrangements, that we will be successful in attracting desirable sales and distribution partners or that we will be able to enter into such arrangements on favorable terms. If our sales and marketing efforts, or those of any third-party sales and distribution partners, are not successful, the G4 or any future products may not gain market acceptance, which could materially impact our business and results of operations.

Our products could fail to achieve key performance metrics we are targeting and our prospects could be harmed.

We believe our Sequencing Engine can impart commercially marketable capabilities to our products, including power, speed, flexibility and accuracy. To successfully commercialize our products, we are targeting certain performance metrics, including cycle times for each base, accuracy for base reads, quality scores and the number of independent flow cells that can run concurrently. If our Sequencing Engine or our products are unable to meet and to consistently achieve key performance metrics, including once commercially deployed, or, if the data supporting our preliminary achievement of certain key performance metrics are incorrect or not viewed favorably by KOLs or potential customers, demand for the G4 or any future products may not develop as anticipated, which could adversely affect our revenue and our results of operations.

If we fail to continue to expand the capabilities of the G4 and complete the development of the PX, our revenue and our prospects could be harmed.

We completed our beta pilot program, have concluded our early access program, and have commercially launched the G4. We began recognizing revenue on sales of the G4 in the fourth quarter of 2022. We are working to expand the capabilities of the G4 by providing novel kits for targeted applications. Any delay or failure by us to successfully develop and release these enhancements could have a substantial adverse effect on our business and results of operations.

We commenced development of the PX, and it is subject to all the risks and uncertainties associated with product development of highly complex and novel life sciences instruments. We have not met a number of technical and performance metrics that we believe will be necessary to achieve prior to commercialization. If we do not achieve the required technical specifications and performance metrics for the PX or if development work is delayed, reprioritized, or otherwise not performed according to schedule, then we may not be successful in completing development of the PX and its commercial launch may be adversely affected, delayed or not occur at all. Additionally, the PX could be subject to redesign or further improvements, and result in delays in finalizing development and commencing commercialization, after feedback from beta collaborators, collaborators in our early access program, and KOLs. Any delay or failure by us to successfully develop, release, commercialize and maintain the PX or other multiomic technologies could have a substantial adverse effect on our business and results of operations.

If we fail to continue to improve our planned products or introduce compelling new products, product enhancements or product configurations, our revenue and our prospects could be harmed.

Our ability to attract customers and earn revenue will depend in large part on our ability to continue to enhance and improve our products and to introduce compelling new products and product capabilities. The success of any enhancements to the G4 or the introduction of any new products and product capabilities depends on several factors, including timely completion and delivery of such enhancements and products, competitive pricing, adequate quality testing, integration with existing products and technologies, appropriately timed and staged introduction, overall market acceptance and our ability to properly manufacture, service and maintain these products. Any new products or enhancements that we develop may not be introduced in a timely or cost effective manner, may contain defects, errors, vulnerabilities or bugs, or may not achieve the market acceptance necessary to increase our revenue and improve our operating results. Further, if we are unable to successfully develop any new products, enhance the capabilities of our existing products to meet evolving customer requirements and demands, compete with alternative products and technologies, or otherwise gain and maintain market acceptance, our business, results of operations and financial condition could be harmed.

The sizes of the markets for our products and technologies may be smaller or grow slower than we estimate, and new markets may not develop as quickly as we expect, or at all, limiting our ability to successfully sell our products.

The market for NGS, single-cell, spatial and proteomics products and technologies is evolving, making it difficult to predict with any accuracy the market opportunity for our current and future products and technologies. Our estimates of the total addressable market for our current and future products and technologies are based on a number of internal and third-party estimates and assumptions. In particular, while we believe that our target markets may be underserved by existing genomics products and technologies and that our target customers will recognize the value proposition offered by our products, we cannot be certain that our target customers will recognize enough value from our products to purchase our products in place of, or in addition to, tools and technologies they already use. Further, we cannot be certain that our target customers will view our products as competitive alternatives to existing tools and technologies in our target markets, especially given that our competitors have long relationships, including exclusive arrangements, with our target customers and may be able to offer significant discounts and/or bundle products or offerings to our target customers.

While we believe our assumptions and the data underlying our estimates of the total annual addressable market for our products and technologies are reasonable, these assumptions and estimates may not be correct and the conditions supporting our assumptions or estimates, or those underlying the third-party data we have used, may change at any time, thereby reducing the accuracy of our estimates. As a result, our estimates of the annual total addressable market for our products and technologies may be incorrect. Further, the future growth of the market for our current and future products depends on many factors beyond our control, and if the markets for our current and future products are smaller than estimated or do not develop as we expect, our growth may be limited and our business, financial condition and results of operations could be adversely affected.

We expect to commercialize the G4 and other future product offerings outside of the United States, which could expose us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the United States.

Engaging in international business inherently involves a number of difficulties and risks, including:

- required compliance with existing and changing foreign regulatory requirements and laws that are or may be applicable to our business in the future, such as the European Union's ("EU") General Data Protection Regulation ("GDPR") and other data privacy requirements, labor and employment regulations, anti-competition regulations, the U.K. Bribery Act of 2010 and other anti-corruption laws, regulations relating to the use of certain hazardous substances or chemicals in commercial products, and require the collection, reuse, and recycling of waste from products we manufacture;
- required compliance with U.S. laws such as the Foreign Corrupt Practices Act, and other U.S. federal laws and regulations established by the office of Foreign Asset Control;
- export requirements and import or trade restrictions;
- laws and business practices favoring local companies;
- foreign currency exchange, longer payment cycles and difficulties in enforcing agreements and collecting receivables through certain foreign legal systems;
- changes in social, economic, and political conditions or in laws, regulations and policies governing foreign trade, manufacturing, research and development, and investment both domestically as well as in the other countries and jurisdictions in which we operate and into which we may sell our products, including as a result of the separation of the United Kingdom from the European Union ("Brexit");
- potentially adverse tax consequences, tariffs, customs charges, bureaucratic requirements and other trade barriers;
- difficulties and costs of staffing and managing foreign operations; and

- difficulties protecting, maintaining, enforcing or procuring intellectual property rights.

If one or more of these risks occurs, it could require us to dedicate significant resources to remedy such occurrence, and if we are unsuccessful in finding a solution, our financial results would suffer.

Risks Related to Our Financial Position and Need for Additional Capital

We may require substantial additional funding, which may not be available to us on acceptable terms, or at all, and, if not available, may require us to delay, scale back, or cease our product development or commercialization activities.

Based on our current plans, we believe that our current cash and cash equivalents, short-term investments and anticipated cash flow from operations, if any, will be sufficient to meet our anticipated cash requirements for at least 12 months from the date of this report. If our available cash resources and anticipated cash flows from operations, if any, are insufficient to satisfy our liquidity requirements, we may be required to raise significant additional capital to support our continued operations and the implementation of our business plans. Our future funding requirements will depend on many factors, including but not limited to:

- our rate of progress in commercializing and scaling the manufacturing of the G4;
- the costs of the sales and marketing activities associated with establishing adoption of the G4;
- the effect of competing technological and market developments, including any requirement to provide discounts for the G4 because of competitive pressures;
- litigation expenses we incur to defend against claims, including claims that we infringe the intellectual property of others or judgments we must pay to satisfy such claims;
- contractual obligations to third parties;
- our progress, if any, in developing, launching and commercializing the PX and any new products or product enhancements we pursue;
- our ability to control our manufacturing and operating costs;
- our ability to satisfy our outstanding debt obligations; and
- the costs of responding to the other risks and uncertainties described in this report.

We may also be required to raise additional capital in the future to expand our business and operations to pursue strategic investments or for other reasons, including but not limited to:

- increasing our sales and marketing and other commercialization efforts to drive market adoption of the G4;
- completing the development of and commercializing the PX or any other future products;
- scaling up our manufacturing and customer support capabilities;
- funding development and marketing efforts of our other future products and product enhancements;
- expanding our technologies into additional markets;
- acquiring, licensing or investing in technologies and other intellectual property rights;
- acquiring or investing in complementary businesses or assets; and
- financing capital expenditures and general and administrative expenses.

We may seek required funding through issuances of equity or convertible debt securities, entering into additional loan facilities or drawing down additional funds under our SVB Loan. Each of the various ways we could raise additional capital carry potential risks. If we raise funds by issuing equity securities, dilution to our stockholders would result. If we raise funds by issuing additional debt securities, those debt securities would have rights, preferences and privileges senior to those of holders of our common stock. Our SVB Loan restricts our ability to pursue certain transactions that we may believe to be in our best interest, including incurring additional indebtedness without the prior written consent of the lender under the SVB Loan. If we raise funds through collaborations or licensing arrangements, we might be required to relinquish significant rights to our technologies or products or grant licenses on terms that are not favorable to us.

If we are unable to obtain adequate financing or financing on terms satisfactory to us, if we require it, our ability to continue to pursue our business objectives and to respond to business opportunities, challenges, or unforeseen circumstances could be significantly limited and could have a material adverse effect on our business, financial condition, results of operations and prospects.

Our results of operations could be materially harmed if we are unable to accurately forecast customer demand for the G4 and any other future products and product enhancements we elect to pursue.

To ensure adequate supply of the G4 to meet demand, we must forecast our future inventory needs and appropriately scale-up our manufacturing operations and personnel. We must also place orders with our third-party suppliers based on such forecasts. Our ability to accurately forecast demand for the G4 could be negatively affected by many factors, including: our ability to timely scale our manufacturing operations and capabilities; the success of our sales and marketing activities; customer acceptance of the G4; and supply delays and shortages. These same risks and uncertainties would also apply to the PX and any other future products and product enhancements we elect to pursue.

Inventory levels in excess of customer demand may result in inventory write-downs or write-offs, which would cause our gross margin to be adversely affected and could impair the strength of our brand. Similarly, a portion of our inventory could become obsolete or expire, which could have a material and adverse effect on our earnings and cash flows due to the resulting costs associated with inventory impairment charges and costs required to replace obsolete inventory. Any of these occurrences could negatively impact our financial performance.

Conversely, if we underestimate customer demand for the G4 or any other future products and product enhancements we elect to pursue, we may not be able to deliver sufficient products to meet our customer requirements, which could result in damage to our reputation and customer relationships. In addition, if we experience a significant increase in demand, we may not be able to increase our manufacturing capacity on a timely basis. Further, we may not be able to obtain the components for our products when required on terms that are acceptable to us, or at all, which could have an adverse effect on our ability to meet customer demand and harm our business and results of operations.

Our existing indebtedness may limit our flexibility in financing and operating our business and adversely affect our business, financial condition and results of operations.

As of September 30, 2023, we owed $10.5 million of principal under our SVB Loan (as defined in Note 8 to our financial statements elsewhere in this report). In addition to this outstanding amount, we may borrow substantial funds in the future to provide a portion of the capital needed in our business and may secure the repayment of such borrowings by placing additional liens or other encumbrances on our assets. Our SVB Loan contains customary conditions to borrowing, events of default and affirmative and negative covenants, including covenants that restrict our ability (and the ability of certain of our subsidiaries) to incur additional indebtedness, grant liens, make certain fundamental changes and asset sales, pay dividends or make other distributions to holders of our stock, make investments or engage in transactions with our affiliates. Such restrictions could limit our ability to take certain actions and reduce our flexibility to run and manage our business, which could have an adverse effect on our results of operations. The obligations under the SVB Loan are also secured by liens on substantially all of our assets, excluding our intellectual property on which there is a negative pledge, subject to customary exceptions. If we were unable to repay amounts due under the SVB Loan, SVB could proceed against such assets. Any declaration by SVB of an event of default could significantly harm our business and prospects and could cause the price of our common shares to decline.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

We have incurred substantial losses during our history, which we expect to continue for the foreseeable future, and we may never achieve profitability. As of December 31, 2022, we had federal and California tax loss carryforwards of approximately $148.6 million and $126.7 million, respectively. As of December 31, 2022, we had federal and state tax credit carry forwards of approximately $6.0 million and $5.8 million, respectively. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, (the “Code”), if a corporation undergoes an “ownership change,” generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a three-year period, the corporation’s ability to use its pre-change net operating loss carryforwards (“NOLs”), and other pre-change tax attributes (such as research tax credits) to offset its post-change income or taxes may be limited. We have not yet completed an ownership change analysis. If a requisite ownership change occurs, the amount of remaining tax attribute carryforwards available to offset taxable income and reduce income tax expense in future years may be restricted or eliminated. Similar provisions of state tax law may also apply to limit our use of accumulated state tax attributes. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. As a result, even if we attain profitability, we may be unable to use a material portion of our NOLs and other tax attributes based on restrictions in the Code, which could adversely affect our future cash flows and results of operations.

U.S. federal income tax reform and the implementation of such reforms could adversely affect us.

On December 22, 2017, the United States enacted the Tax Cuts and Jobs Act (the "TCJA") that significantly reformed the Code. The TCJA, among other things, contained significant changes to corporate taxation, including a reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, the limitation of the tax deduction for net interest expense to 30% of adjusted earnings (except for certain small businesses), the limitation of the deduction for NOLs arising in taxable years beginning after December 31, 2017 to 80% of current year taxable income and elimination of NOL carrybacks for losses arising in taxable years ending after December 31, 2017 (though any such NOLs may be carried forward indefinitely), the imposition of a one-time taxation of offshore earnings at reduced rates regardless of whether they are repatriated, the elimination of U.S. tax on foreign earnings (subject to certain important exceptions), the allowance of immediate deductions for certain new investments instead of deductions for depreciation expense over time, and the modification or repeal of many business deductions and credits. The financial statements contained herein reflect the effects of the TCJA based on current guidance. However, there remain uncertainties and ambiguities in the application of certain provisions of the TCJA, and, as a result, we made certain judgments and assumptions in the interpretation thereof.

As part of Congress's response to the COVID-19 pandemic, the Families First Coronavirus Response Act (the "FFCR Act"), was enacted on March 18, 2020, and the Coronavirus Aid, Relief, and Economic Security Act, (the "CARES Act"), was enacted on March 27, 2020. Both contain numerous tax provisions. In particular, the CARES Act retroactively and temporarily (for taxable years beginning before January 1, 2021) suspends application of the 80%-of-income limitation on the use of NOLs, which was enacted as part of the TCJA. It also provides that NOLs arising in any taxable year beginning after December 31, 2017 and before January 1, 2021 are generally eligible to be carried back up to five years. The CARES Act also temporarily (for taxable years beginning in 2019 or 2020) relaxes the limitation of the tax deductibility for net interest expense by increasing the limitation from 30% to 50% of adjusted taxable income.

Risks Related to Manufacturing Our Products

We may be unable to manufacture the G4 to meet our commercialization plans on a timely or cost effective basis.

We must successfully increase our manufacturing output to meet our long-term commercialization plans. We currently manufacture the G4 in our facilities in San Diego, California. In order to manufacture sufficient G4 instruments and consumables to meet our commercialization plans, we will need to hire and train a sufficient number of manufacturing, engineering and quality personnel. Manufacturing the G4 requires complex processes, and depends on the skill and experience of our manufacturing personnel. The manufacturing process for the G4 also includes sourcing components from various third-party suppliers and then assembling and testing the final product offerings. We must manufacture the G4 in compliance with our demanding specifications in a timely and efficient manner and at an acceptable cost in order to achieve and maintain profitability. We have a limited history of manufacturing and assembling the G4, and, as a result, we may have difficulty manufacturing and assembling sufficient quantities of such products in a timely and cost-effective manner. For example, we had previously experienced delays in the scale-up of our manufacturing process when producing our first commercial units of the G4, and we have since improved this process. In addition, to manage our manufacturing operations and the supply of components from our third-party suppliers, we will need to forecast anticipated demand to predict our inventory needs from six months to a year in advance and enter into purchase orders on the basis of these requirements. Our limited manufacturing history may not provide us with enough data to allow us to accurately and effectively predict our manufacturing capacity requirements or our need for components from our third-party suppliers, including appropriately anticipating supply shortages or unavailability and fluctuations in the pricing of required components. We may experience delays in obtaining components required for the G4, including due to recent supply chain challenges being experienced in the economy generally, or not have sufficient manufacturing capabilities and personnel for such products, which could impede our ability to manufacture and assemble these products on our expected timeline. As a result of this or any other delays, we may encounter difficulties in production of the G4, including problems with quality control and assurance, component supply shortages or surpluses, increased costs, shortages of qualified personnel and difficulties associated with compliance with local, state, federal and foreign regulatory requirements. Our costs may also significantly increase as a result of inflation, and we may not be able to offset those higher costs by increasing our prices to our customers to the extent we have generated sales. Our operating costs have increased, and may continue to increase, due to the recent growth in inflation, which could have an adverse effect on our results of operation and financial condition.

We are dependent on single source suppliers for some components to our consumables and the loss of any of these suppliers could harm our business.

We do not have long-term contracts with third-party suppliers from whom we obtain some components to manufacture the G4. We are, therefore, subject to the risk that these third-party suppliers will not continue to provide us with components that meet our specifications, quality standards and delivery schedules. Factors that could impact our suppliers' willingness and ability to continue to provide us with the required components include disruption at or affecting our suppliers' facilities, such as work stoppages or natural disasters, demand for and availability of raw materials and subcomponents, adverse weather or other conditions that affect their supply, the financial condition of our suppliers and deterioration in our relationships with these suppliers. In addition, we cannot be sure that we will be able to obtain these components on satisfactory terms. Any increase in component costs could reduce any potential future sales and harm our gross margins.

While we have qualified second sources for several of our critical components, including flow cells, optics and oligonucleotides, we do not have qualified secondary sources for all components that we source through a single supplier and we cannot assure investors that the qualification of a secondary supplier will prevent future supply issues. Disruption in the supply of materials or components would impair our ability to sell our products and meet customer demand, and also could delay the launch of new products, any of which could harm our business and results of operations. If we were to have to change suppliers, the new supplier may not be able to provide us components in a timely manner and in adequate quantities that are consistent with our quality standards and on satisfactory pricing terms. In addition, alternative sources of supply may not be available for components for which there are a limited number of suppliers which could result in a requirement to redesign certain aspects of our products. Further, supply shortages could require us to redesign our products to be compatible with components that are more readily available, which could lead to manufacturing and commercialization delays.

We have limited experience manufacturing the G4, and we may be unable to consistently manufacture or supply the G4 to the necessary specifications or in quantities necessary to meet demand on a timely basis and at acceptable performance and cost levels.

The G4 is a complex product with many different components that must work together to obtain the desired results. As such, a quality defect in a single component can compromise the performance of the entire product. In order to successfully generate sufficient revenue from the G4, we need to supply our customers with products that meet their expectations for quality and functionality in accordance with established specifications on a timely basis. Given the complexity of the G4, individual G4 units may require additional installation and service time prior to becoming available for customer use and we may be required to replace lots of reagents or consumables.

We manufacture the G4 at our existing facilities in San Diego, California. We procure certain components of the G4 from third-party suppliers, which include both commonly available raw materials and custom components. Many of these manufacturing processes are complex. For example, we had previously experienced delays in the scale-up of our manufacturing process when producing our first commercial units of the G4, and we have since improved this process. If we are not able to repeatedly produce the G4 at commercial scale and source required components from third-party suppliers, our business will be adversely impacted.

We have limited manufacturing experience and there is no assurance that we will be able to manufacture our products so that they repeatedly provide accurate results consistent with product specifications. Further, our consumables have a limited shelf life, after which their performance is not ensured. Shipment of consumables that effectively expire early or shipment of defective instruments or consumables to customers may result in recalls and warranty replacements, which would increase our costs, and depending upon our inventory levels and the availability and lead time for additional inventory, could lead to availability issues. As we develop additional products, we may need to bring new equipment on-line, implement new systems, technology, controls and procedures and hire personnel with different qualifications. Any future design issues, unforeseen manufacturing problems, equipment malfunctions, aging components, quality issues with components and materials sourced from third-party suppliers, or failures to strictly follow procedures or meet specifications, may have a material adverse effect on our brand, business, results of operations and financial condition.

The G4 could have defects or errors, which may give rise to claims against us, adversely affect market adoption and adversely affect our business, financial condition, and results of operations.

The G4 utilizes novel and complex technologies and may develop or contain undetected defects or errors. We cannot assure you that material performance problems, defects, or errors will not arise, and as we commercialize our products, these risks may increase. We provide and expect to continue to provide warranties that our products will meet performance expectations and will be free from defects. The costs incurred in correcting any defects or errors may be substantial and could adversely affect our operating margins.

In manufacturing the G4, we depend on third parties for the supply of various components, many of which require a significant degree of technical expertise to produce. If our suppliers fail to produce our components to specification or provide defective products to us and our quality control tests and procedures fail to detect such errors or defects, or if we or our suppliers use defective materials or workmanship in the manufacturing process, the reliability and performance of our products will be compromised.

If the G4 contains defects, we may experience:

- a failure to achieve market acceptance for our products or increased sales;
- loss of customer orders or delays in order fulfillment;
- damage to our brand reputation;
- increased warranty and customer service and support costs due to product repair or replacement;
- product recalls or replacements;
- inability to attract new customers or gain market acceptance;
- diversion of resources from our manufacturing and research and development departments into our service department; and
- legal claims against us, including product liability claims, which could be costly and time consuming to defend and result in substantial damages.

In addition, we expect that the G4 will be used with our customers' and potential customers' own lab equipment and third-party products, and the performance of such equipment and products is outside of our control. If our customers' equipment or the third-party products they utilize are not produced to specification, are produced in accordance with modified specifications, or are defective, they may not be compatible with or perform as intended with the G4. In such case, the reliability, results and performance of the G4 may be compromised. The occurrence of any one or more of the foregoing could negatively affect our business, financial condition, and results of operations. Additionally, we expect that we will need to train our customers on properly using the G4. If we are unable to adequately train our customers to use the G4 or they fail to follow our training and protocols we have established, the performance of the G4 may be compromised.

Our ability to achieve profitability will depend, in part, on our ability to reduce the per unit manufacturing costs of the G4.

To achieve our operating and strategic goals, we will need to, among other things, reduce the per unit manufacturing cost of the G4. Manufacturing the G4 involves complex processes, and depends on the skills and experience of our manufacturing personnel. For example, we had previously experienced delays in the scale-up of our manufacturing process when producing our first commercial units of the G4, and we have since improved this process. We may in the future experience delays or low manufacturing yields for the G4. In addition, we will need to continually focus on reducing the per unit manufacturing cost of the G4, which cannot be achieved without increasing the volume of components that we purchase in order to take advantage of volume-based pricing discounts, improving our manufacturing efficiency or increasing our volumes to leverage manufacturing overhead costs. For example, gross margin for the nine months ended September 30, 2023 is negative as a result of both additional incentives we provided to certain customers for their early adoption of the G4 sequencing platform, as well as higher direct costs for "white-glove" services to our initial customers, and we will need to improve our gross margins in the future, which we may be unable to achieve. If we are unable to improve our manufacturing efficiency and reduce our manufacturing overhead costs per unit, our ability to achieve profitability will be severely constrained. Any increase in manufacturing volumes is dependent upon a corresponding increase in sales. Our costs may also significantly increase as a result of inflation, and we may not be able to offset those higher costs by increasing our prices to our customers. The occurrence of one or more factors that negatively impact the manufacturing or sales of the G4 or reduce our manufacturing efficiency may prevent us from achieving our desired reduction in manufacturing costs, which would negatively affect our operating results and may prevent us from attaining profitability.

If our facilities or our third-party suppliers' facilities become unavailable or inoperable, our research and development program and commercialization launch plan could be adversely impacted and manufacturing of the G4 could be interrupted.

Our existing facilities in San Diego, California house our corporate, research and development, manufacturing, sales and marketing, customer support and quality assurance teams. Our facilities and those of our third-party suppliers are vulnerable to natural disasters, pandemics, public health crises, including the COVID-19 pandemic, civil unrest, wars and other catastrophic events. For example, our San Diego facilities are located near earthquake fault zones and are vulnerable to damage from earthquakes as well as other types of disasters, including fires, floods, power loss, communications failures and similar events. Also, for example, our San Diego headquarters is located next to a site currently undergoing significant construction of new office and laboratory space; accidents caused by such construction activities could cause significant or even catastrophic damage to our facilities. If any disaster, any new or continuing public health crisis or catastrophic event were to occur, our ability to operate our business would be seriously, or potentially completely, impaired. If our facilities or our third-party suppliers' facilities become unavailable for any reason, we cannot provide assurances that we will be able to secure alternative facilities with the necessary capabilities and equipment or alternative suppliers on acceptable terms, if at all. We may encounter particular difficulties in replacing our San Diego facilities given the specialized equipment housed within it. The inability to manufacture the G4, combined with our limited inventory of such manufactured products, may result in the loss of future customers or harm our reputation, and we may be unable to re-establish relationships with those customers in the future. Because our consumables are perishable and must be kept in temperature controlled storage, the loss of power to our facilities, mechanical or other issues with our storage facilities or other events that impact our temperature controlled storage could result in the loss of some or all of such products, and we may not be able to replace them without disruption to our customers or at all.

If our business operations are disrupted by a disaster, war or other catastrophe, the launch of the G4 and any future products, and the timing of improvements to such products, could be significantly delayed and could adversely impact our ability to compete with other available products and solutions. If our or our third-party suppliers' capabilities are impaired, we may not be able to manufacture and ship our products in a timely manner, which would adversely impact our business. Although we possess insurance for damage to our property and the disruption of our business, this insurance may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, or at all.

The costs to maintain and provide customer support for the G4, and any future products or product enhancements that we commercialize, may exceed our expectations.

As we continue to commercialize the G4, we are building a commercial organization and infrastructure to support the following activities:

- installing the G4 in customer locations;
- training customers on the use of the G4;
- providing customer support services; and
- providing maintenance, repair and warranty services.

We may not be successful in developing the organization or commercial infrastructure necessary to provide these customer support activities in a timely manner to meet commercial demand, and on a cost effective basis. Any failure to provide our customers with a superior customer experience, to timely respond to their requests and questions and to provide maintenance and warranty services, may adversely affect our brand and our results of operations.

Risks Related to Our Planned Growth

If we do not successfully manage our current and anticipated growth, our business and prospects will be harmed.

From December 31, 2021 to September 30, 2023, the number of our full-time employees increased from 221 to 284. Our overall growth has increased the strain on our management, financial systems and internal controls. We expect that the growth associated with the commercial launch of the G4 and the development and commercial launch of any future products will also strain our operational and manufacturing systems and processes, sales and marketing team, financial systems and internal controls and other aspects of our business. Commercializing the G4 and the development and commercialization of any future products, including the PX, will require us to hire and retain scientific, sales and marketing, software, manufacturing, customer service and quality assurance personnel. As a public company, our management and other personnel devote a substantial amount of time toward maintaining compliance with these requirements and effectively managing these growth activities. We have faced challenges integrating, developing and motivating our rapidly growing employee base, especially during the COVID-19 pandemic, and may continue to face related challenges as we continue to grow. To effectively manage our growth, we must continue to improve our operational and manufacturing systems and processes, our financial systems and internal controls and other aspects of our business and continue to effectively expand, train and manage our personnel in an in-person and virtual environment. Our ability to successfully manage our expected growth is uncertain given the fact that we have been in operation only since 2016. As our organization continues to grow, we will be required to implement more complex organizational management structures and may find it increasingly difficult to maintain the benefits of our corporate culture, including our ability to quickly develop and launch new and innovative products and technologies. If we do not successfully manage our anticipated growth, our business, results of operations, financial condition and prospects will be harmed.

We depend on our senior management team, and the loss of one or more of our key employees or an inability to attract and retain highly skilled employees, particularly in this highly competitive labor market, will negatively affect our business, financial condition and results of operations.

Our future success depends upon our ability to recruit, train, retain and motivate our senior management team and our other highly qualified personnel. Our senior management team, including Andrew Spaventa, our founder, Chief Executive Officer and Chairperson of the Board, and Eli Glezer, our founder and Chief Scientific Officer, is critical to our vision, strategic direction, product development and commercialization efforts. The departure of one or more of these individuals or any of our other executive officers, senior management team members, or other key employees could be disruptive to our business until we are able to hire qualified successors. We do not have long-term employment contracts or maintain “key man” life insurance on our senior management team.

Our continued growth and ability to successfully transition from a company primarily focused on research and development to commercialization depends, in part, on attracting, retaining and motivating qualified personnel, including highly-trained sales and marketing personnel with the necessary scientific background and ability to understand our products at a technical level to effectively identify, market and sell to potential new customers. New hires will require significant training and, in most cases, take significant time before they achieve full productivity. Our failure to successfully integrate these key personnel into our business could adversely affect our business. In addition, competition for qualified personnel in the life sciences space is intense and has recently become even more intense, particularly in the San Diego metropolitan area. Recently, the labor market to retain and replace highly skilled personnel has become even more competitive. We compete for qualified scientific and information technology personnel with other life science and information technology companies as well as academic institutions and research institutions. Some of our scientific personnel are qualified foreign nationals whose ability to live and work in the United States is contingent upon the continued availability of appropriate visas. Due to the competition for qualified personnel, particularly in the current labor market and in the San Diego metropolitan area, we expect to continue to utilize foreign nationals to fill part of our recruiting needs. As a result, changes to United States immigration policies could restrain the flow of technical and professional talent into the United States and may inhibit our ability to hire qualified personnel.

We do not maintain fixed term employment contracts with any of our employees, including the members of our senior management team. As a result, our executives and other key employees could leave our company with little or no prior notice and would be free to work for a competitor. Further, declines in our stock price could impact the retentive value of our equity awards, including for stock option grants that are out-of-the-money. The failure to properly manage succession plans, develop leadership talent or replace the loss of services of senior management or other key employees and qualified personnel, could significantly delay or prevent the achievement of our objectives.

We may acquire or invest in other companies or technologies, which could divert our management's attention, result in additional dilution to our stockholders and otherwise disrupt our operations and harm our operating results.

We may in the future seek to acquire or invest in businesses, applications or technologies that we believe could complement or expand the G4, the PX or any other future products and product enhancements we elect to pursue. We may also pursue acquisitions or investments to expand our technical capabilities or otherwise offer growth opportunities. The pursuit of potential acquisitions or investments may divert the attention of management and cause us to incur various costs and expenses in identifying, investigating and pursuing suitable acquisitions or investments, whether or not they are consummated. We may not be able to identify desirable acquisition targets or be successful in entering into an agreement with any particular target or obtain the expected benefits of any acquisition or investment.

To date, the growth of our operations has been organic, and we have limited experience in acquiring or investing in other businesses or technologies. We may not be able to successfully integrate acquired personnel, operations and technologies, or effectively manage the combined business following an acquisition. Acquisitions could also result in dilutive issuances of equity securities, the use of our available cash, or the incurrence of debt, which could harm our operating results. In addition, if an acquired business fails to meet our expectations, our operating results, business and financial condition may suffer. Also, our SVB Loan may restrict our ability to pursue certain mergers, acquisitions, amalgamations or consolidations without obtaining the prior consent of SVB or repaying our outstanding loan amounts. Additionally, future acquisitions or investments could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities or amortization expenses or write-offs of goodwill, any of which could harm our financial condition.

If we experience a disruption in our information technology systems or breaches of data security, our business could be adversely affected.

We rely on information technology systems to keep financial records, facilitate our research and development initiatives, manage our manufacturing operations, maintain quality control, fulfill customer orders, maintain corporate records, communicate with staff and external parties and operate other critical functions. Our information technology systems and those of our vendors and partners are potentially vulnerable to disruption due to breakdown, malicious intrusion and computer viruses or other disruptive events, including, but not limited to, natural disasters and catastrophes. Cyberattacks and other malicious internet-based activity continue to increase and cloud-based platform providers of services have been and are expected to continue to be targeted. Methods of attacks on information technology systems and data security breaches change frequently, are increasingly complex and sophisticated, including social engineering and phishing scams, and can originate from a wide variety of sources. In addition to traditional computer "hackers," malicious code, such as viruses and worms, stolen or fraudulently obtained log-in credentials, employee errors, actions, inaction, theft, or misuse, and denial-of-service attacks, there are sophisticated nation-state and nation-state supported actors that now engage in attacks, including advanced persistent threat intrusions. Our information technology and data security procedures continue to evolve and therefore, our information technology systems may be more susceptible to cybersecurity attacks. Despite any of our current or future efforts to protect against cybersecurity attacks and data security breaches, there is no guarantee that our efforts are adequate to safeguard against all such attacks and breaches. Moreover, it is possible that we may not be able to anticipate, detect, appropriately react and respond to, or implement effective preventative measures against, all cybersecurity incidents.

If our security measures, or those of our vendors and partners, are compromised due to any cybersecurity attacks or data security breaches, our business and reputation may be harmed, we could become subject to litigation and we could incur significant liability. If we were to experience a prolonged system disruption in our information technology systems or those of certain of our vendors and partners, it could negatively impact our ability to serve our customers, which could adversely impact our business, financial condition, results of operations and prospects. If operations at our facilities were disrupted, it may cause a material disruption in our business if we are not capable of restoring functionality in an acceptable timeframe. In addition, our information technology systems, and those of our vendors and partners, are potentially vulnerable to data security breaches and supply chain attacks, whether by internal bad actors, such as employees or other third parties with legitimate access to our or our third-party providers' systems, or external bad actors, which could lead to the exposure of personal data, sensitive data and confidential information to unauthorized persons. Further, due to the political uncertainty involving Russia and Ukraine resulting from Russia's invasion of Ukraine and conflicts in the Middle East, there is also an increased likelihood that escalation of tensions could result in cyber-attacks or cybersecurity incidents that could either directly or indirectly impact our operations. Any such data security breaches or cyber-attacks could lead to the loss of trade secrets or other intellectual property, or could lead to the exposure of personal information, including sensitive personal information, of our employees, customers and others, any of which could have a material adverse effect on our business, reputation, financial condition and results of operations.

In addition, any such access, disclosure or other loss or unauthorized use of information or data could result in legal claims or proceedings, regulatory investigations or actions, and other types of liability under laws that protect the privacy and security of personal information, including federal, state and foreign data protection and privacy regulations, violations of which could result in significant penalties and fines. Further, defending a suit, regardless of its merit, could be costly, divert management's attention and harm our reputation. In addition, although we seek to detect and investigate all data security incidents, security breaches and other incidents of unauthorized access to our information technology systems and data can be difficult to detect and any delay in identifying such breaches or incidents may lead to increased harm and legal exposure of the type described above. Moreover, there could be public announcements regarding any cybersecurity incidents and any steps we take to respond to or remediate such incidents, and if securities analysts or investors perceive these announcements to be negative, it could, among other things, have a material adverse effect on the price of our common stock.

The cost of protecting against, investigating, mitigating and responding to potential breaches of our information technology systems and data security breaches and complying with applicable breach notification obligations to individuals, regulators, partners and others can be significant. As cybersecurity incidents continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any information security vulnerabilities. The inability to implement, maintain and upgrade adequate safeguards could have a material adverse effect on our business, financial condition, results of operations and prospects. Our insurance policies may not be adequate to compensate us for the potential costs and other losses arising from such disruptions, failures or security breaches. In addition, such insurance may not be available to us in the future on economically reasonable terms, or at all, or that any insurer will not deny coverage as to any future claim. The successful assertion of one or more large claims against us that exceed available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could have a material adverse effect on our business, financial condition, results of operations and prospects.

Risks Related to our Intellectual Property

If we are sued for infringing, misappropriating or otherwise violating intellectual property rights of third parties, such litigation could be costly and time consuming and could prevent or delay us from developing or commercializing our products.

Our commercial success depends on our ability to develop, manufacture, market and sell our products and use our products and technologies without infringing, misappropriating or otherwise violating the intellectual property rights of third parties. We operate in a crowded technology area in which there are numerous issued patents and patent applications and in which there has been substantial litigation regarding patent and other intellectual property rights. There also is a substantial number of administrative proceedings for challenging patents, including interference, derivation, *inter partes* review ("IPR"), post grant review, and reexamination proceedings before the United States Patent and Trademark Office ("USPTO"), or oppositions and other comparable proceedings in foreign jurisdictions. We expect to be exposed to, or threatened with, future litigation by third parties, including our primary competitors, who have patent and other intellectual property rights and may allege that our research and development activities, products, manufacturing methods, software and/or technologies infringe, misappropriate or otherwise violate their intellectual property rights. Our competitors have numerous issued patents and pending patent applications in the fields covered by our products and in which we are developing our products and technologies. It is not always clear to industry participants, including us, the claim scope that may issue from pending patent applications owned by third parties or which patents cover various types of products, technologies or their methods of use or manufacture. In addition, many patent applications are unpublished for up to 18 months from their first filing date and are not accessible to us. We expect that our competitors may, either in connection with our launch of the G4 or other product offerings, assert that we are infringing, or have in the past infringed as part of our research and development activities, their patent and other intellectual property rights and that we are employing their proprietary technology without authorization.

If third parties, including our competitors, believe that our products or technologies infringe, misappropriate or otherwise violate their intellectual property, such third parties may seek to enforce their intellectual property, including patents, against us by filing an intellectual property-related lawsuit, including a patent infringement lawsuit, against us. There is no assurance that a court would find in our favor on questions of infringement, validity, enforceability, or priority. If any of our competitors, or any other third parties, were to assert their patents against us and we are unable to successfully defend against any such assertion, we may be required, including by court order, to cease the development and commercialization of the infringing products or technology and we may be required to redesign such products and technologies so they do not infringe such patents, which may not be possible or may require substantial monetary expenditures and time. We could also be required to pay damages, which could be significant, including treble damages and attorneys' fees if we are found to have willfully infringed such patents. We could also be required to obtain a license to such patents in order to continue the development and commercialization of the infringing product or technology, which may not be on commercially reasonable terms or may not be obtainable at all. Even if such license were available, it may require substantial payments or cross-licenses under our intellectual property rights, and it may only be available on a nonexclusive basis, in which case third parties, including our competitors, could use the same licensed intellectual property to compete with us. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operation or prospects.

We may choose to challenge the patentability, validity or enforceability of any third-party patent that we believe may have applicability in our field, and any other third-party patent that may be asserted against us. Such challenges may be brought either in court or by requesting that the USPTO, or other foreign patent offices review the patent claims. However, there can be no assurance that any such challenge will be successful and if not successful, we may be estopped from asserting in a district court any grounds already raised or that could have been raised in certain proceedings, such as IPR at the USPTO. Even if such proceedings are successful, these proceedings are expensive and may consume our time or other resources, distract our management and technical personnel.

Third parties, including our existing and future competitors, may be infringing, misappropriating or otherwise violating our owned and in-licensed intellectual property rights. Monitoring unauthorized use of our intellectual property will be difficult and costly. We may not be able to detect unauthorized use of, or take appropriate steps to enforce, our intellectual property rights. From time to time, we seek to analyze our competitors' products and services, and may in the future seek to enforce our rights against potential infringement, misappropriation or violation of our intellectual property. However, the steps we have taken to protect our intellectual property rights may not be adequate to enforce our rights. Any inability to meaningfully enforce our intellectual property rights could harm our ability to compete and reduce demand for our products and technologies.

Litigation proceedings may be necessary for us to enforce our patent and other intellectual property rights. We may not be successful in such proceedings. Further, in such proceedings, the defendant could counterclaim that our intellectual property is invalid or unenforceable and the court may agree, in which case we could lose valuable intellectual property rights. The outcome in any such proceedings is unpredictable. Third parties may also bring challenges to our patents in the USPTO or foreign patent offices seeking to invalidate them.

Regardless of whether we are defending against or asserting any intellectual property-related proceeding, any such intellectual property-related proceeding that may be necessary in the future, regardless of outcome, could result in substantial costs and diversion of resources and could have a material adverse effect on our business, financial condition, results of operations and prospects. Further, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of such ongoing litigation, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Some of our competitors and other third parties may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. We may not have sufficient financial or other resources to adequately conduct these types of litigation or proceedings. Any of the foregoing, or any uncertainties resulting from the initiation, continuation and results of any litigation, could have a material adverse effect on our ability to raise the funds necessary to continue our operations or could otherwise have a material adverse effect on our business, financial condition, results of operations and prospects. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar adverse effect on our business, financial condition, results of operations and prospects.

If we are unable to obtain and maintain sufficient intellectual property protection for our products and technology, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products may be impaired.

We rely on patent, trademark, copyright, trade secret and other intellectual property rights and contractual restrictions to protect our proprietary products and technologies, all of which provide limited protection and may not adequately protect our rights or permit us to gain or keep any competitive advantage. We currently have over 30 issued patents covering various aspects of our proprietary NGS technology. If we fail to obtain additional patent protection for our products and technology and maintain and protect our intellectual property rights, third parties may be able to compete more effectively against us. In addition, we may incur substantial litigation costs in our attempts to recover or restrict use of our intellectual property. Further, if we are unable to obtain and maintain sufficient intellectual property protection for our products and technology, or if the scope of the intellectual property protection obtained is not sufficiently broad, our ability to successfully commercialize our products may be impaired.

We have and intend to continue to apply for patents covering our products and technologies and uses thereof, as we deem appropriate. However, obtaining and enforcing patents is costly, time-consuming and complex, and we may fail to apply for patents on important products and technologies in a timely fashion or at all, or we may fail to apply for patents in potentially relevant jurisdictions. We may not be able to file and prosecute all necessary or desirable patent applications, or maintain, enforce and license any patents that may issue from such patent applications, at a reasonable cost or in a timely manner or in all jurisdictions. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Moreover, we may not develop additional proprietary products, methods and technologies that are patentable. We may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the rights to patents licensed from or to third parties. Therefore, these patents and applications may not be prosecuted and enforced by such third parties in a manner consistent with the best interests of our business.

In addition, the patent position of life sciences technology companies such as ours is generally highly uncertain, involves complex legal and factual questions, and our industry has experienced widespread and intense litigation in recent years. Changes in either the patent laws or in interpretations of patent laws in the United States or other countries or regions may diminish the value of our intellectual property. As a result, the issuance, scope, validity, enforceability, and commercial value of our patent rights are highly uncertain. It is possible that none of our pending patent applications will result in issued patents in a timely fashion or at all, and even if patents are granted, they may not provide a basis for intellectual property protection of commercially viable products or technologies, may not provide us with any competitive advantages, or may be challenged, narrowed and invalidated by third parties. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. It is possible that third parties will design around our current or future patents such that we cannot prevent such third parties from using similar technologies and commercializing similar products to compete with us. Some of our owned or licensed patents or patent applications may be challenged at a future point in time and we may not be successful in defending any such challenges made against our patents or patent applications. Any successful third-party challenge to our patents could result in the narrowing, unenforceability or invalidity of such patents and increased competition to our business. The outcome of patent litigation or other proceeding can be uncertain, and any attempt by us to enforce our patent rights against others or to challenge the patent rights of others may not be successful, or, regardless of success, may take substantial time and result in substantial cost, and may divert our efforts and attention from other aspects of our business. Any of the foregoing events could have a material adverse effect on our business, financial condition and results of operations.

We cannot ensure that patent rights relating to inventions described and claimed in our pending patent applications will issue and will provide sufficient protection for our products and technologies. We also cannot ensure that our patents or patents based on our patent applications will not be challenged and rendered invalid and/or unenforceable.

Our success depends in large part on our ability to obtain and maintain intellectual property protection, particularly patents, for our products and technologies in the both the United States and other foreign countries. Patents are of national or regional effect, and filing, prosecuting and defending patents on all of our products and technologies throughout the world would be prohibitively expensive, and the laws of foreign countries may not protect our rights to the same extent as the laws of the United States. As such, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Further, the legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. As such, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Further, certain foreign and developing countries, including China and India, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In those countries, we and our licensors may have limited remedies if patents are infringed or if we or our licensors are compelled to grant a license to a third-party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license. We have pending U.S. and foreign patent applications in our portfolio, however, we cannot predict:

- if and when patents may issue based on our patent applications;
- the scope of protection of any patent issuing based on our patent applications;
- whether the claims of any patent issuing based on our patent applications will provide protection against competitors;
- whether or not third parties will find ways to invalidate or circumvent our patent rights;
- whether or not others will obtain patents claiming aspects similar to those covered by our patents and patent applications;
- whether we will need to initiate litigation or administrative proceedings to enforce and/or defend our patent rights which will be costly whether we win or lose; and/or
- whether the patent applications that we own or in-license will result in issued patents with claims that cover our product candidates or uses thereof in the United States or in other foreign countries.

We cannot be certain that the claims in our pending patent applications directed to our product candidates and/or technologies will be considered patentable by the USPTO or by patent offices in foreign countries. One aspect of the determination of patentability of our inventions depends on the scope and content of the "prior art," information that was or is deemed available to a person of skill in the relevant art prior to the priority date of the claimed invention. There may be prior art of which we are not aware that may affect the patentability of our patent claims or, if issued, affect the validity or enforceability of a patent claim. Even if the patents do issue based on our patent applications, third parties may challenge the validity, enforceability or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. Further, even if they are unchallenged, patents in our portfolio may not adequately exclude third parties from practicing relevant technology or prevent others from designing around our claims. If the breadth or strength of our intellectual property position with respect to our product candidates is threatened, it could dissuade companies from collaborating with us to develop and threaten our ability to commercialize our product candidates. In the event of litigation or administrative proceedings, we cannot be certain that the claims in any of our issued patents will be considered valid by courts in the United States or foreign countries.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have employed and expect to employ individuals who were previously employed at universities, research institutions or other companies, including our competitors or potential competitors. Although we seek to protect our ownership of intellectual property rights by ensuring that our agreements with our employees, collaborators, and other third parties with whom we do business include provisions requiring such parties to not disclose the confidential information of their previous employers or other third parties, we may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed confidential information of our employees' former employers or other third parties. We or our licensors may also be subject to claims that former employers or other third parties have an ownership interest in our patents. Litigation may be necessary to defend against these claims. There is no guarantee of success in defending these claims, and if we or our licensors fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Even if we are successful, litigation could result in substantial cost and be a distraction to our management and other employees.

If we are unable to protect the confidentiality of our trade secrets, the value of our technology could be materially adversely affected and our business could be harmed.

We rely heavily on trade secrets and confidentiality agreements to protect our unpatented know-how, technology and other proprietary information, including the design and features of the G4 and PX, and to maintain our competitive position. However, trade secrets and know-how can be difficult to protect. In particular, we anticipate that with respect to our technologies, these trade secrets and know how will over time be disseminated within the industry through independent development, the publication of journal articles describing the methodology, and the movement of personnel from academic to industry scientific positions.

In addition to pursuing patents on our technology, we take steps to protect our intellectual property and proprietary technology by entering into agreements, including confidentiality agreements, non-disclosure agreements and intellectual property assignment agreements, with our employees, consultants, academic institutions, corporate partners and, when needed, our advisers. However, we cannot be certain that such agreements have been entered into with all relevant parties, and we cannot be certain that our trade secrets and other confidential proprietary information will not be disclosed or that competitors or other third parties will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. For example, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Such agreements may not be enforceable or may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements, and we may not be able to prevent such unauthorized disclosure, which could adversely impact our ability to establish or maintain a competitive advantage in the market, business, financial condition, results of operations and prospects.

Monitoring unauthorized disclosure is difficult, and we do not know whether the steps we have taken to prevent such disclosure are, or will be, adequate. If we were to enforce a claim that a third-party had wrongfully obtained and was using our trade secrets, it would be expensive and time-consuming, it could distract our personnel, and the outcome would be unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets.

We also seek to preserve the integrity and confidentiality of our confidential proprietary information by maintaining physical security of our premises and physical and electronic security of our information technology systems, but it is possible that these security measures could be breached. If any of our confidential proprietary information were to be lawfully obtained or independently developed by a competitor or other third-party, absent patent protection, we would have no right to prevent such competitor from using that technology or information to compete with us, which could harm our competitive position. Competitors or third parties could purchase our products and attempt to replicate some or all of the competitive advantages we derive from our development efforts, design around our protected technology, develop their own competitive technologies that fall outside the scope of our intellectual property rights or independently develop our technologies without reference to our trade secrets. If any of our trade secrets were to be disclosed to or independently discovered by a competitor or other third-party, it could materially and adversely affect our business, financial condition, results of operations and prospects.

We could have disputes with contractual counterparties regarding our or their performance under those contracts or we could be unable to fulfill such contractual commitments. For example, we in-licensed certain patents and other intellectual property rights from The Trustees of Columbia University in the City of New York ("Columbia"). If we fail to comply with the terms of our agreement with Columbia or have a disagreement with Columbia regarding our obligations thereunder, we may be subject to breach of contract claims or other actions by Columbia, which could harm our business, results of operations and financial condition.

We could have disputes with contractual counterparties regarding our or their performance under those contracts or could be unable to fulfill such contractual commitments. For example, in August 2016, we entered into the License Agreement with Columbia, which was subsequently amended in September 2016, November 2016 and June 2017 (the "License Agreement"). Under the License Agreement, we received (i) an exclusive, sublicensable, worldwide license under certain patents owned by Columbia to discover, develop, make and sell products or services covered by the claims of such licensed patents (the "Patent Products"), and (ii) an exclusive, sublicensable, worldwide license under certain materials and technical information provided by Columbia to discover, develop, make and sell products or services that directly use or incorporate such materials or information (the "Other Products"). Under the License Agreement, we are required to use commercially reasonable efforts to research, discover, develop and market Patent Products and/or Other Products and to achieve certain fundraising and development milestone events. For any products within the scope of the License Agreement that we commercialize, we are required to pay royalties ranging from low to mid-single digits on net sales of Patent Products and low single-digit royalty rates on net sales of Other Products. We are also required to make milestone payments to Columbia upon our achievement of certain development and commercialization milestones, which could total up to $3.9 million over the life of the License Agreement.

The License Agreement includes a number of diligence obligations that require us to use commercially reasonable efforts to research, discover, develop and market Patent Products and/or Other Products by certain dates. Columbia could take the position that the License Agreement should convert to a non-exclusive license or pursue actions to terminate the License Agreement alleging that we have not satisfied our diligence obligations. Columbia could also disagree with our interpretation of our milestone and royalty obligations under the License Agreement and contend that we are in breach of the License Agreement.

Columbia has a right to pursue a termination of the License Agreement in the event we become insolvent or otherwise cease operations, in the event we materially breach our obligations under the License Agreement, or in the event we assert any claim challenging the validity or enforceability of any patent licensed to us by Columbia under the License Agreement. For example, Columbia may assert that we have breached the License Agreement if it disagrees with our interpretation regarding the application of the License Agreement to the G4 and PX instruments and the associated consumables. Columbia may take the position that we have not complied with our diligence obligations under the License Agreement. There is no assurance that we can satisfy our obligations under the License Agreement, or that we and Columbia will agree on whether or not we have satisfied our obligations under the License Agreement, including whether any royalty or milestones, or the amount thereof, are payable under the terms of the License Agreement or whether we have satisfied our diligence obligations. If we fail to comply with our obligations, or if we and Columbia do not agree on whether we have satisfied our obligations under the License Agreement, Columbia could exercise its right to assert a breach of contract, convert the License Agreement to a non-exclusive license and/or pursue actions to terminate the License Agreement. If we are required to defend against breach of contract or other claims and actions asserted by Columbia or if Columbia is successful in terminating the License Agreement or converting the License Agreement to a non-exclusive license, our business may be adversely affected. Further, if we are required to make additional milestone payments or pay Columbia royalties on the G4 and PX Instruments, and the consumables we have developed to date, beyond what we believe would be due under the License Agreement, our resulting operations and financial condition may be adversely affected. If we are unable to fulfill our contractual commitments with Columbia or other parties, or if we have disputes with Columbia or other contractual counterparties regarding our or their performance under those contracts, our results of operations and financial condition may be adversely affected.

Patent terms may be inadequate to protect our competitive position on our products for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. While extensions may be available, the life of a patent, and the protection it affords, is limited. In the United States, a patent's term may, in certain cases, be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the USPTO in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over a commonly owned patent or a patent naming a common inventor and having an earlier expiration date. Even if patents covering our products are obtained, once the patent life has expired, we may be open to competition from competitive products. If one of our products requires extended development, testing and/or regulatory review, patents protecting such products might expire before or shortly after such products are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours, which could have a material adverse effect on our business, financial condition and results of operations.

We may not be able to protect and enforce our trademarks and trade names, or build name recognition in our markets of interest thereby harming our competitive position.

The registered or unregistered trademarks or trade names that we own may be challenged, infringed, circumvented, declared generic, lapsed or determined to be infringing on or dilutive of other marks. We may not be able to protect our rights in these trademarks and trade names, which we need in order to build name recognition. In addition, third parties have filed, and may in the future file, for registration of trademarks similar or identical to our trademarks, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Further, we may in the future enter into agreements with owners of such third-party trade names or trademarks to avoid potential trademark litigation which may limit our ability to use our trade names or trademarks in certain fields of business. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively, and our business, financial condition, results of operations and prospects may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks, trade secrets, domain names, copyrights or other intellectual property may be ineffective and could result in substantial costs and diversion of resources. Any of the foregoing events could have a material adverse effect on our business, financial condition and results of operations.

The U.S. law relating to the patentability of certain inventions in the life sciences technology industry is uncertain and rapidly changing, which may adversely impact our existing patents or our ability to obtain patents in the future.

Changes in either the patent laws or interpretation of the patent laws in the United States or in other jurisdictions could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. For instance, under the Leahy-Smith America Invents Act (the "America Invents Act"), enacted in September 2011, the United States transitioned to a first inventor to file system in which, assuming that other requirements for patentability are met, the first inventor to file a patent application is entitled to the patent on an invention regardless of whether a third-party was the first to invent the claimed invention. These changes include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to challenge the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review and derivation proceedings. The America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Various courts, including the U.S. Supreme Court, have rendered decisions that impact the scope of patentability of certain inventions or discoveries relating to the life sciences technology. Specifically, these decisions stand for the proposition that patent claims that recite laws of nature are not themselves patentable unless those patent claims have sufficient additional features that provide practical assurance that the processes are genuine inventive applications of those laws rather than patent drafting efforts designed to monopolize the law of nature itself. What constitutes a "sufficient" additional feature is uncertain. Further, in view of these decisions, since December 2014, the USPTO has published and continues to publish revised guidelines for patent examiners to apply when examining process claims for patent eligibility.

In addition, U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events may create uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that may have a material adverse effect on our ability to obtain new patents and to defend and enforce our existing patents and patents that we might obtain in the future.

We cannot be certain that our patent portfolio will not be negatively impacted by the current uncertain state of the law, new court rulings or changes in guidance or procedures issued by the USPTO or other similar patent offices around the world. From time to time, the U.S. Supreme Court, other federal courts, the U.S. Congress or the USPTO may change the standards of patentability, scope and validity of patents within the life sciences industry and any such changes, or any similar adverse changes in the patent laws of other jurisdictions, could have a negative impact on our business, financial condition, prospects and results of operations.

If we cannot license rights to use technologies on reasonable terms, we may not be able to commercialize new products in the future.

We may identify third-party technology that we may need to license or acquire in order to develop or commercialize our products or technologies. However, we may be unable to secure such licenses or acquisitions. The licensing or acquisition of third-party intellectual property rights is a competitive area, and several more established companies may pursue strategies to license or acquire third-party intellectual property rights that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us.

We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all. In return for the use of a third-party's technology, we may agree to pay the licensor royalties based on sales of our products or services. Royalties are a component of cost of products or technologies and affect the margins on our products. We may also need to negotiate licenses to patents or patent applications before or after introducing a commercial product. We may not be able to obtain necessary licenses to patents or patent applications, the commercial release of our products could be delayed and our business may suffer if we are unable to enter into the necessary licenses on acceptable terms or at all, if any necessary licenses are subsequently terminated, if the licensor fails to abide by the terms of the license or fails to prevent infringement by third parties, or if the licensed intellectual property rights are found to be invalid or unenforceable.

Certain of our future owned and in-licensed patents may be subject to a reservation of rights by one or more third parties, including government march-in rights, which may limit our ability to exclude third parties from commercializing products similar or identical to ours.

Our future in-licensed patents may be subject to a reservation of rights by one or more third parties. For example, when new technologies are developed with government funding, in order to secure ownership of such patent rights, the recipient of such funding is required to comply with certain government regulations, including timely disclosing the inventions claimed in such patent rights to the U.S. government and timely electing title to such inventions. Any failure to timely elect title to such inventions may provide the U.S. government the option to, at any time, take title such inventions. Additionally, the U.S. government generally obtains certain rights in any resulting patents, including a non-exclusive license authorizing the government to use the invention or to have others use the invention on its behalf. If the government decides to exercise these rights, it is not required to engage us as its contractor in connection with doing so. These rights may permit the U.S. government to disclose our confidential information to third parties and to exercise march-in rights to use or allow third parties to use our licensed technology. The U.S. government can exercise its march-in rights if it determines that action is necessary because we fail to achieve practical application of the government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, our rights in such inventions may be subject to certain requirements to manufacture products embodying such inventions in the United States. Any exercise by the government of any of the foregoing rights could have a material adverse effect on our business, financial condition, results of operations and prospects.

Our use of open source software may pose particular risks to our proprietary software and systems.

We use open source software in our products and anticipate that we will continue to use open source software in the future. The licenses applicable to our use of open source software may require that source code that is developed using open source software be made available to the public and that any modifications or derivative works to certain open source software continue to be licensed under open source licenses. From time to time, we may face claims from third parties claiming infringement of their intellectual property rights, or demanding the release or license of the open source software or derivative works that we developed using such software (which could include our proprietary source code) or otherwise seeking to enforce the terms of the applicable open source license. These claims could result in litigation and could require us to purchase a costly license, publicly release the affected portions of our source code, be limited in or cease using the implicated software unless and until we can re-engineer such software to avoid infringement or change the use of, or remove, the implicated open source software. Our use of open source software may also present additional security risks because the source code for open source software is publicly available. Any of these risks could be difficult to eliminate or manage, and, if not addressed, could have a material adverse effect on our business, results of operations, financial condition, and prospects.

Risks Related to Regulatory and Legal Compliance Matters

If we elect to label and promote any of our products as clinical diagnostics tests or medical devices, we would be required to obtain prior approval or clearance by the FDA, which would take significant time and expense and could fail to result in FDA clearance or approval for the intended uses we believe are commercially attractive.

We intend to market and sell the G4 and future products to academic and research institutions and research companies, government laboratories, hospitals, and biotechnology, consumer genomics and proteomics, commercial molecular diagnostic laboratories, and agrigenomics companies as research use only ("RUO") products. Our products are not currently designed, or intended to be used, for clinical diagnostic tests or as medical devices. If we elect to label and market our products for use as, or in the performance of, clinical diagnostics in the United States, thereby subjecting them to U.S. Food and Drug Administration ("FDA") regulation as medical devices, we would be required to obtain premarket 510(k) clearance or premarket approval from the FDA, unless an exception applies.

We may in the future register with the FDA as a medical device manufacturer and list some of our products with the FDA pursuant to an FDA Class I listing for general purpose laboratory equipment. While this regulatory classification is exempt from certain FDA requirements, such as the need to submit a premarket notification commonly known as a 510(k), and some of the requirements of the FDA's Quality System Regulations ("QSRs"), we would be subject to ongoing FDA "general controls," which include compliance with FDA regulations for labeling, inspections by the FDA, complaint evaluation, corrections and removals reporting, promotional restrictions, reporting adverse events or malfunctions for our products, and general prohibitions against misbranding and adulteration.

In addition, we may in the future submit 510(k) premarket notifications to the FDA to obtain FDA clearance of certain of our products on a selective basis. It is possible, in the event we elect to submit 510(k) applications for certain of our products, that the FDA would take the position that a more burdensome premarket application, such as a premarket approval application (PMA) or a de novo application is required for some of our products. If such applications were required, greater time and investment would be required to obtain FDA approval. Even if the FDA agreed that a 510(k) was appropriate, FDA clearance can be expensive and time consuming. It generally takes a significant amount of time to prepare a 510(k), including conducting appropriate testing on our products, and several months to years for the FDA to review a submission. Notwithstanding the effort and expense, FDA clearance or approval could be denied for some or all of our products for which we choose to market as a medical device or a clinical diagnostic device. Even if we were to seek and obtain regulatory approval or clearance, it may not be for the intended uses we request or that we believe are important or commercially attractive. There can be no assurance that future products for which we may seek premarket clearance or approval will be approved or cleared by FDA or a comparable foreign regulatory authority on a timely basis, if at all, nor can there be assurance that labeling claims will be consistent with our anticipated claims or adequate to support continued adoption of such products. Compliance with FDA or comparable foreign regulatory authority regulations will require substantial costs, and subject us to heightened scrutiny by regulators and substantial penalties for failure to comply with such requirements or the inability to market our products. The lengthy and unpredictable premarket clearance or approval process, as well as the unpredictability of the results of any required clinical studies, may result in our failing to obtain regulatory clearance or approval to market such products, which would significantly harm our business, results of operations, reputation, and prospects.

If we sought and received regulatory clearance or approval for certain of our products, we would be subject to ongoing FDA obligations and continued regulatory oversight and review, including the general controls listed above and the FDA's QSRs for our development and manufacturing operations. In addition, we would be required to obtain a new 510(k) clearance before we could introduce subsequent modifications or improvements to such products. We could also be subject to additional FDA post-marketing obligations for such products, any or all of which would increase our costs and divert resources away from other projects. If we sought and received regulatory clearance or approval and are not able to maintain regulatory compliance with applicable laws, we could be prohibited from marketing our products for use as, or in the performance of, clinical diagnostics and/or could be subject to enforcement actions, including warning letters and adverse publicity, fines, injunctions and civil penalties, recall or seizure of products, operating restrictions and criminal prosecution.

In addition, we could decide to seek regulatory clearance or approval for certain of our products in countries outside of the United States. Sales of such products outside the United States will likely be subject to foreign regulatory requirements, which can vary greatly from country to country. As a result, the time required to obtain clearances or approvals outside the United States may differ from that required to obtain FDA clearance or approval and we may not be able to obtain foreign regulatory approvals on a timely basis or at all. For example, in Europe we would need to comply with the new Medical Device Regulation 2017/745 and In Vitro Diagnostic Regulation 2017/746, which became effective May 26, 2017, with application dates of May 26, 2021 (postponed from 2020) and May 26, 2022 respectively. This will increase the difficulty of regulatory approvals in Europe in the future. In addition, the FDA regulates exports of medical devices. Failure to comply with these regulatory requirements or obtain and maintain required approvals, clearances and certifications could impair our ability to commercialize our products for diagnostic use outside of the United States.

The G4 is sold as an RUO product; changes in the regulatory landscape could affect the market for such a product. Our products could become subject to government regulation as medical devices by the FDA and other regulatory agencies even if we do not elect to seek regulatory clearance or approval to market our products for diagnostic purposes, which would adversely impact our ability to market and sell our products and harm our business. If our products become subject to FDA regulation, the regulatory clearance or approval and the maintenance of continued and post-market regulatory compliance for such products will be expensive, time-consuming, and uncertain both in timing and in outcome.

The G4 is sold as an RUO product, and we do not currently expect either the G4 or PX to be subject to the clearance or approval of the FDA, as they are not intended to be used for the diagnosis, treatment or prevention of disease. However, as we expand our product line and the applications and uses of our products into new fields, certain of our future products could become subject to regulation by the FDA, or comparable international agencies, including requirements for regulatory clearance or approval of such products before they can be marketed. Also, even if our products are labeled, promoted, and intended as RUO, the FDA or comparable agencies of other countries could disagree with our conclusion that our products are intended for RUO or deem our sales, marketing and promotional efforts as being inconsistent with RUO products. For example, our customers may independently elect to use our RUO labeled products in their own laboratory developed tests ("LDTs") for clinical diagnostic use, which could subject our products to government regulation, and the regulatory clearance or approval and maintenance process for such products may be uncertain, expensive and time-consuming. Regulatory requirements related to marketing, selling and distribution of RUO products could change or be uncertain, even if clinical uses of our RUO products by our customers were done without our consent. Further, regulations may change causing RUO products to be subject to regulatory clearance or approval. If the FDA or other regulatory authorities assert that any of our RUO products are subject to regulatory clearance or approval, our business, financial condition, or results of operations could be adversely affected.

The FDA has historically exercised enforcement discretion in not enforcing the medical device regulations against laboratories offering LDTs. However, on October 3, 2014, the FDA issued two draft guidance documents that set forth the FDA's proposed risk-based framework for regulating LDTs, which are designed, manufactured, and used within a single laboratory. The draft guidance documents provide the anticipated details through which the FDA would propose to establish an LDT oversight framework, including premarket review for higher-risk LDTs, such as those that have the same intended use as FDA-approved or cleared companion diagnostic tests currently on the market. In January 2017, the FDA announced that it would not issue final guidance on the oversight of LDTs and manufacturers of products used for LDTs, but would seek further public discussion on an appropriate oversight approach, and give Congress an opportunity to develop a legislative solution. More recently, the FDA has issued warning letters to certain genomics labs for illegally marketing genetic tests that claim to predict patients' responses to specific medications, noting that the FDA has not created a legal "carve-out" for LDTs and retains discretion to take action when appropriate, such as when certain genomic tests raise significant public health concerns.

As manufacturers develop more complex diagnostic tests and diagnostic software, the FDA may increase its regulation of LDTs. Any future legislative or administrative rule-making or oversight of LDTs, if and when finalized, may impact the sales of our products and how customers use our products, and may require us to change our business model in order to maintain compliance with these laws. We cannot predict how these various efforts will be resolved, how Congress or the FDA will regulate LDTs in the future, or how that regulatory system will impact our business. Changes to the current regulatory framework, including the imposition of additional or new regulations, including regulation of our products, could arise at any time during the development or marketing of our products, which may negatively affect our ability to obtain or maintain FDA or comparable regulatory approval of our products, if required. Further, sales of devices for diagnostic purposes may subject us to additional healthcare regulation and enforcement by the applicable government agencies. Such laws include, without limitation, state and federal anti-kickback or anti-referral laws, healthcare fraud and abuse laws, false claims laws, privacy and security laws, Physician Payments Sunshine Act and related transparency and manufacturer reporting laws, and other laws and regulations applicable to medical device manufacturers. Our operations may subject us to certain of these health care laws through our customers who use our platform for the development or sale of diagnostic tests. Failure to comply with such laws and regulations, as applicable, may result in substantial penalties.

Additionally, on November 25, 2013, the FDA issued Final Guidance "Distribution of In Vitro Diagnostic Products Labeled for Research Use Only." The guidance emphasizes that the FDA will review the totality of the circumstances when it comes to evaluating whether equipment and testing components are properly labeled as RUO. The final guidance states that merely including a labeling statement that the product is for RUO will not necessarily render the device exempt from the FDA's clearance, approval, and other regulatory requirements if the circumstances surrounding the distribution, marketing and promotional practices indicate that the manufacturer knows its products are, or intends for its products to be, used for clinical diagnostic purposes. These circumstances may include written or verbal sales and marketing claims or links to articles regarding a product's performance in clinical applications and a manufacturer's provision of technical support for clinical applications.

As part of the previous Administration's efforts to combat COVID-19 and consistent with former President Trump's direction in Executive Orders 13771 and 13924, the Department of Health and Human Services ("HHS") announced rescission of guidance and other informal issuances of the FDA regarding premarket review of LDTs absent notice-and-comment rulemaking, stating that, absent notice-and-comment rulemaking, those seeking approval or clearance of, or an emergency use authorization, for an LDT may nonetheless voluntarily submit a premarket approval application, premarket notification or an Emergency Use Authorization request, respectively, but are not required to do so. However, laboratories opting to use LDTs without FDA premarket review or authorization would not be eligible for liability protection under the Public Readiness and Emergency Preparedness Act. While this action by HHS is expected to reduce the regulatory burden on clinical laboratories certified under the Clinical Laboratory Improvement Amendments of 1988 that develop LDTs, it is unclear how this action as well as future legislation by federal and state governments and the FDA will impact the industry, including our business and that of our customers. Such HHS measure may compel the FDA to formalize earlier enforcement discretionary policies and informal guidance through notice-and-comment rulemaking and/or impose further restrictions on LDTs. HHS' rescission policy may change over time and we cannot be certain if the new administration will withdraw Executive Orders 13771 and 13924. Congress could also enact legislation restricting LDTs. Any restrictions on LDTs by the FDA, HHS, Congress, or state regulatory authorities may decrease the demand for our products. The adoption of new restrictions on RUO products, whether by the FDA or Congress, could adversely affect demand for our specialized reagents and instruments. Further, we could be required to obtain premarket clearance or approval before we can sell our products to certain customers.

Additionally, in the United States and some foreign jurisdictions there have been, and continue to be, several legislative and regulatory changes and proposed reforms of the healthcare system in an effort to contain costs, improve quality, and expand access to care. Further, third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for medications and other health care products and services. Our ability to commercialize any of our products successfully, and our customers' ability to commercialize their products successfully, will depend in part on the extent to which coverage and adequate reimbursement for these products and will be available from third-party payors. As such, cost containment reform efforts may result in an adverse effect on our operations.

We are currently subject to, and may in the future become subject to, additional U.S. federal and state laws and regulations imposing obligations on how we collect, store and process personal information. Our actual or perceived failure to comply with such obligations could harm our business. Ensuring compliance with such laws could also impair our efforts to maintain and expand our future customer base, and thereby decrease our revenue.

In the ordinary course of our business, we currently, and in the future will, collect, store, transfer, use or process sensitive data, including personally identifiable information of employees, and intellectual property and proprietary business information owned or controlled by ourselves and other parties. The secure processing, storage, maintenance, and transmission of this critical information is vital to our operations and business strategy. We are, and may increasingly become, subject to various laws and regulations, as well as contractual obligations, relating to data privacy and security in the jurisdictions in which we operate. The regulatory environment related to data privacy and security is increasingly rigorous, with new and constantly changing requirements applicable to our business, and enforcement practices are likely to remain uncertain for the foreseeable future. These laws and regulations may be interpreted and applied differently and inconsistently over time and from jurisdiction to jurisdiction, and it is possible that they will be interpreted and applied in ways that may have a material adverse effect on our business, financial condition, results of operations and prospects.

In the United States, various federal and state regulators, including governmental agencies like the Consumer Financial Protection Bureau and the Federal Trade Commission, have adopted, or are considering adopting, laws and regulations concerning personal information and data security. Certain state laws may be more stringent or broader in scope, or offer greater individual rights, with respect to personal information than federal, international or other state laws, and such laws may differ from each other, all of which may complicate compliance efforts. For example, the California Consumer Privacy Act ("CCPA"), which increases privacy rights for California residents and imposes obligations on companies that process their personal information, came into effect on January 1, 2020. Among other things, the CCPA requires covered companies to provide new disclosures to California consumers and provide such consumers new data protection and privacy rights, including the ability to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for certain data breaches that result in the loss of personal information. This private right of action may increase the likelihood of, and risks associated with, data breach litigation. In addition, laws in all 50 U.S. states require businesses to provide notice to consumers whose personal information has been disclosed as a result of a data breach. State laws are changing rapidly and there is discussion in the U.S. Congress of a new comprehensive federal data privacy law to which we would become subject if it is enacted. Additionally, California voters approved a new privacy law, the California Privacy Rights Act ("CPRA"), in the November 3, 2020 election. Effective on January 1, 2023, the CPRA will significantly modify the CCPA, including by expanding consumers' rights with respect to certain sensitive personal information. The CPRA also creates a new state agency that will be vested with authority to implement and enforce the CCPA and the CPRA. New legislation proposed or enacted in various other states will continue to shape the data privacy environment nationally. Certain state laws may be more stringent or broader in scope, or offer greater individual rights, with respect to confidential, sensitive and personal information than federal, international or other state laws, and such laws may differ from each other, which may complicate compliance efforts.

Further, regulations promulgated pursuant to the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), establish privacy and security standards that limit the use and disclosure of individually identifiable health information (known as "protected health information" or "PHI") and require the implementation of administrative, physical and technological safeguards to protect the privacy of PHI and ensure the confidentiality, integrity and availability of electronic PHI. Determining whether protected health information has been handled in compliance with applicable privacy standards and our contractual obligations can require complex factual and statistical analyses and may be subject to changing interpretation. Although we take measures to protect sensitive data from unauthorized access, use or disclosure, our information technology and infrastructure may be vulnerable to attacks by hackers or viruses or breached due to employee error, malfeasance or other malicious or inadvertent disruptions. Any such breach or interruption could compromise our networks and the information stored there could be accessed by unauthorized parties, manipulated, publicly disclosed, lost or stolen. Any such access, breach or other loss of information could result in legal claims or proceedings, liability under federal or state laws that protect the privacy of personal information (such as the HIPAA and the Health Information Technology for Economic and Clinical Health Act ("HITECH"), and regulatory penalties. Notice of breaches must be made to affected individuals, the Secretary of the Department of Health and Human Services, and for extensive breaches, notice may need to be made to the media or State Attorneys General. Such a notice could harm our reputation and our ability to compete.

In Europe, the collection, use, storage, disclosure, transfer, or other processing of personal data regarding individuals in the European Economic Area ("EEA"), including personal health data, is subject to the GDPR, which became effective on May 25, 2018. The GDPR is wide-ranging in scope and imposes numerous requirements on companies that process personal data, including requirements relating to processing health and other sensitive data, obtaining consent of the individuals to whom the personal data relates, providing information to individuals regarding data processing activities, implementing safeguards to protect the security and confidentiality of personal data, providing notification of data breaches and taking certain measures when engaging third-party processors. The GDPR also imposes strict rules on the transfer of personal data to countries outside the EEA, including the United States, and permits data protection authorities to impose large penalties for violations of the GDPR, including potential fines of up to €20 million or 4% of annual global revenues, whichever is greater. The GDPR also confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies and obtain compensation for damages resulting from violations of the GDPR. In addition, the GDPR includes restrictions on cross-border data transfers. The GDPR may increase our responsibility and liability in relation to personal data that we process where such processing is subject to the GDPR, and we may be required to put in place additional mechanisms to ensure compliance with the GDPR, including as implemented by individual countries. Compliance with the GDPR will be a rigorous and time- intensive process that may increase our cost of doing business or require us to change our business practices, and despite those efforts, there is a risk that we may be subject to fines and penalties, litigation and reputational harm in connection with our European activities.

The exit of the United Kingdom ("UK") from the EU, often referred to as Brexit, also has created uncertainty with regard to data protection regulation in the UK. Specifically, the UK exited the EU on January 1, 2020, subject to a transition period that ended December 31, 2020. Under the post-Brexit Trade and Cooperation Agreement between the EU and the UK, the UK and EU have agreed that transfers of personal data to the UK from EEA member states will not be treated as 'restricted transfers' to a non-EEA country for a period of up to four months from January 1, 2021, plus a potential further two months extension (the "Extended Adequacy Assessment Period"). Although the current maximum duration of the Extended Adequacy Assessment Period is six months, it may end sooner, for example, in the event that the European Commission adopts an adequacy decision in respect of the UK, or the UK amends the UK GDPR and/or makes certain changes regarding data transfers under the UK GDPR/Data Protection Act 2018 without the consent of the EU (unless those amendments or decisions are made simply to keep relevant UK laws aligned with the EU's data protection regime). If the European Commission does not adopt an 'adequacy decision' in respect of the UK prior to the expiry of the Extended Adequacy Assessment Period, from that point onwards the UK will be an 'inadequate third country' under the GDPR and transfers of personal data from the EEA to the UK will require a 'transfer mechanism' such as the Standard Contractual Clauses.

Further, the European Court of Justice ("ECJ") invalidated the EU-U.S. Privacy Shield, which had enabled the transfer of personal data from the EU to the U.S. for companies that had self-certified to the Privacy Shield in July 2020. The ECJ decision also raised questions about the continued validity of one of the primary alternatives to the EU-U.S. Privacy Shield, namely the European Commission's Standard Contractual Clauses, and EU regulators have issued additional guidance regarding considerations and requirements that we and other companies must consider and undertake when using the Standard Contractual Clauses. Although the EU has presented a new draft set of contractual clauses, at present, there are few, if any, viable alternatives to the EU-U.S. Privacy Shield and the Standard Contractual Clauses. To the extent that we were to rely on the EU-U.S. or Swiss-U.S. Privacy Shield programs, we will not be able to do so in the future, and the ECJ's decision and other regulatory guidance or developments otherwise may impose additional obligations with respect to the transfer of personal data from the EU and Switzerland to the U.S., each of which could restrict our activities in those jurisdictions, limit our ability to provide our products and services in those jurisdictions, or increase our costs and obligations and impose limitations upon our ability to efficiently transfer personal data from the EU and Switzerland to the U.S.

We are in the process of evaluating compliance needs, and are still finalizing formal policies and procedures related to the storage, collection and processing of information, and still need to conduct internal or external data privacy audits, to ensure our compliance with all applicable data protection laws and regulations. Additionally, we still need to assess our third-party vendors' compliance with applicable data protection laws and regulations. All of these evolving compliance and operational requirements impose significant costs, such as costs related to organizational changes, implementing additional protection technologies, training employees and engaging consultants, which are likely to increase over time. In addition, such requirements may require us to modify our data processing practices and policies, distract management or divert resources from other initiatives and projects, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects. Any failure or perceived failure by us or our third-party vendors, collaborators, contractors and consultants to comply with any applicable federal, state or similar foreign laws and regulations relating to data privacy and security could result in damage to our reputation, as well as proceedings or litigation by governmental agencies or other third parties, including class action privacy litigation in certain jurisdictions, which could subject us to significant fines, sanctions, awards, penalties or judgments, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological and radioactive materials. Our research and development and manufacturing operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risks of contamination or injury from these materials. We could be held liable for any resulting damages in the event of contamination or injury resulting from the use of hazardous materials by us, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties.

Although we maintain general liability insurance as well as workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological, hazardous or radioactive materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research and development. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Further, with respect to the operations of our any future third-party contract manufacturers, it is possible that if they fail to operate in compliance with applicable environmental, health and safety laws and regulations or properly dispose of wastes associated with our products, we could be held liable for any resulting damages, suffer reputational harm or experience a disruption in the manufacture and supply of our product candidates or products. In addition, our supply chain may be adversely impacted if any of our third-party contract manufacturers become subject to injunctions or other sanctions as a result of their non-compliance with environmental, health and safety laws and regulations.

We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We can face criminal liability and other serious consequences for violations, which can harm our business.

We are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls, the U.S. Foreign Corrupt Practices Act of 1977, as amended, ("FCPA"), the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and other state and national anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti- corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors, and other collaborators from authorizing, promising, offering, or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We may engage third parties to sell our products outside the United States, to conduct clinical trials, and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We can be held liable for the corrupt or other illegal activities of our employees, agents, contractors, and other collaborators, even if we do not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences.

Risks Related to Ownership of our Common Stock

We are not currently in compliance with the minimum bid price rule of the Nasdaq Global Select Market, and if we cannot regain and maintain compliance, our securities may be delisted, which could negatively impact the price of our securities, the liquidity of our common stock, and hinder our ability to raise capital.

On July 17, 2023, we received a deficiency letter (the "Letter") from The Nasdaq Stock Market LLC ("Nasdaq") notifying us that, for the preceding 30 consecutive business days prior to the date of the Letter, the bid price for our common stock closed below the $1.00 per share minimum bid price requirement for continued inclusion on the Nasdaq Global Select Market (the "Minimum Bid Price Requirement"). Under applicable Nasdaq rules, we have a period of 180 calendar days, or until January 15, 2024, to regain compliance with the Minimum Bid Price Requirement. To regain compliance, the closing bid price of our common stock must be at least $1.00 per share for a minimum of 10 consecutive business days during the 180-day period (or prior to January 15, 2024). If we do not regain compliance with the Minimum Bid Requirement by January 15, 2024, we may qualify for an additional 180 calendar day compliance period if we transfer the listing of our common stock to the Nasdaq Capital Market and meet certain requirements. If we do not qualify for, or fail to regain, compliance during the second compliance period, then Nasdaq will notify us of its determination to delist our common stock, at which point we may appeal Nasdaq's delisting determination to a Nasdaq Listing Qualifications Hearings Panel.

We intend to actively monitor the closing bid price of our common stock and will consider all available options to regain compliance with the Minimum Bid Price Requirement; however, there can be no assurance that we will regain or be able to maintain compliance within the Minimum Bid Price Requirement during the 180-day compliance period, secure a second 180-day period to regain compliance, or maintain compliance with other Nasdaq listing requirements. If we are unable to comply with applicable Nasdaq listing standards, shares of our common stock would be subject to delisting, which could have a material adverse effect on the market for, and liquidity and price of, our common stock and impair our ability to raise capital. Delisting from Nasdaq could also have other negative results, including, without limitation, the reduction or elimination of our coverage by securities analysts and other market participants, the potential loss of confidence by customers and employees, the loss of institutional investor interest, and fewer business development opportunities. If our common stock is delisted from Nasdaq and is ineligible for quotation or listing on another market or exchange, it could become significantly more difficult to dispose of our common stock, which could cause the price of our common stock to decline further.

We have a limited market for our common stock. The stock price of our common stock has been and may continue to be volatile or may decline regardless of our operating performance.

While our common stock is traded on the Nasdaq Global Select Market, we currently have a limited trading history and an active trading market may not be sustained. The market price of our common stock has fluctuated and declined substantially and may continue to do so significantly in response to numerous factors, many of which are beyond our control, including:

- the timing of our launch and commercialization of our products and degree to which such launch and commercialization meets the expectations of securities analysts and investors;
- actual or anticipated fluctuations in our operating results, including fluctuations in our quarterly and annual results;
- operating and research and development expenses exceed our plans and expectations;
- the failure or discontinuation of any of our product development and research programs;
- changes in the structure or funding of research at academic and research laboratories and institutions, including changes that would affect their ability to purchase our instruments or consumables;
- our ability to reduce the per unit cost of our commercialized products;
- financing or other corporate transactions, or inability to obtain additional funding;
- sales by us of a substantial number of shares of our capital stock or other securities to raise capital;
- variations in the financial results of competitive companies;
- the introduction and success of existing or new competitive businesses or technologies;
- announcements about new research programs or products by us or our competitors;
- announcements of new pricing or product bundling terms offered by our competitors;
- intellectual property litigation or developments in disputes concerning infringement of patents or other proprietary rights;
- the recruitment or departure of key personnel;
- litigation and governmental investigations involving us, our industry or both;
- regulatory or legal developments in the United States and other countries;
- volatility and variations in market conditions in the life sciences technology sector generally, or the genomics and proteomics sectors specifically;
- investor perceptions of us or our industry;
- the level of expenses related to any of our research and development programs or future products or product enhancements;
- actual or anticipated changes in our estimates as to our financial results or development timelines;
- changes in estimates or recommendations by securities analysts, if any, that cover our common stock or companies that are perceived to be similar to us;
- whether our financial results meet the expectations of securities analysts or investors;
- the effect of inflation on our business;
- the announcement or expectation of additional financing efforts;
- sales of our common stock by us or sales of our common stock or common stock by our insiders or other stockholders;
- the expiration of market standoff or lock-up agreements;
- pandemics similar to the COVID-19 pandemic, natural disasters or major catastrophic events; and
- general economic, industry and market conditions.

The concentration of our stock ownership will likely limit your ability to influence corporate matters, including the ability to influence the outcome of director elections and other matters requiring stockholder approval.

As of March 31, 2023, the record date of our annual meeting of stockholders, our officers, directors and the holders of more than 5% of our outstanding common stock collectively beneficially owned approximately 43% of our common stock. As a result, these stockholders, acting together, will have significant influence over all matters that require approval by our stockholders, including the election of directors and approval of significant corporate transactions. Corporate actions might be taken even if many other stockholders oppose them. This concentration of ownership might also have the effect of delaying or preventing a change of control of our company that many other stockholders may view as beneficial.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our results of operation could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in our financial statements and accompanying notes. We base our estimates on historical experience and estimates and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. For example, in connection with the implementation of revenue accounting standards, management makes judgments and assumptions based on our interpretations of these standards. The revenue standards are principle-based and interpretation of those principles may vary from company to company based on their unique circumstances. It is possible that interpretation, industry practice and guidance may evolve as we apply revenue accounting standards. If our assumptions underlying our estimates and judgments relating to our critical accounting policies change or if actual circumstances differ from our assumptions, estimates or judgments, our operating results may be adversely affected and could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

We are an "emerging growth company" and "smaller reporting company" and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an "emerging growth company" as defined in the JOBS Act and we intend to take advantage of some of the exemptions from reporting requirements that are applicable to other public companies that are not emerging growth companies, including:

- the option to present only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes Oxley Act;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- not being required to disclose certain executive compensation-related items such as the correlation between executive compensation and performance and comparisons of the chief executive officer's compensation to median employee compensation; and
- not being required to submit certain executive compensation matters to stockholder advisory votes, such as "say-on-pay," "say-on-frequency," and "say-on-golden parachutes."

The JOBS Act permits an "emerging growth company" such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We have elected to avail ourselves of this exemption and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for private companies.

We cannot predict if investors will find our common stock less attractive because we will rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. We may take advantage of these reporting exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of our IPO, (b) in which we have total annual gross revenue of at least $1.235 billion or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior September 30th and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period. We are also a smaller reporting company as defined in the Exchange Act. We may continue to be a smaller reporting company even after we no longer qualify as an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as our voting and non-voting common stock held by non-affiliates is less than $250 million measured on the last business day of our second fiscal quarter, or (ii) our annual revenue is less than $100 million during the most recently completed fiscal year and the market value of our voting and non-voting common stock held by non-affiliates is less than $700 million as measured on the last business day of our second fiscal quarter.

We do not intend to pay dividends for the foreseeable future.

We have never declared nor paid cash dividends on our capital stock. We currently intend to retain any future earnings to finance the operation and expansion of our business, and we do not expect to declare or pay any dividends in the foreseeable future. The SVB Loan also contains a negative covenant that prohibits us from paying dividends subject to limited exceptions. Consequently, stockholders must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investment.

Delaware law and provisions in our amended and restated certificate of incorporation and amended and restated bylaws could make a merger, tender offer or proxy contest difficult, thereby depressing the trading price of our common stock.

Our status as a Delaware corporation and the anti-takeover provisions of the Delaware General Corporation Law may discourage, delay or prevent a change in control by prohibiting us from engaging in a business combination with an interested stockholder for a period of three years after the person becomes an interested stockholder, even if a change of control would be beneficial to our existing stockholders. In addition, our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that may make the acquisition of our company more difficult, including the following:

- a classified board of directors with three-year staggered terms, which could delay the ability of stockholders to change the membership of a majority of our board of directors;
- the ability of our board of directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by a majority vote of our entire board of directors, the chair of our board of directors or our chief executive officer, which could delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- the requirement for the affirmative vote of holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of the voting stock, voting together as a single class, to amend the provisions of our amended and restated certificate of incorporation or our amended and restated bylaws, which may inhibit the ability of an acquirer to effect such amendments to facilitate an unsolicited takeover attempt; and
- advance notice procedures with which stockholders must comply to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time. A Delaware corporation may opt out of this provision by express provision in its original certificate of incorporation or by amendment to its certificate of incorporation or bylaws approved by its stockholders. However, we have not opted out of this provision.

These and other provisions in our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law could make it more difficult for stockholders or potential acquirers to obtain control of our board of directors or initiate actions that are opposed by our then-current board of directors, including delay or impede a merger, tender offer or proxy contest involving our company. The existence of these provisions could negatively affect the price of our common stock and limit opportunities for you to realize value in a corporate transaction.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and the U.S. federal district courts are the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our certificate of incorporation or our bylaws or any action asserting a claim against us that is governed by the internal affairs doctrine.

This provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Further, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our certificate of incorporation further provides that the U.S. federal district courts will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, including all causes of action asserted against any defendant named in such complaint. For the avoidance of doubt, this provision is intended to benefit and may be enforced by us, our officers and directors, the underwriters to any offering giving rise to such complaint, and any other professional entity whose profession gives authority to a statement made by that person or entity and who has prepared or certified any part of the documents underlying the offering. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of our certificate of incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees and may discourage these types of lawsuits. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions.

Sales of a substantial number of shares of our common stock in the public market could cause the price of our common stock to fall.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to decline. Sales of a substantial number of shares of our common stock could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock.

On July 19, 2022 we filed a shelf registration statement (the "Shelf Registration Statement") on Form S-3 with the Securities and Exchange Commission ("SEC") (that was declared effective on July 27, 2022), which permits us to offer up to an aggregate of $250.0 million of our common stock, preferred stock, debt securities and warrants in one or more offerings and in any combination, including units from time to time. Our Shelf Registration Statement is intended to provide us with additional flexibility to raise capital in the future for general corporate purposes. As part of this Shelf Registration Statement, we also entered into a sales agreement with Cowen and Company, LLC ("Cowen and Company"), pursuant to which we may offer and sell common stock through Cowen and Company from time to time up to an aggregate offering price of $100.0 million (the "Sales Agreement"). Through the date of this filing, we have not sold any shares of our common stock in "at the market" transactions pursuant to the Sales Agreement. Depending upon market liquidity at the time, sales of shares of our common stock under the Shelf Registration Statement or the Sales Agreement may cause the trading price of our common stock to decline and may result in substantial dilution to the interests of other holders of our common stock.

Further, we have registered and intend to continue to register all shares of common stock that we may issue under our equity plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates. We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our common stock. However, future sales of substantial amounts of our common stock in the public market, including shares issued upon exercise of our outstanding options, or the perception that such sales may occur, could adversely affect the market price of our common stock.

We expect that significant additional capital may be needed in the future to continue our planned operations. To raise capital, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time, including through our existing Shelf Registration Statement and Sales Agreement with Cowen and Company. To the extent that additional capital is raised through the sale and issuance of shares or other securities convertible into shares, our stockholders will be diluted. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. Sales of a substantial number of shares of our common stock in the public market could cause our stock price to decline. Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our common stock. However, future sales of substantial amounts of our common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our common stock.

General Risk Factors

If securities or industry analysts cease publishing research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports published by securities or industry analysts about us or our business. Securities and industry analysts currently publish research on our company. If analysts cease coverage of us, the trading price for our common stock could be negatively affected. If one or more of the analysts who cover us downgrade our common stock or publish inaccurate or unfavorable research about our business, our common stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our common stock price and trading volume to decline.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because our stock price has declined since our IPO, and life science technology companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

Requirements associated with being a public company have increased and will increase our costs significantly, as well as divert significant company resources and management attention.

We are subject to the reporting requirements of the Exchange Act, or the other rules and regulations of the SEC, or any securities exchange relating to public companies. Compliance with the various reporting and other requirements applicable to public companies requires considerable time and attention of management and we will incur significant legal, accounting and other expenses that we did not incur as a private company. We cannot assure you that we will satisfy our obligations as a public company on a timely basis.

In addition, as a public company, it may be more difficult or more costly for us to obtain certain types of insurance, including directors' and officers' liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified personnel to serve on our board of directors, our board committees or as executive officers.

If we fail to maintain proper and effective internal controls, our ability to produce accurate and timely financial statements could be impaired, which could result in sanctions or other penalties that would harm our business.

We are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act and the rules and regulations of the Nasdaq Global Select Market. The Sarbanes Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal controls over financial reporting. Commencing in 2022, we must perform system and process design evaluation and testing of the effectiveness of our internal controls over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting in our Form 10-K filing for the year ended December 31, 2022, as required by Section 404 of the Sarbanes-Oxley Act. To achieve compliance with Section 404 within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, including through hiring additional financial and accounting personnel, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. This will require that we incur substantial additional professional fees and internal costs to expand our accounting and finance functions and that we expend significant management efforts. Prior to our IPO, we have never been required to test our internal controls within a specified period and, as a result, we may experience difficulty in meeting these reporting requirements in a timely manner.

We may discover weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls over financial reporting, we may not be able to produce timely and accurate financial statements. If that were to happen, our investors could lose confidence in our reported financial information, the market price of our stock could decline and we could be subject to sanctions or investigations by the SEC or other regulatory authorities including equivalent foreign authorities.

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

Use of Proceeds from Public Offering of Common Stock

On May 26, 2021, our Registration Statement on Form S-1 (File No. 333-255912) ("Registration Statement") relating to the initial public offering of our common stock ("IPO") was declared effective by the SEC. Pursuant to such Registration Statement, we sold an aggregate of 11,730,000 shares of our common stock, which includes 1,530,000 shares sold pursuant to the underwriters' full exercise of their option to purchase additional shares, at a price to the public of $22.00 per share. The aggregate offering price for shares sold in the offering was $258.1 million. On June 1, 2021, we closed the sale of such shares, resulting in aggregate cash proceeds to us of approximately $237.2 million, net of underwriting discounts, commissions and offering expenses paid or payable by us. No offering expenses were paid or are payable, directly or indirectly, to our directors or officers, to persons owning 10% or more of any class of our equity securities or to any of our affiliates. There has been no material change in the planned use of proceeds from our IPO as described in the final prospectus, dated May 26, 2021, filed with the SEC on May 28, 2021, pursuant to Rule 424(b) of the Securities Act.

Item 3. Defaults upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit Number	Description	Incorporated by Reference Form	File No.	Exhibit	Filing Date	Filed Herewith
3.1	Amended and Restated Certificate of Incorporation of Registrant.	8-K	001-40443	3.1	June 1, 2021	
3.2	Amended and Restated Bylaws of Registrant.	8-K	001-40443	3.2	June 1, 2021	
3.3	Certificate of Designation of Preferences, Rights and Limitations of the Series A Preferred Stock, par value $0.0001 per share, of the Registrant.	8-K	001-40443	3.1	January 26, 2022	
10.1	Second Amendment to Lease Agreement, dated July 19, 2023, by and between ARE-SD Region No. 27, LLC and the Registrant.					X
10.2	Lease Agreement, dated November 15, 2019, by and between ARE-SD Region No. 35, LLC and the Registrant.					X
10.3	First Amendment to Lease Agreement, dated February 24, 2020, by and between ARE-SD Region No. 35, LLC and the Registrant.					X
10.4	Second Amendment to Lease Agreement, dated May 7, 2020, by and between ARE-SD Region No. 35, LLC and the Registrant.					X
10.5	Third Amendment to Lease Agreement, dated June 19, 2020, by and between ARE-SD Region No. 35, LLC and the Registrant.					X
10.6	Fourth Amendment to Lease Agreement, dated April 20, 2021, by and between ARE-SD Region No. 35, LLC and the Registrant.					X
10.7	Fifth Amendment to Lease Agreement, dated January 19, 2022, by and between ARE-SD Region No. 35, LLC and the Registrant.					X
10.8	Sixth Amendment to Lease Agreement, dated July 19, 2023, by and between ARE-SD Region No. 35, LLC and the Registrant.					X
10.9	Agreement for Termination of Lease, dated July 19, 2023, by and between ARE-10933 North Torrey Pines, LLC and the Registrant.					X
10.10	Second Amendment to Agreement for Termination of Lease, dated August 31, 2023, by and between ARE-10933 North Torrey Pines, LLC and the Registrant.					X
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
32.1*	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
32.2*	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
101.INS	Inline XBRL Instance Document - The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document.					X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.					X

101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.	X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.	X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).	X

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this Quarterly Report on Form 10-Q to be signed on its behalf by the undersigned, thereunto duly authorized.

Singular Genomics Systems, Inc.

Date: November 14, 2023

/s/ Andrew Spaventa

Andrew Spaventa

Chief Executive Officer

(Principal Executive Officer)

Date: November 14, 2023

/s/ Dalen Meeter

Dalen Meeter

Chief Financial Officer

(Principal Financial Officer and Principal Accounting Officer)

SECOND AMENDMENT TO LEASE AGREEMENT

THIS SECOND AMENDMENT TO LEASE AGREEMENT (this "**Second Amendment**") is made this 19 day of July, 2023 (the "**Effective Date**"), between **ARE-SD REGION NO. 27, LLC**, a Delaware limited liability company ("**Landlord**"), and **SINGULAR GENOMICS SYSTEMS, INC.**, a Delaware corporation ("**Tenant**").

RECITALS

A.Landlord and Tenant entered into that certain Lease Agreement dated as of June 26, 2020 (the "**Original Lease**"), as amended by that certain First Amendment to Lease Agreement dated January 19, 2022 (the "**First Amendment**," the Original Lease, as amended, being the "**Lease**"). Pursuant to the Lease, Tenant leases certain premises containing approximately 76,778 rentable square feet (the "**Premises**") in a building located at 3010 Science Park Road, San Diego, California. The Premises are more particularly described in the Lease. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

B.Concurrently with this Second Amendment, Tenant is entering into an Agreement For Termination of Lease (the "**Termination Agreement**") with respect to the "**Long Term Lease**" referenced in Recital B of the First Amendment. The effectiveness of such Termination Agreement is expressly conditioned on a certain contingency set forth therein (the "**Contingency**").

C.Landlord and Tenant desire, subject to the terms and conditions set forth below, to amend the Lease to, among other things, adjust the square footage of the Premises.

NOW, THEREFORE, in consideration of the foregoing Recitals, which are incorporated herein by this reference, the mutual promises and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. **Base Term**. In the event the Contingency is satisfied such that the Long Term Lease is terminated, then the parties agree that the Base Term (as set forth in Section 1 of the First Amendment) shall be amended so that it expires as of October 31, 2036.

2. **Premises**. The parties hereby agree that the square footage of the Premises has been remeasured and the parties stipulate and agree that effective as of the Effective Date, the "Premises" shall be deemed to contain a total of 78,498 rentable square feet and shall not be subject to further remeasurement other than as contemplated in Section 5 of this Second Amendment.

3. **Base Rent**. The Base Rent payable by Tenant shall be adjusted as of the Effective Date to take into account the updated measurement for the Premises as reflected in Section 2 hereof and concurrently herewith Tenant shall pay to Landlord such additional Base Rent that is due and payable as a result of such adjustment to the Premises being effective as of the Effective Date.

Upon the earlier to occur of (i) the Project Amenities Availability Date (as defined in Section 3(b) of the Original Lease) or, if the Project Amenities Availability Date is not the first day of a calendar month, the first day of the first full calendar month following the Project Amenities Availability Date and (ii) May 1, 2025 (such earlier date being the "**Base Rent Abatement Period Commencement**"), so long as Tenant is not in default under the Lease, the Base Rent shall be abated for 6 months commencing on the Base Rent Abatement Period Commencement.

4. **Building's Share of Operating Expenses of Project**. For purposes of calculating the Building's Share of Operating Expenses of Project (as defined on Page 1 of the Original Lease), the

Rentable Area set forth in Section 2 hereof shall be utilized (as the same may be further adjusted on the Project Amenities Availability Date as contemplated in Section 5 below).

5. Project Amenities.

a. **Generally**. Landlord (or an affiliate of Landlord) will construct certain other amenities (such additional amenities being the "**New Amenities**"), which New Amenities will initially include shared conferencing facilities, a grab and go coffee shop, a restaurant, pickle ball courts and a great lawn for the non-exclusive use of Users (as defined below). The New Amenities are currently contemplated to contain a total of 14,925 square feet of interior and roof deck areas (the "**Contemplated New Amenity SF**"). The location of the New Amenities shall be at a location to be designated by Landlord (or its respective affiliate) and shall be for non-exclusive use by (a) the employees of Tenant officing in the Premises, (b) other tenants of the Project, (c) Landlord, (d) the tenants of Landlord's affiliates, and (e) affiliates of Landlord, and Alexandria Real Estate Equities ("**ARE**"), (g) the tenants of such affiliates of Landlord and ARE, and (h) any other parties permitted by Landlord (collectively, "**New Amenity Users**"). Notwithstanding anything to the contrary contained herein, Tenant acknowledges and agrees that Landlord shall have the right, at the sole discretion of Landlord, to not make the New Amenities available for use by some or all currently contemplated New Amenity Users (including Tenant). Landlord shall have the sole right to determine all matters related to the New Amenities including, without limitation, relating to the reconfiguration, relocation, modification or removal of any of the New Amenities and/or to revise, expand or discontinue any of the services (if any) provided in connection with the New Amenities. Tenant acknowledges and agrees that Landlord has not made any representations or warranties regarding the availability of the New Amenities and that Tenant is not entering into this Second Amendment relying on the continued availability of the New Amenities to Tenant and that Landlord (or its affiliate) shall have the right to change, remove or modify the type of the amenities being constructed as part of the New Amenities. Following the date that Landlord (or its affiliate) constructs and allows use of certain New Amenities that in the aggregate contain at least the Contemplated New Amenity SF (as calculated by Landlord when taking into account the interior square footage and roof deck areas of such amenities), then the Rentable Area of the Premises (which shall in turn result in an increase in the Base Rent payable by Tenant under the Lease) shall be deemed to be increased to 81,131 rentable square feet. In the event that Landlord (or its affiliate) constructs and allows use of certain New Amenities but such New Amenities in the aggregate contain less than the Contemplated New Amenity SF (as calculated by Landlord when taking into account the interior square footage and roof deck areas of such amenities), then from the date that such New Amenities are constructed and available for tenants' use and continuing until the date that Landlord and/or Landlord's affiliate constructs additional New Amenities, the Rentable Area of the Premises shall be increased by an amount equal to the product of (I) 2,633 rentable square feet multiplied by (II) a fraction whose numerator is the total interior square footage (as calculated by Landlord) of the New Amenities completed by Landlord (or its affiliate) and the denominator is the Contemplated New Amenity SF. Thereafter, if New Amenities are added, the rentable square feet of the Premises shall be recalculated based on the additional New Amenity square footage and once the total New Amenities square footage meets or exceeds the Contemplated New Amenity SF, then the Premises shall be increased to contain 81,131 rentable square feet. In the event that at any time after the construction of the New Amenities, the New Amenities are removed or Tenant is no longer permitted to use all or a portion of such New Amenities (for any reason other than a Default by Tenant under the Lease or the default by Tenant of any agreement(s) relating to the use of the New Amenities by Tenant) and such removal or closure continues for a period in excess of 180 consecutive days, then, commencing on the expiration of such 180-day period and continuing thereafter until such or additional New Amenities are again open and available to Tenant, the Rentable Area of the Premises

shall be adjusted and recalculated by an amount equal to the product of (I) 2,633 rentable square feet multiplied by (II) a fraction whose numerator is the total interior square footage (as calculated by Landlord) of the New Amenities completed by Landlord (or its affiliate) (i.e., without taking into account the square footage of the New Amenities that has been closed or is no longer available to Tenant for a period in excess of 180 days) and the denominator is the Contemplated New Amenity SF. Tenant acknowledges that the exact scope, design, location, size and configuration of the New Amenities shall be subject to the sole and absolute discretion of Landlord. Landlord shall pay for the initial costs to construct the New Amenities (including all costs to acquire the initial furniture, fixtures and equipment for the New Amenities). Thereafter, the New Amenities shall be considered part of the Project Amenities for purposes of determining Operating Expenses.

b. **License**. Commencing on the date as the New Amenities are constructed, and so long as the New Amenities and the Project continue to be owned by affiliates of ARE, Tenant shall have the non-exclusive right to the use of the available New Amenities in common with other New Amenity Users pursuant to the terms of this Section 5. If the Project is no longer owned by affiliates of ARE and Tenant is no longer permitted to use the New Amenities, then the Rentable Area of the Premises (which shall in turn result in a decrease in the Base Rent payable by Tenant under the Lease) shall be decreased by an amount corresponding to the increased rentable area that was added pursuant to Section 5(a) above following the construction of the New Amenities (which in no event shall such decrease be greater than 2,633 rentable square feet).

c. **New Shared Conference Facilities**. The New Amenities shall initially include a restaurant (the "**New Restaurant**") and shared conference facilities ("**New Shared Conference Facilities**"). Use by Tenant of the New Shared Conference Facilities and New Restaurant shall be in common with other Users with scheduling procedures reasonably determined by Landlord or Landlord's then designated event operator ("**New Amenity Event Operator**"). Tenant's use of the New Shared Conference Facilities shall be subject to the payment by Tenant to Landlord of a fee equal to Landlord's quoted rates for the usage of the New Shared Conference Facilities in effect at the time of Tenant's scheduling. Tenant's use of the conference rooms in the New Shared Conference Facilities shall be subject to availability and Landlord (or, if applicable, New Amenity Event Operator) reserves the right to exercise its reasonable discretion in the event of conflicting scheduling requests among New Amenity Users.

d. Tenant shall be required to use the food service operator designated by Landlord at Project (the "**New Amenity Designated Food and Beverage Operator**") for any food and/or beverage service or catered events held by Tenant in the New Shared Conference Facilities. Landlord (or Landlord's affiliate) has the right, in its sole and absolute discretion, to change the New Amenity Designated Food and Beverage Operator at any time. Tenant may not use any vendors other than the New Amenity Designated Food and Beverage Operator nor may Tenant supply its own food and/or beverages in connection with any food and/or beverage service or catered events held by Tenant in the New Shared Conference Facilities.

e. Tenant shall, at Tenant's sole cost and expense, (i) be responsible for the set-up of the New Shared Conference Facilities in connection with Tenant's use (including, without limitation ensuring that Tenant has a sufficient number of chairs and tables and the appropriate equipment), and (ii) surrender the New Shared Conference Facilities after each time that Tenant uses the New Shared Conference Facilities free of Tenant's personal property, in substantially the same set up and same condition as received, and free of any debris and trash. If Tenant fails to restore and surrender the New Shared Conference Facilities as required by sub-section (ii) of the immediately preceding sentence, such failure shall constitute a "New Shared Facilities Default." Each time that Landlord reasonably determines that Tenant has committed a New Shared Facilities Default, Tenant shall be

required to pay Landlord a penalty within 5 days after notice from Landlord of such New Shared Facilities Default. The penalty payable by Tenant in connection with the first New Shared Facilities Default shall be $200. The penalty payable shall increase by $50 for each subsequent New Shared Facilities Default (for the avoidance of doubt, the penalty shall be $250 for the second New Shared Facilities Default, shall be $300 for the third New Shared Facilities Default, etc.). In addition to the foregoing, Tenant shall be responsible for reimbursing Landlord or its affiliate, as applicable, for all reasonable out-of-pocket costs expended by Landlord or its affiliate, as applicable, in repairing any damage to the New Shared Conference Facilities or the New Amenities caused by Tenant or any Tenant Party. The provisions of this Section 5(c) shall survive the expiration or earlier termination of the Lease.

f. **Restaurants**. Tenant's employees that have been issued an access card to the Project shall have the right, along with other New Amenity Users, to access and use the New Restaurant.

g. **Rules and Regulations**. Tenant shall be solely responsible for paying for any and all ancillary services (e.g., audio visual equipment) provided to Tenant at Tenant's request, all food services operators and any other third party vendors providing services to Tenant at Tenant's request at the New Amenities. Tenant shall use the New Amenities (including, without limitation, the New Shared Conference Facilities) in compliance with all applicable Legal Requirements and any rules and regulations imposed by Landlord or its affiliate from time to time and in a manner that will not interfere with the rights of other New Amenity Users, which rules and regulations shall be enforced in a non- discriminatory manner. The use of New Amenities other than the New Shared Conference Facilities by employees of Tenant shall be in accordance with the terms and conditions of the standard licenses, indemnification and waiver agreement required by Landlord or the operator of the New Amenities to be executed by all persons wishing to use such New Amenities. Neither Landlord nor its affiliates shall have any liability or obligation for the breach of any rules or regulations by other New Amenity Users with respect to the New Amenities. Tenant shall not make any alterations, additions, or improvements of any kind to the New Amenities.

h. Tenant acknowledges and agrees that Landlord shall have the right at any time and from time to time to reconfigure, relocate, modify or remove any of the New Amenities at the Project and/or to revise, expand or discontinue any of the services (if any) provided in connection with the New Amenities.

i. **Waiver of Liability and Indemnification**. Tenant shall use reasonable care to prevent damage to property and injury to persons while using the New Amenities. Tenant waives any claims it or any Tenant Parties may have against any ARE Parties relating to, arising out of or in connection with the New Amenities and any entry by Tenant and/or any Tenant Parties onto The New Amenities, and Tenant releases and exculpates all ARE Parties from any liability relating to, arising out of or in connection with the New Amenities and any entry by Tenant and/or any Tenant Parties onto the New Amenities. Tenant hereby agrees to indemnify, defend, and hold harmless the ARE Parties from any claim of damage to property or injury to person relating to, arising out of or in connection with (i) the use of the New Amenities by Tenant or any Tenant Parties, and (ii) any entry by Tenant and/or any Tenant Parties onto the New Amenities, except to the extent caused by the negligence or willful misconduct of ARE Parties. The provisions of this Section 5 shall survive the expiration or earlier termination of this Lease.

6. **Increase in Rentable Area Due to Certain Project Amenities**. The parties agree that the second grammatical paragraph of Section 3(b) of the Original Lease is hereby amended and restated in its entirety as follows:

"Tenant acknowledges and agrees that the contemplated Project Improvements includes

certain Project Amenities (as defined in Section 5 below). Once Landlord (or its affiliate), constructs the Project Amenities, Landlord and Tenant acknowledge and agree that, commencing on the date(s) that all or any portions of the Project Amenities are made available for use by Tenant and any other tenants of the Project (each, a "**Project Amenities Availability Date**"), the Rentable Area of the Premises (which shall in turn result in an increase in the Base Rent payable by Tenant under the Lease) shall be deemed to be increased pursuant to the terms of Section 5 of the Second Amendment to Lease Agreement between the parties. For the avoidance of doubt, Tenant shall remain obligated to continue paying the Amenities Fee provided for in Section 40 following the Project Amenities Availability Date."

7. **The Alexandria Amenities**. Effective as of the Effective Date, the "**Amenities Fee**," originally set forth in the penultimate sentence of Section 40(b) of the Original Lease, shall be amended to be $3.60 per rentable square foot of the Premises pear year, and shall be subject to annual escalations on each anniversary of the Effective Date as contemplated in such Section 40(b). The Amenities Fee shall be calculated based on the adjusted Rentable Area of the Premises as set forth in Section 2 hereof, as such Rentable Area may be subject to further adjustment on the Project Amenities Availability Date. Concurrently herewith Tenant shall pay to Landlord such additional Amenities Fee that is due and payable as a result of such adjustment to the Premises being effective as of the Effective Date.

8. **Solar Array**. Notwithstanding anything to the contrary in the Lease, Landlord, in its sole discretion, shall have the right (but shall in no event be obligated) to install, maintain, repair and remove, or cause a third party to install, maintain, repair and remove, a solar array on the roof of the Building or any other area of the Project reasonably designated by Landlord (the "**Solar Array**"), so long as such Solar Array does not materially adversely affect Tenant's use of the Premises for the Permitted Use. During the initial connection and activation of the Solar Array and during any repairs, alterations or modifications to the Solar Array, Tenant acknowledges that there may be a planned interruption in the electrical service to the Premises and that Landlord shall not be liable to Tenant with respect thereto. Landlord shall provide at least 2 business days advance written notice to Tenant prior to any planned interruption of electrical service during the initial activation of the Solar Array and/or arising from any alterations, modifications or repairs of the Solar Array. Landlord shall schedule any such planned interruption during a time to minimize any impact on Tenant's operations. Landlord or the third party designated by Landlord to install the Solar Array shall be responsible for the initial construction costs to acquire and install the Solar Array. Repair and maintenance costs of the Solar Array shall be excluded from Operating Expenses. Tenant acknowledges that any environmental or tax benefits arising from or accruing with respect to the Solar Array shall be the sole property of Landlord or Landlord's designee. Landlord shall have the right to contract (on terms acceptable to Landlord in its discretion) for the purchase of the electricity generated from the Solar Array for purposes of supplying all or a portion of the electricity for the Project. Tenant acknowledges that any costs incurred by Landlord to purchase power generated from the Solar Array shall be an Operating Expense; provided such costs shall not exceed the costs of purchasing such power from the local utility provider.

9. **OFAC**. Tenant and Landlord are currently (a) in compliance with and shall at all times during the Term of the Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the Term of the Lease be listed on, the Specially Designated Nationals and Blocked Persons List maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental

authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

10. **California Accessibility Disclosure**. Section 42(r) of the Lease is hereby incorporated into this Second Amendment by reference.

11. **Brokers**. Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, "**Broker**") in connection with the transaction reflected in this Second Amendment and that no Broker brought about this transaction, other than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Inc. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Inc., claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction.

12. **Miscellaneous**.

a.This Second Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. This Second Amendment may be amended only by an agreement in writing, signed by the parties hereto.

b.This Second Amendment is binding upon and shall inure to the benefit of the parties hereto, their respective agents, employees, representatives, officers, directors, divisions, subsidiaries, affiliates, assigns, heirs, successors in interest and shareholders.

c.This Second Amendment may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Second Amendment and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

d.Except as amended and/or modified by this Second Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this Second Amendment. In the event of any conflict between the provisions of this Second Amendment and the provisions of the Lease, the provisions of this Second Amendment shall prevail. Whether or not specifically amended by this Second Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this Second Amendment.

[Signatures are on the next page.]

TENANT:

SINGULAR GENOMICS SYSTEMS, INC.,
a Delaware corporation

By: _____ Name: Dalen Meeter Its: CFO

[X] I hereby certify that the signature, name,
and title above are my signature, name and title

LANDLORD:

ARE-10933 NORTH TORREY PINES, LLC,
a Delaware limited liability company

By: Alexandria Real Estate Equities, Inc., a Maryland corporation,
managing member

By: Name: Gary Dean
Its: Executive Vice President – Real Estate Legal Affairs

[X] I hereby certify that the signature, name,
and title above are my signature, name and title

LEASE
AGREEMENT

THIS LEASE AGREEMENT (this **"Lease")** is made this 15 day of November, 2019, between **ARE-SD REGION NO. 35, LLC,** a Delaware limited liability company **("Landlord"),** and **SINGULAR GENOMICS SYSTEMS, INC.,** a Delaware corporation **("Tenant").**

Building: Science Park Road, San Diego, California
Premises: That portion of the Building (i) commonly known as Suite F, containing approximately 3,722 rentable square feet (the **"Initial Premises"),** and (ii) commonly known as Suite B and Suite C, containing approximately 12,074 rentable square feet **("Subsequent Premises"),** as determined by Landlord, as shown on **Exhibit A.**

Project: The real property on which the Building in which the Premises are located, together with all improvements thereon and appurtenances thereto as described on **Exhibit B.**

Base Rent: $18,610.00 per month with respect to the Initial Premises
None with respect to the Subsequent Premises
Rentable Area of Premises: 15,796 sq.ft.
Rentable Area of Building: 102,938 sq. ft.
Rentable Area of Project: 165,938 sq. ft.
Tenant's Share of Operating Expenses of Building: 3.62% with respect to the Initial Premises and 11.73% with respect to the Subsequent Premises

Building's Share of Operating Expenses of Project: 62.03%

Security Deposit: None

Target Subsequent Premises Commencement Date: May 1, 2020

Rent Adjustment Percentage: 3%

Base Term Beginning on the Commencement Date and ending on the Commencement Date (as defined in the Long Term Lease (as defined in Section 2)).

Permitted Use: Research and development laboratory, related office and other related uses consistent with the character of the Project and otherwise in compliance with the provisions of Section 7 hereof.

Address for Rent Payment:
P.O. Box 79840
Baltimore, MD 21279-0840

Tenant's Notice Address:
10931 N. Torrey Pines Road, Suite #100 La Jolla, CA 92037
Attention: Chief Executive Officer

Landlord's Notice Address:
26 North Euclid Avenue Pasadena, CA 91101 Attention: Corporate Secretary

The following Exhibits and Addenda are attached hereto and incorporated herein by this reference:

[X] EXHIBIT A - PREMISES DESCRIPTION **[X] EXHIBIT B** - DESCRIPTION OF PROJECT
[X] EXHIBIT C - INTENTIONALLY OMITTED **[X] EXHIBIT D-** COMMENCEMENT DATE
[X] EXHIBIT E- RULES AND REGULATIONS **[X] EXHIBIT** F-TENANT'S PERSONAL PROPERTY
[X] **EXHIBIT G** - MAINTENANCE OBLIGATIONS [XJ **EXHIBIT H** - CONTROL AREAS

1. **Lease of Premises.** Upon and subject to all of the terms and conditions hereof, Landlord hereby leases the Premises to Tenant and Tenant hereby leases the Premises from Landlord. The portions of the Project which are for the non-exclusive use of tenants of the Project are collectively referred to herein as the **"Common Areas."** Tenant shall'have the non-exclusive right during the Term to use the Common Areas along with others having the right to use the Common Areas. Landlord reserves the right to modify Common Areas, provided that such modifications do not materially adversely affect Tenant's use of the Premises for the Permitted Use. From and after the Commencement Date through the expiration of the Term, Tenant shall have access to the Building and the Premises 24 hours a day, 7 days a week, except in the case of emergencies, as the result of Legal Requirements, the performance by Landlord of any installation, maintenance or repairs, or any other temporary interruptions, and otherwise subject to the terms of this Lease.

2. **Delivery; Acceptance of Premises; Commencement Date.**

(a) **Initial Premises.** The **"Commencement Date"** shall be the earlier to occur of (I) November 15, 2019, or (ii) the date that this Lease Is mutually executed and delivered by Landlord and Tenant. Landlord shall Deliver(as defined below) the Initial Premises to Tenant on the Commencement Date. The **"Rent Commencement Date"** with respect to the Initial Premises shall be December 1, 2019. Prior to the Subsequent Premises Commencement Date (as defined below), references to "Premises" in this Lease shall mean the Initial Premises.

During the Term, Tenant shall have the right to use, at no additional cost, the furniture, fixtures and equipment belonging to Landlord located within the Initial Premises as of the Commencement Date ("**Landlord's Initial Premises FF&E").** Tenant shall have no right to remove any of Landlord's Initial Premises FF&E from the Initial Premises at any time during the Term. Tenant shall use reasonable efforts to maintain Landlord's Initial Premises FF&E and return the same to Landlord at the expiration or earlier termination of the Initial Premises Term in the same condition as received by Tenant, subject to ordinary wear and tear.

Except as otherwise expressly set forth in this Lease: (i) Tenant shall accept the Initial Premises and Landlord's Initial Premises FF&E In their "as-is" condition as of the Commencement Date, subject to all applicable Legal Requirements; (ii} Landlord shall have no obligation for any defects in the Initial Premises or Landlord's Initial Premises FF&E; and (iii) Tenant's taking possession of the Initial Premises and Landlord's Initial Premises FF&E shall be conclusive evidence that Tenant accepts the Initial Premises and Landlord's Initial Premises FF&E, and that the Initial Premises and Landlord's Initial Premises FF&E were In good condition at the time possession was taken.

(b) **Subsequent Premises.** Landlord shall use reasonable efforts to deliver the Subsequent Premises (**"Delivery"** or **"Deliver")** to Tenant on or before the Target Subsequent Premises Commencement Date. If Landlord fails to timely Deliver the Premises, Landlord shall not be liable to Tenant for any loss or damage resulting therefrom, and this Lease shall not be void or voidable except as provided herein. If Landlord does not Deliver the Subsequent Premises within 90 days of the Target Subsequent. Premises Commencement Date for any reason other than Force Majeure delays, this Lease may be terminated by Tenant by written notice to Landlord. If so terminated by Tenant, Tenant shall voluntarily surrender the Initial Premises on such date in accordance with all surrender requirements contained in the Lease and in the condition in which Tenant is required to surrender the Premises as of the expiration of the Lease, Tenant shall have no further rights of any kind with respect to the any portion of the Premises and neither Landlord nor Tenant shall have any further rights, duties or obligations under this Lease, except with respect to provisions which expressly survive termination of this Lease. If Tenant does not elect to void this Lease within 5 business days of the lapse of such 90 day period, such right to void this Lease shall be waived and this Lease shall remain in full force and effect.

The "**Subsequent Premises Commencement Date"** shall be the date Landlord Delivers the Subsequent Premises to Tenant.

During the Term, Tenant shall have the right to use, at no additional cost, the furniture, fixtures and equipment belonging to Landlord located within the Subsequent Premises as of the Subsequent Premises Commencement Date **("Landlord's Subsequent Premises FF&E").** Tenant shall have no right to remove any of Landlord's Subsequent Premises FF&E from the Subsequent Premises at any time during the Term. Tenant shall use reasonable efforts to maintain Landlord's Subsequent Premises FF&E and return the same to Landlord at the expiration or earlier termination of the Term in the same condition as received by Tenant, subject to ordinary wear and tear.

Except as otherwise expressly set forth in this Lease: (i) Tenant shall accept the Subsequent Premises and Landlord's Subsequent Premises FF&E in their "as-ls"" condition as of the Subsequent Premises Commencement Date; (ii) Landlord shall have no obligation for any defects in the Subsequent Premises or Landlord's Subsequent Premises FF&E; and (iii) Tenant's taking possession of the Subsequent Premises and Landlord's Subsequent Premises FF&E shall be conclusive evidence that Tenant accepts the Subsequent Premises and Landlord's Subsequent Premises FF&E, and that the Subsequent Premises and Landlord's Subsequent Premises FF&E were in good condition at th time possession was taken. Any occupancy of the Subsequent Premises by Tenant before the Subsequent Premises Commencement Date shall be subject to all of the terms and conditions of this Lease, including the obligation to pay Operating Expenses.

(c) **General.** Commencement Date, the Subsequent Premises Commencement Date and the expiration date of the Term when such are established in the form of the "Acknowledgment of Commencement Date" attached to this Lease as **Exhibit D;** provided, however, Tenant's failure to execute and deliver such acknowledgment shall not affect Landlord's rights hereunder. The "**Term"** of this Lease shall be the Base Term, as defined above on the first page of this Lease and the Extension Term which Tenant may elect pursuant to Section 39 hereof.

Tenant agrees and acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of all or any portion of the Premises, Landlord's Initial Premises FF&E, Landlord's Subsequent Premises FF&E or the Project, and/or the suitability of the Premises, Landlord's FF&E or the Project for the conduct of Tenant's business, and Tenant waives any implied warranty that the Premises, Landlord's FF&E or the Project are suitable for the Permitted Use. This Lease constitutes the complete agreement of Landlord and Tenant with respect to the subject matter hereof and supersedes any and all prior representations, Inducements, promises, agreements, understandings and negotiations which are not contained herein. Landlord in executing this Lease does so in reliance upon Tenant's representations, warranties, acknowledgments and agreements contained herein.

Notwithstanding anything to the contrary contained in this Lease, Tenant and Landlord acknowledge and agree that if, for any reason, Tenant and Landlord's affiliate have not mutually entered Into a long term lease agreement pursuant to which Tenant will lease approximately 74,567 rentable square feet of space from Landlord's affiliate at 301 O Science Park Road, San Diego, California **("Long Term Lease")** on or before March 1, 2020, which Long Term Lease shall be on terms and conditions reasonably acceptable to Landlord's affiliate and Tenant, then this Lease shall automatically terminate on March 1, 2020. If the Lease is so terminated pursuant to this paragraph, Tenant shall voluntarily surrender the Initial Premises on such date In accordance with all surrender requirements contained in the Lease and in the condition In which Tenant Is required to surrender the Premises as of the expiration of the Lease, Tenant shall have no further rights of any kind with respect to the any portion of the Premises and neither Landlord nor Tenant shall have any further rights, duties or obligations under this Lease, except with respect to provisions which expressly survive termination of this Lease. Landlord shall have no liability whatsoever to Tenant relating to or arising from the failure of the Long Term Lease to be entered into.

3. **Rent.**

(a) **Base Rent.** The first month's Base Rent due with respect to the Initial Premises shall be due and payable on the Rent Commencement Date. Tenant shall pay to Landlord in advance, without demand, abatement, deduction or set-off, monthly installments of Base Rent payable with respect to the Initial Premises on or before the first day of each calendar month during the Term hereof as of the Rent Commencement Date, in lawful money of the United States of America, at the office of Landlord

for payment of Rent set forth above, or to such other person or at such other place as Landlord may from time to time designate in writing. Payments of Base Rent for any fractional calendar month shall be prorated. The obligation of Tenant to pay Base Rent and other sums to Landlord and the obligations of Landlord under this Lease are independent obligations. Tenant shall have no right at any time to abate, reduce, or set-off any Rent (as defined in Section 5) due hereunder except for any abatement as may be expressly provided in this Lease.

(b) **Additional Rent.** Tenant agrees to pay to Landlord as rent **("Rent"):** (i) commencing on the R nt Commencement Date with respect to the Initial Premises and commencing on the Subsequent Premises Commencement Date with respect to the Subsequent Premises, Tenant's Share of "Operating Expenses[1] {as defined in Section 5), and (ii) any and all other amounts Tenant assumes or agrees to pay under the provisions of this Lease, including, without limitation, any and all other sums that may become due by reason of any default of Tenant or failure to comply with the agreements, terms, covenants and conditions of this Lease to be performed by Tenant, after any applicable notice and cure period.

4. **Intentionally Omitted.**

5. **Operating Expense Payments.** Landlord shall deliver to Tenant a written estimate of Operating Expenses for each calendar year during the Term (the **"Annual Estimate'!),** which may be revised by Landlord from time to time during such calendar year. Commencing on the Rent Commencement Date with respect to the Initial Premises and as of the Subsequent Premises Commencement Date with respect to the Subsequent Premises, and continuing thereafter on the first day of each month during the Term, Tenant shall pay Landlord an amount equal to 1112th of Tenant's Share of the Annual Estimate. Payments for any fractional calendar month shall be prorated.

The term **"Operating Expenses"** means all costs and expenses of any kind or description whatsoever incurred or accrued each calendar year by Landlord with respect to the Building {including the Building's Share of all costs and expenses of any kind or description incurred or accrued by Landlord with respect to the Project which are not specific to the Building or any other building located in the Project) (including, without duplication, (w) Taxes (as defined in Section 9), (x) capital repairs, improvements and replacements amortized over the lesser of 7 years and the useful life of such capital repairs improvements and replacements, (y) the cost (including, without limitation, any subsidies which Landlord may provide in connection with the Project Amenities) of the common area amenities now or hereafter located at the Project (the **"Project Amenities"),** (z) and the costs of Landlord's third party property manager or, if there is no third party property manager, administration rent in the amount of $2,369.41 per month (provided, however, that for the period commencing on the Rent Commencement Date through the day immediately preceding the Subsequent Premises Commencement Date, the administration rent payable hereunder shall be equal to $558.33 per month)), excluding only:

(a) the original construction costs of the Project and renovation prior to the date of the Lease and costs of correcting defects In such original construction or renovation;

(b) capital expenditures for expansion of the Project;

(c) interest, principal payments of Mortgage (as defined in Section 27) debts of Landlord, financing costs and amortization of funds borrowed by Landlord, whether secured or unsecured;

(d) depreciation of the Project (except for capital improvements, the cost of which are includable in Operating Expenses);

(e) advertising, legal and space planning expenses and leasing commissions and other costs and expenses incurred in procuring and leasing space to tenants for the Project, including any leasing office maintained in the Project, free rent and construction allowances for tenants;

(f) legal and other expenses incurred in the negotiation or enforcement of leases:

(g) completing, fixturing, improving, renovating, painting, redecorating or other work, which Landlord pays for or performs for other tenants within their premises, and costs of correcting defects in such work;

(h) costs to be reimbursed by other tenants of the Project or Taxes to be paid directly by Tenant or other tenants of the Project, whether or not actually paid;

(I) salaries, wages, benefits and other compensation paid to officers and employees of Landlord who are not assigned in whole or in part to the operation, management, maintenance or repair of the Project;

(j) general organizational, administrative and overhead costs relating to maintaining Landlord's existence, either as a corporation, partnership, or other entity, including general corporate, legal and accounting expenses;

(k) costs (including attorneys' fees and costs of settlement, judgments and payments in lieu thereof) incurred in connection with disputes with tenants, other occupants1 or prospective tenants, and costs and expenses, including legal fees, incurred in connection with negotiations or disputes with employees, consultants, management agents, leasing agents, purchasers or mortgagees of the Building;

(I) costs incurred by Landlord due to the violation by Landlord, its employees, agents or contractors or any tenant of the terms and conditions of any lease of space In the Project or any Legal Requirement (as defined ln Section 7);

(m) penalties! fines or interest Incurred as a result of Landlord's inability or failure to make payment of Taxes and/or to file any tax or informational returns when due, or from Landlord's failure to make any payment of Taxes required to e made by Landlord hereunder before delinquency;

(n) overhead and profit increment paid to Landlord or to subsidiaries or affiliates of Landlord for goods and/or services in or to the Project to the extent the same exceeds the costs of such goods and/or services rendered by unaffiliated third parties on a competitive basis;

(o) costs of Landlord's charitable or political contributions, or of fine art maintained at the Project;

(p) costs in connection with services (including electricity), items or other benefits of a type which are not standard for the Project and which are not available to Tenant without specific charges therefor, but which are provided to another tenant or occupant of the Project, whether or not such other tenant or occupant ls specifically charged therefor by Landlord;

(q) costs incurred in the sale or refinancing of the Project;

(r) net income taxes of Landlord or the owner of any interest in the Project, franchise, capital stock, gift, estate or inheritance taxes or any federal, state or local documentary taxes imposed against the Project or any portion thereof or interest therein;

(s) costs arising from the gross negligence or intentional misconduct of Landlord or Landlord's officers, directors, employees, managers or agents;

(t) the cost of capital repairs and replacements of Structural Items (as defined In Section), unless Tenant or any Tenant Party is responsible for the cause of the repairs or replacements;

(u) reserves for future capital replacements;

(v) costs occasioned by condemnation; and

(w) any expenses otherwise includable within Operating Expenses to the extent actually reimbursed by persons other than tenants of the Project under leases for space in the Project.

For the avoidance of doubt, capital costs incurred by Landlord prior to the Commencement Date may not be Included as Operating Expenses.

Notwithstanding anything to the contrary contained herein, any earthquake deductible payable by Tenant under this Lease shall be amortized with interest in equal monthly installments over the remaining Term.

Notwithstanding anything to the contrary contained herein, in no event shall Landlord be entitled to make any profit from Landlord's collection of Operating Expenses.

In addition, notwithstanding anything to the contrary contained in this Lease, Operating Expenses Incurred or accrued by Landlord with respect to any capital Improvements which are reasonably expected by Landlord to reduce overall Operating Expenses {for example, without limitation, by reducing energy usage at the Project) (the "Energy Savings Costs") shall be amortized over a period of years equal to the least .of (A) 7 years, (B) the useful life of such capital items 1 or (C) the quotient of (I) the Energy Savings Costs, divided by (ii) the annual amount of Operating Expenses reasonably expected by Landlord to be saved as a result of such capital improvements.

Within 90 days after the end of each calendar year (or such longer period as may be reasonably required), Landlord shall furnish to Tenant a statement (an "Annual Statement") showing in reasonable detail: (a) the total and Tenant's Share of actual Operating Expenses for the previous calendar year, and (b) the total of Tenant's payments in respect of Operating Expenses for such year. If Tenant's Share of actual Operating Expenses for such year exceeds Tenant's payments of Operating Expenses for such year, the excess shall be due and payable by Tenant as Rent within 30 days after delivery of such Annual Statement to Tenant. If Tenant's payments of Operating Expenses for such year exceed Tenant's Share of actual Operating Expenses for such year Landlord shall pay the excess to Tenant within 30 days after delivery of such Annual Statement, except that after the expiration, or earlier termination of the Term or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord. Landlord's and Tenant's obligations to pay any overpayments or deficiencies due pursuant to this paragraph shall survive the expiration or earlier termination of this Lease.

The Annual Statement shall be final and binding upon Tenant unless Tenant, within 60 days after Tenant's receipt thereof, shall contest any item therein by giving written notice to Landlord, specifying each item contested and the reason therefor. If, during such 60 day period, Tenant reasonably and in good faith questions or contests the accuracy of Landlord's statement of Tenant's Share of Operating Expenses, Landlord will provide Tenant with access to Landlord's books and records relating to the operation of the Project and such information as Landlord reasonably determines to be responsive to Tenant's questions (the "Expense lnformation"). If after Tenant's review of such Expense Information, Landlord and Tenant cannot agree upon the amount of Tenant's Share of Operating Expenses, then Tenant shall have the right to have an independent regionally or nationally recognized public accounting firm selected by Tenant and approved by Landlord {which approval shall not be unreasonably withheld or delayed)1 working pursuant to a fee arrangement other than a contingent fee {at Tenant's sole cost and expense}, audit and/or review the Expense Information for the year in question (the "Independent Review"). The results of any such Independent Review shall be binding on Landlord and Tenant. If the Independent Review shows that the payments actually made by Tenant with respect to Operating Expenses for the calendar year in question exceeded Tenant's Share of Operating Expenses for such calendar year, Landlord shall .at Landlord's option either (i) credit the excess amount to the next succeeding installments of estimated Operating Expenses or (ii) pay the excess to Tenant within 30 days after delivery of such statement, except that after the expiration or earlier termination of this Lease or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord. If the Independent Review shows that Tenant's payments with respect to Operating Expenses for such calendar year ere less than Tenant's Share of Operating Expenses for the calendar year, Tenant shall pay the deficiency to Landlord within 30 days after delivery of such statement. If the Independent Review shows that Tenant has overpaid with respect to Operating Expenses by more than 5% then Landlord shall reimburse Tenant for all costs Incurred by Tenant for the Independent Review. Operating Expenses for the calendar years in which Tenant's obligation to share therein begins and ends shall be prorated. Notwithstanding anything set forth herein to the contrary, if the Building is not at least 95% occupied on average during any year of the Term, Tenant's Share of Operating Expenses for such year shall be computed as though the Building had been 95% occupied on average during such year.

"Tenant's Share" shall be the percentage set forth on the first page of this Lease as Tenant's Share as reasonably adjusted by Landlord for changes in the physical size of the Premises or the

Project occurring thereafter. Landlord may equitably increase Tenant's Share for any item of expense or cost reimbursable by Tenant that relates to a repair, replacement, or service that benefits only the Premises or only a portion of the Project that includes the Premises or that varies with occupancy or use.

6. **Intentionally Omitted.**

7. **Use.** The Premises shall be used solely for the Permitted Use set forth in the basic lease provisions on page 1 of this Lease, and in compliance with all laws, orders, judgments, ordinances, regulations, codes, directives, permits, licenses, covenants and restrictions now or hereafter applicable to the Premises, and to the use and occupancy thereof, including, without limitation, the Americans With Disabilities Act, 42 U.S.C. § 12101, et seq. (together with the regulations promulgated pursuant thereto, **"ADA")** (collectively, **"Legal Requirements"** and each, a **"Legal Requirement").** Tenant shall, upon 5 days' written notice from Landlord, discontinue any use of the Premises which is declared by any Governmental Authority (as defined in Section 9) having jurisdiction to be a violation of a Legal Requirement; provided$_1$ however, that if the applicable Governmental Authority grants to Tenant time in addition to such 5 day period to discontinue its use of the Premises, Tenant may continue to operate in the Premises for such additional period granted by the applicable Governmental Authority. Tenant will not use or permit the Premises to be used for any purpose or in any manner that would void Tenant's or Landlord's insurance, Increase the insurance risk, or cause the disallowance of any sprinkler or other credits. Tenant shall not permit any part of the Premises to be used as a "place of public accommodation'', as defined in the ADA or any similar legal requirement. Tenant shall reimburse Landlord promptly upon demand for any additional premium charged for any such Insurance policy by reason of Tenant's failure to comply with the provisions of this Section or otherwise caused by Tenant's use and/or occupancy of the Premises. Tenant will use the Premises in a careful, safe and proper manner and will not commit or permit waste, overload the floor or structure of the Premises, subject the Premises to use that would damage the Premises or obstruct or Interfere with the rights of Landlord or other tenants or occupants of the Project, including conducting or giving notice of any auction, liquidation, or going out of business sale on the Premises, or using or allowing the Premises to be used for any unlawful purpose. Tenant shall cause any equipment or machinery to be installed In the Premises so as to reasonably prevent sounds or vibrations from the Premises from extending Into Common Areas, or other space in the Project. Tenant shall not place any machinery or equipment that would overload the floor in or upon the Premises or transport or move such items through the Common Areas of the Project or 111the Project elevators without the prior written consent of Landlord. Tenant shall not, without the prior written consent of Landlord, use the Premises in any manner which will require ventilation, air exchange, heating, gas, steam, electricity or water beyond the existing capacity of the Project as proportionately allocated to the Premises based upon Tenant's Share as usually furnished for the Permitted Use.

Landlord shall be responsible, at Landlord's cost and expense, for the compliance of the Common Areas of the Project with Legal Requirements as of the Commencement Date. Following the Commencement Date, Landlord shall, as an Operating Expense (to the extent such Legal Requirement is generally applicable to similar buildings in the area in which the Project Is located) and at Tenant's expense (to the extent such Legal Requirement is triggered by reason of Tenant's, as compared to other tenants of the Project, particular use of the Premises or Tenant's Alterations) make any alterations or modifications to the Common Areas or the exterior of the Building that are required by Legal Requirements. Except as provided in the two immediately preceding sentences, Tenant, at its sole expense, shall make any .alterations .or modifications to the interior of the Premises that are required by Legal Requirements (including, without limitation, compliance of the Premises with the ADA) related to Tenant's particular use or occupancy of the Premises or any Tenant Alterations. Notwithstanding any other provision herein to the contrary, Tenant shall be responsible for any and all demands, claims, liabilities, losses, costs, expenses, actions, causes of action, damages or judgments, and all reasonable expenses incurred in investigating or resisting the same (including, without limitation, reasonable attorneys' fees, charges and disbursements and costs of suit) (collectively, "claims") arising out of or in connection with Legal Requirements related to Tenant's use or occupancy of the Premises or Tenant's Alterations, and Tenant shall indemnify, defend, hold and save Landlord harmless from and against any and all Claims arising out of or in connection with any failure of the Premises to comply with any Legal Requirement related to Tenant's use or occupancy of the Premises or Tenant's Alterations.

Tenant acknowledges that Landlord may, but shall not be obligated to, seek to obtain Leadership in Energy and Environmental Design (LEED), WELL Building Standard, or other similar 11 green" certification with respect to th Project and/or the Premises, and Tenant agrees to reasonably cooperate with Landlord, and to provide such Information and/or documentation as Landlord may reasonably request in connection therewith.

8. **Holding Over.** If, with Landlord's express written consent, Tenant retains possession of the Premises after the termination of the Term, (i) unless otherwise agreed in such written consent, such possession shall be subject to immediate termination by Landlord at any time, (ii) all of the other terms and provisions of this Lease shall remain in full force and effect (excluding any expansion or renewal option or other similar right or option) during such holdover period, (iii) Tenant shall pay base rent in the amount of $157,960.00 per month or such other amount as Landlord may indicate, in Landlord's sole and absolute discretion, in such written consent, and (Iv) all other payments shall continue under the terms of this Lease. If Tenant remains in possession of the Premises after the expiration or earlier termination of the Term without the express written consent of Landlord, (A) Tenant shall become- a tenant at sufferance upon the terms of this Lease except that the monthly rental shall be equal to $157,960.00 per month, and (B) Tenant shall be responsible for all damages suffered by Landlord resulting from or occasioned by Tenant's holding over, including consequential damages. No holding over by Tenant, whether with or without consent of Landlord, shall operate to extend this Lease except as otherwise expressly provided, and this Section 8 shall not be construed as consent for Tenant to retain possession of the Premises. Acceptance by Landlord of Rent after the expiration of the Term or earlier termination of this Lease shall not result in a renewal or reinstatement of this Lease.

9. **Taxes.** Landlord shall pay, as part of Operating Expenses, all taxes, levies, fees, assessments and governmental charges of any kind, existing as of the Commencement Date or thereafter enacted (collectively referred to as **"Taxes"),** imposed by any federal, state, regional, municipal, local or other governmental authority or agency, including, without limitation, quasi-public agencies (collectively, **"Governmental Authority")** during the Term, including, without limitation, all Taxes: (i) imposed on or measured by or based, in whole or in part, on rent payable to (or gross receipts received by) Landlord under this Lease and/or from the rental by Landlord of the Project or any portion thereof$_1$ or (ii) based on the square footage, assessed value or other measure or evaluation of any kind of the Premises or the Project, or (iii) assessed or imposed by or on the operation or maintenance of any portion of the Premises pr the Project, including parking, or (iv) assessed or imposed by, or at the direction of, or resulting from Legal Requirements, or interpretations thereof, promulgated by any Governmental Authority, or (v) imposed as a license or other fee, charge, tax, or assessment on Landlord's business or occupation of leasing space in the Project. Landlord may contest by appropriate legal proceedings the amount, validity, or application of any Taxes or liens securing Taxes. Notwithstanding anything to the contrary contained herein, Landlord shall only charge Tenant for assessments as if those assessments were paid by Landlord over the longest possible term which Landlord is permitted to pay for the applicable assessments without additional charge other than interest, if any1 provided under th terms of the underlying assessments. Taxes shall not include (a) any net income taxes imposed on Landlord except to the extent such net income taxes are in substitution for any Taxes payable hereunder, (b) excess profit taxes 1 franchise taxes, transfer taxes, capital stock .taxes, gift taxes or estate, inheritance or succession taxes Imposed on or payable by Landlord, (c) any tax, assessment or charge levied on Landlord's rental income (other than gross receipts taxes or similar taxes), unless such taxes or assessments are In substitution for any Taxes payable hereunder, (d) any taxes or assessments in excess of the amount which would be payable if such tax or assessment were paid in installments over the longest possible term, or (e) any tax, assessment or charge imposed on land or improvements other than the Project. If any such Tax is levied or assessed directly against Tenant$_1$ then Tenant shall be responsible for and shall pay the same at such times and in such manner as the taxing authority shall require. Tenant shall pay, prior to delinquency, any and all Taxes levied or assessed against any personal property or trade fixtures placed by Tenant in the Premises, whether levied or assessed against Landlord or Tenant. If any Taxes on Tenant's personal property or trade fixtures are levied against Landlord or Landlord's property, or if the assessed valuation of the Project is increased by a value attributable to improvements in or alterations to the Premises, whether owned by Landlord or Tenant and whether or not affixed to the real property so as to become a part thereof, higher than the base valuation on which Landlord from time to time allocates Taxes to all tenants in the Project, Landlord shall have the right, but not the obligation, to pay such Taxes. Landlord's determination of any excess assessed valuation shall be binding and conclusive, absent manifest error. The amount of any such payment

by Landlord shall constitute Rent due from Tenant to Landlord immediately upon demand.

10. **Parking.** Subject to all applicable Legal Requirements, Force Majeure, a Taking (as defined In Section 19 below) and the exercise by Landlord of its rights hereunder, Tenant shall have the right, in common with other tenants of the Project, to use 2.5 parking spaces per 1,000 rentable square feet of the Premises, which shall be located in those areas designated for non-reserved parking, subject in each case to Landlord's rules and regulations. Landlord may allocate parking spaces among Tenant and other tenants in the Project pro rata as described above if Landlord determines that such parking facilities are becoming crowded. Landlord shall not be responsible for enforcing Tenant's parking rights against any third parties, Including other tenants of the Project.

11. **Utilities, Services.** Landlord shall provide, subject to the terms of this Section 11, water, electricity, heat, light, power, sewer, and other utilities (including gas and fire sprinklers to the extent the Project is plumbed for such services), with respect to the Common Areas. refuse and trash. collection and janitorial services (collectively, **"Utilities").** Landlord shall pay, as Operating Expenses or subject to Tenant's reimbursement obligation, for all Utilities used on the Premises$_1$ all maintenance charges for Utilities, and any storm sewer charges or other similar charges for Utilities imposed by any Governmental Authority or Utility provider, and any taxes, penalties, surcharges or similar charges thereon. Landlord may cause, at Tenant's expense$_1$ any Utilities to be separately metered or charged directly to Tenant by the provider. Tenant shall pay directly to the Utility provider, prior to delinquency, any separately metered Utilities and services which may be furnished to Tenant or the Premises during the Term. Commencing on the Commencement Date, Tenant shall pay, as part of Operating Expenses, its share of all charges for jointly metered Utilities based upon consumption, as reasonably determined by Landlord. No interruption or failure of Utilities, from any cause whatsoever other than Landlord's willful misconduct, shall result in eviction or constructive eviction of Tenant, termination of this Lease or the abatement of Rent. Tenant agrees to limit use of water and sewer with respect to Common Areas to normal restroom use. Tenant shall be responsible for obtaining and paying for Its own janitorial services for the Premises.

Landlord's sole obligation for either providing emergency generators or providing emergency back-up power to Tenant shall be: (i) to provide emergency generators with not less than the capacity of the emergency generators located In the Building as of the Commencement Date, and {Ii) to contract with a third party to maintain the emergency generators as per the manufacturer's standard maintenance guidelines. Except as otherwise provided In the Immediately preceding sentence, Landlord shall have no obligation to provide Tenant with operational emergency generators or back-up power or to supervise, oversee or confirm that the third party maintaining the emergency generators is maintaining the generators as per the manufacturer's standard guidelines or otherwise. During -any period of replacement, repair or maintenance of the emergency generators when the emergency generators are not operational, Including any delays thereto due to the Inability to obtain parts or replacement equipment, Landlord shall have no obligation to provide Tenant with an alternative back-up generator or generators or alternative sources of back-up power. Tenant expressly acknowledges and agrees that Landlord does not guaranty that such emergency generators will be operational at all times or that emergency power will be available to the Premises when needed.

Tenant agrees to provide Landlord with access to Tenant's water and/or energy usage data on a monthly basis, either by providing Tenant's applicable utility login credentials to Landlord's Measurable online portal, or by another delivery method reasonably agreed to by Landlord and Tenant. The costs and expenses incurred by Landlord in connection with receiving and analyzing such water and/or energy usage data (Including, without limitation, as may be required pursuant to applicable Legal Requirements) shall be included as part of Operating Expenses.

12. **Alterations and Tenant's Property.** Any alterations, additions, or improvements made to the Premises by or on behalf of Tenant, including additional locks or bolts of any kind or nature upon any doors or windows in the Premises, but excluding installation, removal or realignment of furniture systems (other than removal of furniture systems owned or paid for by Landlord) not involving any modifications to the structure or connections (other than by ordinary plugs or jacks) to Building Systems (as defined In Section 13) **("Alterations")** shall be subject to Landlord's prior written consent, which may be given or withheld In Landlord's sole discretion if any such Alteration affects the structure or Building Systems. and shall not be otherwise unreasonably withheld. If Landlord approves any Alterations, Landlord may impose such conditions on Tenant In connection with the

commencement, performance and completion of such Alterations as Landlord may deem appropriate in Landlord's sole and absolute discretion. Any request for approval shall be In writing, delivered not less than 15 business days in advance of any proposed construction, and accompanied by plans, specifications, bid proposals, work contracts and such other information concerning the nature and cost of the alterations as may be reasonably requested by Landlord, Including the Identities and mailing addresses of all persons performing work or supplying materials. Landlord's right to review plans and specifications and to monitor construction shall be solely for its own benefit, and Landlord shall have no duty .to ensure that such plans and specifications or construction comply with applicable Legal Requirements. Tenant shall cause, at its sole cost and expense, all Alterations to comply with insurance requirements and with Legal Requirements and shall implement' at its sole cost and expense any alteration or modification required by Legal Requirements as a result of any Alterations. Tenant shall pay to Landlord, as Rent, on demand an amount equal to 3% of all charges Incurred by Tenant or its contractors or agents in connection with any Alteration to cover Landlord's overhead and expenses for plan review, coordination, scheduling and supervision. Before Tenant begins any Alteration, Landlord may post on and about the Premises notices of non-responsibility pursuant to applicable law. Tenant shall reimburse Landlord for, and indemnify and hold Landlord harmless from, any expense incurred by Landlord by reason of faulty work done by Tenant or its contractors, delays caused by such work, or inadequate cleanup.

Tenant shall furnish security or make other arrangements satisfactory to Landlord to assure payment for the completion of all Alterations work free and clear of liens, and shall provide (and cause each contractor or subcontractor to provide) certificates of insurance for workers[1] compensation and other coverage in amounts and from an insurance company satisfactory to Landlord protecting Landlord against liability for personal injury or property damage during construction. Upon completion of any Alterations, Tenant shall deliver to Landlord: (i) sworn statements setting forth the names of all contractors and subcontractors who did the work and final lien waivers from all such contractors and subcontractors'; and (ii) "as built" plans for any such Alteration.

Except for Removable Installations (as hereinafter defined), all Installations (as hereinafter defined) shall be and shall remain the property of Landlord during the Term and following the expiration or earlier termination of the Term, shall not be removed by Tenant at any time during the Term, and shall remain upon and be surrendered with the Premises as a part thereof. Tenant shall be required to restore any Alterations constructed by Tenant in the Premises such that the Premises are surrendered at the expiration or earlier termination of the Term in the same condition and configuration as received on the Commencement Date. Upon the expiration or earlier termination of the Term$_1$ Tenant shall remove (i) all wires, cables or similar equipment which Tenant has installed in the Premises or in the risers or plenums of the Building, (ii) any Installations for which Landlord has given Tenant notice of removal in accordance with the immediately preceding sentence, and (iii) all of Tenant's Property (as hereinafter defined), and Tenant shall restore and repair any damage caused by or occasioned as a result of such removal, including, without !imitation, capping off all such connections behind the walls of the Premises and repairing any holes. During any restoration period beyond the expiration or earlier termination of the Term, Tenant shall pay Rent to Landlord as provided herein as If said space were otherwise occupied by Tenant. If Landlord Is requested by Tenant or any lender, lessor or other person or entity claiming an interest in any of Tenant's Property to waive any lien Landlord may have against any of Tenant's Property, and Landlord consents to such waiver, then Landlord shall be entitled to be paid as administrative rent a fee of $1,000 per occurrence for its time and effort in preparing and negotiating such a waiver of lien.

For purposes of this Lease, (x) **"Removable Installations"** means any items listed on **Exhibit F** attached hereto and any items agreed by Landlord in writing to be included on **Exhibit F** in, the future,

(y) **'Tenant's Property"** means Removable Installations and, other than Installations, any personal property or equipment of Tenant that may e removed without material damage to the Premises, and

(z) **"Installations"** means all property of any kind paid for by Landlord, all Alterations, all fixtures, and all partitions, hardware, built-in machinery, built-in casework and cabinets and other similar additions, equipment$_1$ property and improvements built Into the Premises so as to become an integral part of the Premises, including, without limitation, fume hoods which penetrate the roof or plenum area, built-in cold rooms, built-in warm rooms, walk-in cold rooms, walk-in warm rooms, deionized water systems, glass washing equipment, autoclaves, chillers, builtin plumbing, electrical and mechanical equipment and systems, and any power generator and transfer switch.

13. **Landlord's Repairs.** Landlord shall, at Landlord's sole expense (and not as an Operating Expense),

be responsible for capital repairs and replacements of the roof (not including the roof membrane), exterior walls, structural walls, concrete flooring and foundation of the Building **("Structural Items")** unless the need for such repairs or replacements is caused by Tenant or any Tenant Parties (reasonable wear and tear excluded)$_1$ in which case Tenant shall, subject to Section 17. bear the full cost to repair or replace such Structural Items. Landlord shall$_1$ as an Operating Expense (except to the extent the cost thereof is expressly excluded from Operating Expenses pursuant to Section 5 hereof), be responsible for the routine maintenance and repairs of such Structural Items. In addition, Landlord, as an Operating Expense (except to the extent the cost thereof is expressly excluded from Operating Expenses pursuant to Section 5 hereof), shall maintain (which maintenance may include, in Landlord's reasonably discretion, repairs and/or replacements) the roof membrane and all of the exterior, parking and other Common Areas of the Project, including HVAC, plumbing,. fire sprinklers, elevators and all other building systems serving the Premises and other portions of the Project **("Building Systems"),** in good repair, reasonable wear and tear and uninsured losses and damages caused by Tenant, or by any of Tenant, ***or*** by any of Tenant's assignees, sublessees, licensees, agents, servants, employees, invitees and contractors (or any of Tenant's assignees, sublessees and/or licensees respective agents, servants, employees, invitees and contractors) (collectively, **"Tenant Parties")** excluded. Losses and damages caused by Tenant or any Tenant Party shall be repaired by Landlord, to the extent not covered by Insurance, at Tenant's sole cost and expense. Landlord reserves the right to stop Building Systems services when reasonably necessary ·(I) by reason of accident or emergency, or (ii) for planned repairs, alterations or improvements, which are, in the reasonable Judgment of Landlord, desirable or necessary to be made, until said repairs, alterations or improvements shall have been completed. Landlord shall have no responsibility or liability for failure to supply Building Systems services during any such period of interruption; provided, however, that Landlord shall, except in case of emergency, make a commercially reasonable effort to give Tenant 24 hours advance notice of any planned stoppage of Building Systems services for routine maintenance, repairs, alterations or Improvements. Tenant shall promptly give Landlord written notice of any repair required by Landlord pursuant to this Section, after which Landlord shall make a commercially reasonable effort to effect such repair. Landlord shall use reasonable efforts to minimize interference with Tenant's operations In the Premises during the performance of Landlord's repair and maintenance obligations under this Lease. Landlord shall not be liable for any failure to make any repairs or to perform any maintenance unless such failure shall persist for an unreasonable time after Tenant's written notice of the need for such repairs or maintenance. Tenant waives its rights under any state or local law to terminate this Lease or to make such repairs at Landlord's expense and agrees that the parties' respective rights with respect to such matters shall be solely as set forth herein. Repairs required as the result of fire, earthquake, flood, vandalism, war, or similar cause of damage or destruction shall be controlled by Section 18.

14. **Tenant's Repairs.** Subject to Section 13 hereof, Tenant, at its expense, shall repair, replace and maintain in good condition (subject to normal wear and tear, casualty and condemnation) all portions of the Premises, including, without limitation, entries, doors, ceilings, interior windows, interior walls, and the interior side of demising walls. Such repair and replacement may include capital expenditures and repairs whose benefit may extend beyond the Term. Should Tenant fail to make any such repair or replacement or fall to maintain the Premises, Landlord shall give Tenant notice of such failure. If Tenant fails to commence cure of such failure within 30 days of Landlord's notice, and thereafter diligently prosecute such cure to completion, Landlord may perform such work and shall be reimbursed by Tenant within 30 days after demand therefor; provided, however, that if such failure by Tenant creates or could create an emergency, Landlord may immediately commence cure of such failure and shall thereafter be entitled to recover the costs of such cure from Tenant. Subject to Sections 17 and 18, Tenant shall bear the full uninsured cost of any repair or replacement to any part of the Project that results from damage caused by Tenant or any Tenant Party and any repair that benefits only the Premises. Landlord shall use reasonable efforts to minimize interference with Tenant's operations in the Premises during the performance of repair and maintenance of the Premises pursuant to this Section 14. Notwithstanding anything to the contrary contained herein, Tenant shall not be required to perform or construct any capital repairs or replacements, but Tenant shall be required to pay for- capital repairs and replacements performed or constructed by Landlord in accordance with the other provisions of this Lease.

Notwithstanding anything to the contrary contained in this Lease, as of the Commencement Date, the maintenance and repair obligations for the Premises shall be allocated between Landlord and Tenant as set forth on **Exhibit G** attached hereto. The maintenance obligations allocated to Tenant pursuant to **Exhibit G** (the **"Tenant Maintenance Obligations")** shall be performed by Tenant

at Tenant's sole cost and expense. The Tenant Maintenance Obligations shall include the procurement and maintenance of contracts, in form and substance reasonably satisfactory to Landlord, with copies to Landlord upon Landlord's written request, for and with contractors reasonably acceptable to Landlord specializing and experienced in the respective Tenant Maintenance Obligations. Notwithstanding anything to the contrary contained herein, the scope of work of any such contracts entered into by Tenant pursuant to this paragraph shall, at a minimum, comply with manufacturer's recommended maintenance procedures for the optimal performance of the applicable equipment. Landlord shall, notwithstanding anything to the contrary contained in this Lease, have no obligation to perform any Tenant Maintenance Obligations. The Tenant Maintenance Obligations shall not include the right or obligation on the part of Tenant to make any structural and/or capital repairs or improvements to the Project, and Landlord shall, during any period that Tenant Is responsible for the Tenant Maintenance Obligations, continue, as part of Operating Expenses, to be responsible, as provided in the immediately preceding paragraph, for capital repairs and replacements required to be made to the Project. If Tenant fails to maintain any portion of the Premises for which Tenant is responsible as part of the Tenant Maintenance Obligations in a manner reasonably acceptable to Landlord within the requirements of this Lease, Landlord shall have the right, but not the obligation, to provide Tenant with written notice thereof and to assume the Tenant Maintenance Obligations if Tenant does not cure Tenant's failure within 10 days after receipt of such notice.

15. **Mechanic's Liens.** Tenant shall discharge, by bond or otherwise, any mechanic's lien filed against the Premises or against the Project for work claimed to have been done for, or materials claimed to *have* been furnished to, Tenant within 10 days after the filing thereof, at Tenant's sole cost and shall otherwise keep the Premises and the Project free from any liens arising out of work performed, materials furnished or obligations Incurred by Tenant. -Should Tenant fail to discharge any lien described herein, Landlord shall have the right, but not the obligation, to pay such claim or post a bond or otherwise provide security to eliminate the lien as a claim against title to the Project and the cost thereof shall be immediately due from Tenant as Rent.. If Tenant shall lease or finance the acquisition of office equipment, furnishings, or other personal property of a removable nature utilized by Tenant in the operation of Tenant's business, Tenant warrants that any Uniform Commercial Code Financing Statement filed as a matter of public record by any lessor or creditor of Tenant will upon its face or by exhibit thereto indicate that such Financing Statement is applicable only to removable personal property of Tenant located within the Premises. In no event shall the address of the Project be furnished on the statement without qualifying language as to applicability of the lien only to removable personal property, located in an identified suite held by Tenant.

16. **Indemnification.** Tenant hereby Indemnifies and agrees to defend, save and hold Landlord, its officers, directors, employees, managers, agents, sub-agents (constituent entitles and lease signators (collectively, **"Landlord Indemnified Parties"**) harmless from and against any and all Claims for injury or death to persons or damage to property occurring within or about the Premises or the Project arising directly or indirectly out of use or occupancy of the Premises or the Project (Including, without limitation, any act, omission or neglect by Tenant or any Tenant's Parties In or about the Premises or at the Project) or the a breach or default by Tenant in the performance of any of its obligations hereunder, unless caused solely by the willful misconduct or gross negligence of Landlord Indemnified Parties. Landlord shall not be liable to Tenant for, and Tenant assumes all risk of damage to, personal property (including, without limitation, loss of records kept within the Premises). Tenant further waives any and all Claims for injury to Tenant's business dr loss of income relating to any such damage or destruction of personal property (including, without limitation, any loss of records}. Landlord Indemnified Parties shall not be liable for any damages arising from any act, omission or neglect of any tenant in the Project or of any other third party or Tenant Parties.

17. **Insurance.** Landlord shall maintain all risk property and, If applicable, sprinkler damage insurance covering the full replacement cost of the Project. Landlord shall further procure and maintain commercial general liability insurance with a single loss limit of not less than $2,000,000 for bodily injury and property damage with respect to the Project. Landlord may, but is not obligated to, maintain such other insurance and additional coverages as it may deem reasonably necessary, including, but not limited to, flood, environmental hazard and earthquake, loss or failure of building equipment, errors and omissions, rental loss during the period of repair or rebuilding, workers' compensation Insurance and fidelity bonds for employees employed to perform services and Insurance for any Improvements Installed by Tenant or which are in addition to the standard Improvements customarily furnished by Landlord without regard to whether or not such are made a part of the Project. All such insurance shall be included as pa:rt of the Operating Expenses. The Project may be included in a

blanket policy (in which case the cost of such insurance allocable to the Project will be determined by Landlord based upon the insurer's cost calculations). Tenant shall also reimburse Landlord for any actual Increased premiums or additional Insurance which Landlord reasonably deems necessary as a result of Tenant's particular use of the Premises.

Tenant, at its sole cost and expense, shall maintain during the Term: all risk property insurance with business interruption and extra expense coverage, covering the full replacement cost of all property and improvements installed or placed in the Premises by Tenant at Tenant's expense; workers' compensation Insurance with no less than the minimum limits required by law; employers liability Insurance with employers liability limits of $1,000,000 bodily Injury by accident - each accident, $1,000,000 bodily injury by disease - policy limit, and $1,000,000 bodily injury by disease - each employee; and commercial general liability Insurance, with a minimum limit of not less than $2,000,000 per occurrence for bodily injury and property damage with respect to the Premises. The commercial general liability insurance maintained by Tenant shall name Alexandria Real Estate Equities, Inc., and Landlord, its officers, directors, employees, managers, agents, sub-agents, constituent entities and lease signators (collectively, **"Landlord Insured Parties"},** as additional Insureds; insure on an occurrence and not a claims-made basis; be issued by insurance companies which have a rating of not less than policyholder rating of A and financial category rating of at least Class X in 11 Best's Insurance Guide"; shall not be cancelable for nonpayment of premium unless 30 days prior written notice shall have been given to Landlord from the insurer; not contain a hostile fire exclusion;, contain a contractual liability endorsement; and provide primary coverage to Landlord Insured Parties (any policy issued to Landlord Insured Parties providing duplicate or similar coverage shall be deemed excess over Tenant's policies, regardless of limits}. Copies of such policies (if requested by Landlord), or certificates of insurance showing the limits of coverage required hereunder and showing Landlord as an additional insured, along with reasonable evidence of the payment of premiums for the applicable period, shall be delivered to Landlord by Tenant prior to (i) the earlier to occur of (x) the Commencement Date, or (y) the date that Tenant accesses the Premises under this Lease, and (ii) each renewal of said insurance. Tenant's policy may be a "blanket policy" with an aggregate per location endorsement which specifically provides that the amount of insurance shall not be prejudiced by other losses covered by the policy. Tenant shall, at least 5 days prior to the expiration of such polices, furnish Landlord with renewal certificates.

In each instance where insurance is to name Landlord as an additional insured, Tenant shall upon written request of Landlord also designate and furnish certificates so evidencing Landlord as additional insured to: (i) any lender of Landlord hold[ng a security interest in the Project or any portion thereof, (ii) the landlord under any lease wherein Landlord is tenant of the real property on which the Project Is located, if the interest of Landlord Is or shall become that of a tenant under a ground or other underlying lease rather than that of a fee owner, and/or (iii) any management company retained by Landlord to manage the Project.

The property insurance obtained by Landlord and Tenant shall include a waiver of subrogation by the insurers and all rights based upon an assignment from its insured, against Landlord or Tenant, and their respective officers, directors, employees, managers, agents, invitees and contractors ("Related Parties"), in connection with any loss or damage thereby insured against. Neither party nor its respective Related Parties shall be liable to the other for loss or damage caused by any risk insured against under property insurance required to be maintained hereunder, and each party waives any claims against the other party, and Its respective Related Parties, for such loss or damage. The failure of a party to insure its property shall not void this waiver. Landlord and its respective Related Parties shall not be liable for, and Tenant hereby waives a[I claims against such parties for, business interruption and losses occasioned thereby sustained by Tenant or any person claiming through Tenant resulting from any accident or occurrence in or upon the Premises or the Project from any cause whatsoever. If the foregoing waivers shall contravene any law with respect to exculpatory agreements, the liability of Landlord or Tenant shall be deemed not released but shall be secondary to the other's insurer.

Landlord may require insurance policy limits to be raised to conform with requirements of Landlord's lender and/or to bring coverage limits to levels then being generally required of new tenants within the Project.

18. **Restoration.** If, at any time during the Term, the Project or the Premises are damaged or destroyed by a fire or other insured casualty, Landlord shall notify Tenant within 60 days after discovery of such

damage as to the amount of time Landlord reasonably estimates it wilt take to restore the Project or the Premises, as applicable (the **"Restoration Period").** If the Restoration Period is estimated to exceed 6 months (the "**Maximum Restoration Period"},** Landlord may, in such notice, elect to terminate this Lease as of the date that is 75 days after the date of discovery of such damage or destruction; provided, however, that notwithstanding Landlord's election to restore, Tenant may elect to terminate this Lease by written notice to Landlord delivered within 5 business days of receipt of a notice from Landlord estimating a Restoration Period for the Premises longer than the Maximum Restoration Period. Unless either Landlord or Tenant so elects to terminate this Lease, Landlord shall, subject to receipt of sufficient insurance proceeds (with any deductible to be treated as a current Operating Expense), promptly restore the Premises (excluding the improvements installed by Tenant or by Landlord and paid for by Tenant)$_r$ subject to delays arising from the collection of insurance proceeds, from Force Majeure events or as needed to obtain any license, clearance or other authorization of any kind required to enter into and restore the Premises issued by any Governmental Authority having Jurisdiction over the use, storage, handling, treatment, generation, release, disposal, removal or remediation of Hazardous Materials {as d fined in Section 30) In, on or about the Premises (collectively referred to herein as **"Hazardous Materials Clearances");** provided, however. that if repair or restoration of the Premises is not substantially complete as of the end of the Maximum Restoration Period or, if longer, the Restoration Period, Landlord may, In its sole and absolute discretion, elect not to proceed with such repair and restoration, or Tenant may by written notice to Landlord delivered within 5 business days of the expiration of the Maximum Restoration Period or, if longer, the Restoration Period, elect to terminate this Lease, in which event Landlord shall be relieved of its obligation to make such repairs or restoration and this Lease shall terminate as of the date that is 75 days after the later of: (i) discovery of such damage or destruction $_1$ or (ii) the date all required Hazardous Materials Clearances are obtained, but Landlord shall retain any Rent paid and the right to any Rent payable by Tenant prior to such election by Landlord or Tenant.

Tenant, at its expense, shall promptly perform, subject to delays arising from the collection of insurance proceeds, from Force Majeure (as defined in Section 34) events or to obtain Hazardous Material Clearances, all repairs or restoration not required to be done by Landlord and shall promptly re- enter the Premises and commence doing business in accordance with this Lease. Notwithstanding the foregoing, either Landlord or Tenant may terminate this Lease upon written notice to the other if the Premises are damaged during the last 9 of the Term and Landlord reasonably estimates that It will take more than 1 month to repair such damage; provided, however, that such notice is delivered within 10 business days after the date that Landlord provides Tenant with written notice of the estimated Restoration Period. Notwithstanding anything to the contrary contained herein, Landlord shall also have the right to terminate this Lease if insurance proceeds are not available for such restoration. Rent shall be abated from the date all required Hazardous Material Clearances are obtained until the Premises are repaired and restored, in the proportion which the area of the Premises, if any, which is not usable by Tenant bears to the total area of the Premises, unless Landlord provides Tenant with other space during the period of repair that is suitable for the temporary conduct of Tenant's business. In the event that no Hazardous Material Clearances are required to be obtained by Tenant with respect to the Premises, rent abatement shall commence on the date of discovery of the damage or destruction. Such abatement shall be the sole remedy of Tenant, and except as provided in this Section 18, Tenant waives any right to terminate the Lease by reason of damage or casualty loss.

The provisions of this Lease, including this Section 18, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, all or any part of the Premises, or any other portion of the Project, and any statute or regulation which is now or may hereafter be in effect shall have no application to this Lease or any damage or destruction to all or any part of the Premises or any other portion of the Project, the parties hereto expressly agreeing that this Section 18 sets forth their entire understanding and agreement with respect to such matters.

19. **Condemnation.** If the whole or any material part of the Premises or the Project is taken for any public or quasi-public use under governmental law, ordinance, or regulation, or by right of eminent domain, or by private purchase in lieu thereof (a **"Taking"** or **"Taken"),** and the Taking would in Landlord's reasonable judgment, either prevent or materially Interfere with Tenant's use of the Premises or materially interfere with or impair Landlord's ownership or operation of the Project, then upon written notice by Landlord this Lease shall terminate and Rent shall be apportioned as of said date. If part of the Premises shall be Taken, and this Lease is not terminated as provided above, Landlord shall promptly restore the Premises and the Project as nearly as is commercially reasonable under the

circumstances to their condition prior to such partial Taking and the rentable square footage of the Building, the rentable square footage of the Premises, Tenant's Share of Operating Expenses and the Rent payable hereunder during the unexpired Term shall be reduced to such extent as may be fair and reasonable under the circumstances. Upon any such Taking, Landlord shall be entitled to receive the entire price or award from any such Taking without any payment to Tenant, and Tenant hereby assigns to Landlord Tenant's interest, If any, in such award. Tenant shall have the right, to the extent that same shall not diminish Landlord's award, to make a separate claim against the condemning authority (but not Landlord) for such compensation as may be separately awarded or recoverable by Tenant for moving expenses and damage to Tenant's trade fixtures, if a separate award for such Items is made to Tenant. Tenant hereby waives any and all rights it might otherwise have pursuant to any provision of state law to terminate this Lease upon a partial Taking of the Premises or the Project.

20. **Events of Default.** Each of the following events shall be a default **("Default")** by Tenant under this Lease:

(a) **Payment Defaults.** Tenant shall fail to pay any installment of Rent or any other payment hereunder when due; provided, however, that Landlord will give Tenant notice and an opportunity to cure any failure to pay Rent within 5 days of Tenant's receipt of any such notice not more than once in any 12 month period and Tenant agrees that such notice shall be in lieu of and not in addition to, or shall be deemed to be$_1$ any notice required by law.

(b) **Insurance.** Any insurance required to be maintained by Tenant pursuant to this Lease shall be canceled or terminated or shall expire or shall be reduced or materially changed, or Landlord shall receive a notice of nonrenewal of any such insurance and Tenant shall fail to obtain replacement insurance at least 20 days before the expiration of the current coverage.

(c) **Abandonment.** Tenant shall abandon the Premises.

(d) **Improper Transfer.** Tenant shall ass[gn, sublease or otherwise transfer or attempt to transfer all or any portion of Tenant's interest in this Lease or the Premises except as expressly permitted herein, or Tenant's Interest In this Lease shall be attached, executed upon, or otherwise judicially seized and such action is not released within 90 days of the action.

(e) **Liens.** Tenant shall fail to discharge or otherwise obtain the release of any lien placed upon the Premises in violation of this Lease within 10 days after any such lien Is flied against the Premises.

(f) **Insolvency Events.** Tenant or any guarantor or surety of Tenant's obligations hereunder shall: (A) make a general assignment for the benefit of creditors; (B) commence any case, proceeding or other action seeking to have an order for relief entered on its behalf as a debtor or to adjudicate it a bankrupt or insolvent, or seeking reorganization, arrangement, adjustment, liquidation, dissolution or composition of it or its debts or. seeking appointment of a receiver, trustee, custodian or other similar official for it or for all or of any substantial part of its property (collectively a **"Proceeding for Relief"); (**C) become the subject of any Proceeding for Relief which is not dismissed within 90 days of its filing or entry; or (D) d[e or suffer a legal disability (if Tenant, guarantor, or surety is an individual) or be dissolved or otherwise fail to maintain its legal existence (if Tenant, guarantor or surety is a corporation, partnership or other entity).

(g) **Estoppel Certificate or Subordination Agreement.** Tenant fails to execute any document required from Tenant under Sections 23 or 27 within ·5 business days after a second notice requesting such document.

(h) **Other Defaults.** Tenant shall fail to comply with any provision of this Lease other than those specifically referred to in this Section 20, and, except as otherwise expressly provided herein, such failure shall continue for a period of 30 days after written notice thereof from Landlord to Tenant.

Any notice given under Section 20{h) hereof shall: (I) specify the alleged default, (ii) demand that Tenant cure such default, (iii) be in lieu of, and not in addition to, or shall be deemed to be, any notice required under any provision of applicable law, and (iv) not be deemed a forfeiture or a termination of

this Lease unless Landlord elects otherwise ln such notice; provided that if the nature of Tenant's default pursuant to Section 20(h) Is such that it cannot be cured by the payment of money and reasonably requires more than 30 days to cure, then Tenant shall not be deemed to be in default if Tenant commences such cure within said 30 day period and thereafter diligently prosecutes the same to completion; provided, however, that such cure shall be completed no later than 60 days from the date of Landlord's notice.

21. **Landlord's Remedies.**

(a) **Payment By Landlord; Interest.** Upon a Default by Tenant hereunder, Landlord may, without waiving or releasing any obligation of Tenant hereunder, make such payment or perform such act. All sums so paid or incurred by Landlord, together with interest thereon, from the date such sums were paid or incurred, at the annual rate equal to 12% per annum or the highest rate permitted by law (the **"Default Rate")**$_1$ whichever is less, shall be payable to Landlord on demand as Rent. Nothing herein shall be construed to create or impose a duty on Landlord to mitigate any damages resulting from Tenant's Default hereunder.

(b) **Late Payment Rent.** Late payment by Tenant to Landlord of Rent and other sums due will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult and impracticable to ascertain. Such costs include, but are not limited to, processing and accounting charges and late charges which may be imposed on Landlord under any Mortgage covering the Premises. Therefore, if any Installment of Rent due from Tenant Is not received by Landlord within 5 days after the date such payment is due, Tenant shall pay to Landlord an additional sum equal to 6% of the overdue Rent as a late charge. The parties agree that this late charge represents a fair and reasonable estimate of the costs Landlord will incur by reason of late payment by Tenant. In addition to the late charge, Rent not paid when due shall bear interest at the Default Rate from the 5th day after the date due until paid.

(c) **Remedies.** Upon the occurrence of a Default, Landlord, at its option, without further notice or demand to Tenanl1 shall have in addition to all other rights and remedies provided in this Lease, at law or in equity, the option to pursue any one or more of the following remedies, each and all of which shall be cumulative and nonexclusive, without any notice or demand whatsoever.

(i) Terminate this Lease, or at Landlord's option, Tenant's right to possession only, in which event Tenant shall immediately surrender the Premises to Landlord, and if Tenant fails to do so, Landlord may, without prejudice to any other remedy which it may have for possession or arrearages in rent, enter upon and take possession of the Premises and expel or remove Tenant and any other person who may be occupying the Premises or any part thereof, without being liable for prosecution or any claim for damages therefor;

(ii) Upon any termination of this Lease, whether pursuant to the foregoing Section

21 or otherwise, Landlord may recover from Tenant the following:

(A)The worth at the time of award of any unpaid rent which has been earned at the time of such termination; plus

(B) The worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus.

(C)The worth at the time of award of the amount by which the unpaid rent for the balance of the Term after the time of award exceeds the amount of such rental lass that Tenant proves could have been reasonably avoided; plus

(D)Any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, specifically including, but not limited to, brokerage commissions and advertising expenses incurred, expenses of remodeling the Premises or any portion thereof for a new tenant, whether for the same or a different use, and any special concessions

made to obtain a new tenant; and

(E)At Landlord's election, such other amounts in addition to or in lieu of the foregoing as may be permitted from time to time by applicable law.

The term **"rent"** as used in this Section 21 shall be deemed to be and to mean all sums of every nature required to be paid by Tenant pursuant to the terms of this Lease, whether to Landlord or to others. As used in Sections 21 fo){ii}(A) and {ID, above, the **"worth at the time of award"** shall be computed by allowing Interest at the Default Rate. As used in Section 21 (c)(il)(C) above, the "**worth at the time of award"** shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus 1%.

(iii)Landlord may continue this Lease in effect after Tenant's Default and recover rent as it becomes due (Landlord and Tenant hereby agreeing that Tenant has the right to sublet or assign hereunder, subject only to reasonable limitations). Accordingly, if Landlord does not elect to terminate this Lease following a Default by Tenant, Landlord may, from time to time, without terminating this Lease, enforce all of its rights and remedies hereunder, including the right to recover all Rent as it becomes due.

(iv)Whether or not Landlord elects to terminate this Lease following a Default by Tenant, Landlord shall have the right to terminate any and all subleases, licenses, concessions or other consensual arrangements for possession entered Into by Tenant and affecting the Premises or may, in Landlord's sole discretion, succeed to Tenant's interest in such subleases, licenses, concessions or arrangements. Upon Landlord's election to succeed to Tenant's interest In any such subleases, licenses, concessions or arrangements, Tenant shall, as of the date of notice by Landlord of such election, have no further right to or Interest in the rent or other consideration receivable thereunder.

(v) Independent of the exercise of any other remedy of Landlord hereunder or under applicable law, Landlord may conduct an environmental test of the Premises as gen rally described in Section 30(d) hereof, at Tenant's expense.

(d) **Effect of Exercise.** Exercise by Landlord of any remedies hereunder or otherwise available shall not be deemed to be an acceptance of surrender of the Premises and/or a termination of this Lease by Landlord, it being understood that such surrender and/or termination can be effected only by the express written agreement of Landlord and Tenant. Any law, usage, or custom to the contrary notwithstanding, Landlord shall have the right at all times to enforce the provisions of this Lease in strict accordance with the terms hereof; and the failure of Landlord at any time to enforce its rights under this Lease strictly in accordance with same shall not be construed as having created a custom in any way or manner contrary to the specific terms, provisions, and covenants of this Lease or as having modified the same and shall not be deemed a waiver of Landlord's right to enforce one or more of Its rights in connection with any subsequent default. A receipt by Landlord of Rent or other payment with knowledge of the breach of any covenant hereof shall not be deemed a waiver of such breach, and no waiver by Landlord of any provision of this Lease shall be deemed to have been made unless expressed in writing and signed by Landlord. To the greatest extent permitted by law, Tenant waives the service of notice of Landlord's intention to re-enter, re-take or otherwise obtain possession of the Premises as provided in any statute, or to institute legal proceedings to that end, and also waives all right of redemption in case Tenant shall be dispossessed by a judgment or by warrant of any court or judge. Any reletting of the Premises or any portion thereof shall be on such terms and conditions as Landlord in its sole discretion may determine. Landlord shall not be liable for, nor shall Tenant's obligations hereunder be diminished because of, Landlord's failure to relet the Premises or collect rent due in respect of such reletting or otherwise to mitigate any damages arising by reason of Tenant's Default.

22. **Assignment and Subletting.** Tenant shall not, directly or indirectly, voluntarily or by operation of law, assign this Lease or sublease the Premises or any part thereof or mortgage, pledge, or hypothecate its leasehold Interest or grant any concession or license within the Premises, and any attempt to do any of the foregoing shall be void and of no effect.

23. **Estoppel Certificate.** Tenant shall, within 15 business days of written notice from Landlord, execute, acknowledge and deliver a statement in writing In any form reasonably requested by a proposed lender or purchaser, (i) certifying that this Lease is unmodified and In full force and effect (or, if

modified, stating the nature of such modification and certifying that this Lease as so modified is in full force and effect) and the dates to which the rental and other charges are paid in advance, if any, (ii) acknowledging that there are not any uncured defaults on the part of Landlord hereunder, or specifying such defaults if any are claimed, and (iii) setting forth such further information with respect to the status of this l:.ease or the Premises as may be requested thereon. Any such statement may be relied upon by any prospective purchaser or encumbrancer of all or any portion of the real property of which the Premises are a. part: Tenant's failure to deliver such statement within such time shall, at the option of Landlord, constitute a Default under this Lease, and, in any event, shall be conclusive upon Tenant that the Lease Is In full force and effect and without modification except as may be represented by Landlord In any certificate prepared by Landlord and delivered to Tenant for execution.

24. **Quiet Enjoyment.** So long as Tenant is not in Default under this Lease, Tenant shall, subject to the terms of this Lease, at all times during the Term, have peaceful and quiet enjoyment of the Premises against any person claiming by, through or under Landlord.

25. **Prorations.** All prorations required or permitted to be made hereunder shall be made on the basis of a 360 day year and 30 day months.

26. **Rules and Regulations.** Tenant shall, at all times during the Term and any extension thereof, comply with all reasonable rules and regulations at any time or from time to time established by Landlord covering use of the Premises and the Project. The current rules and regulations are attached hereto as **Exhibit** E. If there Is any conflict between said rules and regulations and other provisions of this Lease, the terms and provisions of this Lease shall control. Landlord shall not have any liability or obligation for the breach of any rules or regulations by other tenants in the Project and shall not enforce such rules and regulations in a discriminatory manner.

27. **Subordination.** This Lease and Tenant's interest and rights hereunder are hereby made and shall be subject and subordinate at all times to the lien of any Mortgage now existing or hereafter created on or against the Project or the Premises, and all amendments, restatements, renewals, modifications, consolidations, refinancing, assignments and extensions thereof, without the necessity of any further Instrument or act on the part of Tenant; provided, however that so long as there is no Default hereunder, Tenant's right to possession of the Premises shall not be disturbed by the Holder of any such Mortgage. Tenant agrees, at the election of the Holder of any such Mortgage, to attorn to any such Holder. Tenant agrees upon demand to execute r acknowledge and deliver such instruments, confirming such subordination, and such instruments of attornment as shall be requested by any such Holder, provided any such instruments contain appropriate non-disturbance provisions assuring Tenant's quiet enjoyment of the Premises as set forth in Section 24 hereof. Notwithstanding the foregoing, any such Holder may at any time subordinate its Mortgage to this Lease, without Tenant's consent, by notice In writing to Tenant, and thereupon this Lease shall be deemed prior to such Mortgage without regard to their respective dates of execution, delivery or recording and in that event such Holder shall have the same rights with respect to this Lease as though this Lease had been executed prior to the execution, delivery and recording of such Mortgage and had been assigned to such Holder. The term "**Mortgage"** whenever used in this Lease shall be deemed to include deeds of trust, security assignments and *any* other encumbrances, and any reference to the " **Holder"** of a Mortgage shall be deemed to include the beneficiary under a deed of trust.

28. **Surrender.** Upon the expiration of the Term or earlier termination of Tenant's right of possession, Tenant shall surrender the Premises to Landlord in the same condition as received, subject to any Alterations or Installations permitted by Landlord to remain in the Premises, free of Hazardous Materials brought upon, kept, used, stored, handled, treated, generated in, or released or disposed of *from,* the Premises by any person other than a Landlord Party {collectively, **"Tenant HazMat Operations")** and released of all Hazardous Materials Clearances, broom clean, ordinary wear and tear and casualty loss and condemnation covered by Sections 18 and 19 excepted. At least 3 months prior to the surrender of the Premises or such earlier date as Tenant may elect to cease operations at the Premises, Tenant shall deliver to Landlord a narrative description of the actions proposed (or required by any Governmental Authority) to be taken by Tenant In order to surrender the Premises {including any Installations permitted by Landlord to remain in the Premises) at the expiration or earlier termination of the Term, free from any residual impact from the Tenant HazMat Operations and otherwise released for unrestricted use and occupancy (the **"Decommissioning and HazMat Closure Plan").** Such . Decommissioning and HazMat Closure Plan shall be accompanied by a current listing of (i) all Hazardous Materials licenses and permits held by or on behalf of any Tenant

Party with respect to the Premises, and
(ii) all Hazardous Materials used, stored, handled, treated, generated, released or disposed of from the Premises, and shall be subject to the review and approval of Landlord's environmental consultant. In connection with the review and approval of the Decommissioning and HazMat Closure Plan$_t$ upon the request of Landlord, Tenant shall deliver to Landlord or its consultant such additional non-proprietary information concerning Tenant HazMat Operations as Landlord shall request. On or before such surrender, Tenant shall deliver to Landlord evidence that the approved Decommissioning and HazMat Closure Plan shall have been satisfactorily completed and Landlord shall have the right, subject to reimbursement at Tenant's expense as set forth below, to cause Landlord's environmental consultant to inspect the Premises and perform such additional procedures as may be deemed reasonably necessary to confirm that the Premises are, as of the effective date of such surrender or early termination of the Lease, free from any residual Impact from Tenant HazMat Operations. Tenant shall reimburse Landlord, as Rent, for the actual out of pocket expense incurred by Landlord for Landlord's environmental consultant to review and approve the Decommissioning and HazMat Closure Plan and to visit the Premises and verify satisfactory completion of the same, which cost shall not exceed $5,000. Landlord shall have the unrestricted right to deliver such Decommissioning and HazMat Closure Plan and any report by Landlord's environmental consultant with respect to the surrender of the Premises to third parties.

If Tenant shall fail to prepare or submit a Decommissioning and HazMat Closure Plan approved by Landlord, or if Tenant shall fail to complete the approved Decommissioning and HazMat Closure Plan, or if such Decommissioning and HazMat Closure Plan, whether or not approved by Landlord, shall fall to adequately address any residual effect of Tenant HazMat Operations in, on 9r about the Premises, Landlord shall have the right to take such actions as Landlord may deem reasonable or appropriate to assure that the Premises and the Project are surrendered free from any residual impact from Tenant HazMat Operations, the cost of which actions shall be reimbursed by Tenant as Rent, without regard to the limitation set forth in the first paragraph of this Section 28.

Tenant shall immediately return to Landlord all keys and/or access cards to parking, the Project, restrooms or all or any portion of the Premises furnished to or otherwise procured by Tenant. If any such access card or key is lost, Tenant shall pay to Landlord, at Landlord's election, either the cost of replacing such lost access card or key or the cost of reprogramming the access security system in which such access card was used or changing the lock or locks opened by such lost key. Any Tenant's Property, Alterations and property not so removed by Tenant as permitted or required herein shall be deemed abandoned and may be stored, removed, and disposed of by Landlord at Tenant's expense, and Tenant waives all claims against Landlord for any damages resulting from Landlord's retention and/or disposition of such property. All obligations of Tenant hereunder not fully performed as of the termination of the Term, including the obligations of Tenant under Section 30 hereof, shall survive the expiration or earlier termination of the Term, including,. without limitation, Indemnity obligations, payment obligations with respect to Rent and obligations concerning the condition and repair of the Premises.

29. **Waiver of Jury Trial.** TO THE EXTENT PERMITTED BY LAW, TENANT AND LANDLORD WAIVE ANY RIGHT TO TRIAL BY JURY OR TO HAVE A JURY PARTICIPATE IN RE$OLVING ANY DISPUTE, WHETHER SOUNDING IN CONTRACT, TORT, OR OTHERWISE, BETWEEN LANDLORD AND TENANT ARISING OUT OF THIS LEASE OR ANY OTHER INSTRUMENT, DOCUMENT, OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH OR THE TRANSACTIONS RELATED HERETO.

30. **Environmental Requirements.**

(a) **Prohibition/Compliance/Indemnity.** Tenant shall not cause or permit any Hazardous Materials (as hereinafter defined) to be brought upon, kept, used, stored, handled, treated, generated in or about, or released or disposed of from, the Premises or the Project In violation of applicable Environmental Requirements (as hereinafter defined) by Tenant or any Tenant Party. If Tenant breaches the obligation stated in the preceding sentence, or if the presence of Hazardous Materials in the Premises during the Term or any holding ***over*** results ln contamination of the Premises, the Project or any adjacent property or If contamination of the Premises, the Project or any adjacent property by Hazardous Materials brought Into, kept, used, stored$_1$ handled, treated, generated in or about, or released or disposed of from, the Premises by anyone other than Landlord and Landlord's employees, agents and contractors otherwise occurs during the Term or any holding over, Tenant hereby indemnifies and shall defend and hold Landlord, its officers, directors, employees, agents and contractors harmless from any and all actions (including, without limitation,

remedial or enforcement actions of any kind, administrative or judicial proceedings, and orders or judgments arising out of or resulting therefrom), costs, claims, damages (including, without limitation, punitive damages and damages based upon diminution in value of the Premises or the Project, or the loss of, or restriction on, use of the Premises or any portion of the Project), expenses (including, without limitation, attorneys', consultants' and experts' fees, court costs and amounts paid in settlement of any claims or actions), fines, forfeitures or other civil, administrative or criminal penalties, injunctive or other relief (whether or not based upon personal injury, property damage, or contamination of, or adverse effects upon, the environment, water tables or natural resources), liabilities or losses (collectively, **"Environmental Claims")** which arise during or after the Term as a result of such contamination. This. indemnification of Landlord by Tenant Includes, without !Imitation, costs Incurred in connection with any investigation of site conditions or any cleanup, treatment, remedial, removal, or restoration work required by any federal, state or local Governmental Authority because of Hazardous Materials present in the, air, soil or ground water above, on, or under the Premises. Without limiting the foregoing, if the presence of any Hazardous Materials on the Premises, the Building, the Project or any adjacent property caused or permitted by Tenant or any Tenant Party results In any contamination of the Premises, the Building, the Project or any adjacent property, Tenant shall promptly take all actions at its sole expense and in accordance with applicable Environmental Requirements as are necessary to return the Premises, the Building, the Project or any adjacent property to the condition existing prior to the time of such contamination, provided that Landlord's approval of such action shall first be obtained, which approval shall not unreasonably be withheld so long as such actions would not potentially have any material adverse long-term or short term effect on the Premises , the Building or the Project. Notwithstanding anything to the contrary contained in Section 28 or this Section 30, Tenant shall not be responsible (or, and the indemnification and hold harmless obligation set forth in this paragraph shall not apply to (I) contamination in the Premises which Tenant can prove existed in the Initial Premises immediately prior to the Commencement Date or in the Subsequent Premises immediately prior to the Subsequent Premises Commencement Date, {ii) the presence of any Hazardous Materials in the Premises which Tenant can prove migrated from outside of the Premises into the Premises, or (iii) the presence of any Hazardous Materials in the Premises caused by Landlord or any Landlord's employees, agents and contractors, unless in any case, the presence of such Hazardous Materials (x) is the result of a breach by Tenant of any of its obligations under this Lease, or (y) was caused, contributed to or exacerbated by Tenant or any Tenant Party.

(b) **Business.** Landlord acknowledges that it is not the intent of this Section 30 to prohibit Tenant from using the Premises for the Permitted Use. Tenant may operate its business according to prudent industry practices so long as the use or presence of Hazardous Materials is strictly and properly monitored according to all then applicable Environmental Requirements. As a material inducement to Landlord to allow Tenant to use Hazardous Materials In connection with its business, Tenant agrees to deliver to Landlord prior to the Commencement Date a list identifying each type of Hazardous Materials to be brought upon, kept, used, stored, handled, treated, generated on, or released or disposed of from, the Premises and setting forth any and all governmental approvals or permits required In connection with the presence, use, storage, handling, treatment, generation, release or disposal of such Hazardous Materials on or from the Premises **("Hazardous Materials List").** Upon Landlord's request, or any time that Tenant is required to deliver a Hazardous Materials List to any Governmental Authority (e.g., the fire department) in connection with Tenant's use or occupancy of the Premises, Tenant shall deliver to Landlord a copy of such Hazardous Materials List. Tenant shall deliver to Landlord true and correct copies of the follow[ng documents (the **"Haz Mat Documents")** relating to the use) storage, handling, treatment, generation, release or disposal of Hazardous Materials prior to the Commencement Date, or if unavailable at that time, concurrent with the receipt from or submission to a Governmental Authority: permits; approvals; reports and correspondence; storage and management plans, notice of violations of any Legal Requirements; plans relating to the installation of any storage tanks to be installed In or under the Project (provided, said Installation of tanks shall only be permitted after Landlord has given Tenant its written consent to do so, which consent may be withheld in Landlord's sole and absolute discretion); all closure plans or any other documents required by any and all federal, state and local Governmental Authorities for any. storage tanks installed in, on or under the Project for the closure of any such tanks; and a Decommissioning and HazMat Closure Plan (to the extent surrender in accordance with Section 28 cannot be accomplished in 3 months). Tenant is not required, however, to provide Landlord with any portion(s) of the HazMat Documents containing Information of a proprietary nature which, in and of themselves, do not contain a reference to any Hazardous Materials or hazardous activities. It is not the intent of this Section to provide Landlord with information which could be detrimental to Tenant's business should such information become possessed by Tenant's competitors.

(c) **Tenant Representation and Warranty.** Tenant hereby represents and warrants to Landlord that (i) neither Tenant nor, to Tenant's actual knowledge, any of its legal predecessors has been required by any prior landlord, lender or Governmental Authority at any time to take remedial action In connection with Hazardous Materials contaminating a property which contamination was permitted by Tenant of such predecessor or resulted from Tenant's or such predecessor's action or use of the property in question, and (ii) Tenant Is not subject to any enforcement order issued by any Governmental Authority in connection with the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials (including, without limitation, any order related to the failure to make a required reporting to any Governmental Authority). If Landlord determines that this representation and warranty was not true as of the date of this lease, Landlord shall have the right to terminate this Lease in Landlord's sole and absolute discretion.

(d) **Testing.** Landlord shall have the right to conduct annual tests of the Premises to determine whether any contamination of the Premises or the Project has occurred as a result of Tenant's use. Tenant shall be required to pay the cost of such annual test of the Premises; provided, however, that if Tenant conducts its own tests of the Premises using third party contractors and test procedures acceptable to Landlord which tests are certified to Landlord, Landlord shall accept such tests in lieu of the annual tests to be paid for by Tenant. In addition, at any time, and from time to time, prior to the expiration or earlier termination of the Term, Landlord shall have the right to conduct appropriate tests of the Premises and the Project to determine If contamination has occurred as a result of Tenant's use of the Premises. In connection with such testing, upon the request of Landlord, Tenant shall deliver to Landlord or its consultant such non-proprietary information concerning the use of Hazardous Materials In or about the Premises by Tenant or any Tenant Party. If contamination has occurred for which Tenant is liable under this Section 30, Tenant shall pay all costs to conduct such tests. If no such contamination is found, Landlord shall pay the costs of such tests (which shall not constitute an Operating Expense). Landlord shall provide Tenant with a copy of all third party, non-confidential reports and tests of the Premises made by or on behalf of Landlord during the Term without representation or warranty and subject to a confidentiality agreement. Tenant shall, at its sole cost and expense, promptly and satisfactorily remediate any environmental conditions identified by such testing in accordance with all Environmental Requirements. Landlord's receipt of or satisfaction with any environmental assessment in no way waives any rights which Landlord may have against Tenant.

(e) **Control Areas.** Tenant shall have the use of (i) 16% of the control area designated as control area 3 on **Exhibit H** attached hereto, with respect to the Initial Premises, and (ii) 50% of the control area designated as control area 3 on **Exhibit H** attached hereto, with respect to the Subsequent Premises. For the avoidance of doubt, Tenant shall not have rights with respect to any other control areas at the Project.

(f) **Underground Tanks.** Tenant shall have no right to use or install any underground or other storage tanks at the Project.

(g) **Tenant's Obligations.** Tenant's obligations under this Section 30 shall survive the expiration or earlier termination of the Lease. During any period of time after the expiration or earlier termination of this Lease required by Tenant or Landlord *to* complete the removal from the Premises of any Hazardous Materials (including, without limitation, the release and termination of any licenses or permits restricting the use of the Premises and the completion of the approve Decommissioning and Hazmat Closure Plan), Tenant shall continue to pay the full Rent in accordance with this Lease for any portion of the Premises not relet by Landlord in Landlord's sole discretion, which Rent shall be prorated daily.

(h) **Definitions.** As used herein, the term **"Environmental Requirements"** means all applicable present and future statutes, regulations, ordinances, rules, codes, judgments, orders or other similar enactments of any Governmental Authority regulating or relating to health, safety, or environmental conditions on, under, or about the Premises or the Project, or the environment, including
without limitation, the following: the Comprehensive Environmental Response, Compensation and Liability Act; the Resource Conservation and Recovery Act; and all state and local counterparts thereto, and any regulations or policies promulgated or issued thereunder. As used herein, the term **"Hazardous Materials"** means and includes any substance, material, waste, pollutant, or contaminant listed or defined s hazardous or toxic, or regulated by reason of its Impact or potential impact on humans, animals and/or the environment under any Environmental Requirements, asbestos and petroleum, including crude oil or any fraction thereof, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). As

defined in Environmental Requirements, Tenant Is and shall be deemed to be the **"operator** [1] of Tenant's **"facility"** and the **"owner"** of all Hazardous Materials brought on the Premises by Tenant or any Tenant Party, and the wastes, by-products, or residues generated, resulting, or produced therefrom.

31. **Tenant's Remedies/Limitation of Liability.** Landlord shall not be in default hereunder unless Landlord fails to perform any of Its obligations hereunder within 30 days after written notice from Tenant specifying such failure (unless such performance will, due to the nature of the obligation, require a period of time in excess of 30 days1 then after such period of time as is reasonably necessary). Upon any default by Landlord, Tenant shall give notice by register d or certified mail to any Holder of a Mortgage covering the Premises and to .any landlord of any lease of property in or on which the Premises are located and Tenant shall offer such Holder and/or landlord a reasonable opportunity to cure the default, including time to obtain possession of the Project by power of sale or a judicial action if such should prove necessary to effect a cure; provided Landlord shall have furnished to Tenant In writing the names and addresses of all such persons who are to receive such notices. All obligations of Landlord hereunder shall be construed as covenants, not conditions; and, except as may be otherwise expressly provided in this Lease, Tenant may not terminate this Lease for breach of Landlord's obligations hereunder.

All obligations of Landlord under this Lease will be binding upon Landlord only during the period of its ownership of the Premises and not thereafter. The term **"Landlord"** In this Lease shall mean only the owner for the time being of the Premises. Upon the transfer by such owner of its interest in the Premises, such owner shall thereupon be released and discharged from all obligations of Landlord thereafter accruing, but such obligations shall be binding during the Term upon each new owner for the duration of such owner's ownership.

32. **Inspection and Access.** Landlord and its agents, representatives, and contractors may enter the Premises at any reasonable time to inspect the Premises and to make such repairs as may be required or permitted pursuant to this Lease and for any other business purpose. Landlord and Landlord's representatives may enter the Premises during business hours on not less than 48 hours advance written notice (except in the case of emergencies in which case no such notice shall be required and such entry may be at any time) for the purpose of effecting any such repairs, inspecting the Premises, showing the Premises to prospective purchasers and, during the last 18 months of the Term, to prospective tenants or for any other business purpose. Landlord shall use reasonable efforts to minimize interference with Tenant's operations in the Premises in connection with Landlord's activities conducted pursuant to this paragraph .. Landlord may erect a suitable sign on the Premises stating the Premises are available to let or that the Project Is available for sale. Landlord may grant easements, make public dedications, designate Common Areas and create restrictions on or about the Premises, provided that no such easement, dedication, designation or restriction materially, adversely affects Tenant's use or occupancy of the Premises for the Permitted Use. At Landlord's request, Tenant shall execute such instruments as may be necessary for such easements, dedications or restrictions. Tenant shall at all times, except in the case of emergencies, have the right to escort Landlord or its agents, representatives, contractors or guests while the same are in the Premises, provided such escort does not materially and adversely affect Landlord's access rights hereunder. Landlord shall comply with Tenant's reasonable security and safety requirements with respect to entering the Premises; provided, however, that Tenant has notified Landlord of such security and safety requirements simultaneously with or prior to Landlord's entry Into the Premises.

Subject to the terms of this Section 32, Landlord may from time to time during the Term, during regular business hours and/or otherwise at times mutually acceptable to Landlord and Tenant, conduct third party tours of the Premises **("Tours"),** which Tours may be held with not less than 1 business day's advance notice.

33. **Security.** Tenant acknowledges and agrees that security devices and services, if any, while intended to deter crime may not in given instances prevent theft or other criminal acts and that Landlord is not providing any security services with respect to the Premises. Tenant agrees that Landlord shall not be liable to Tenant for, and Tenant waives any claim against Landlord with respect to, any loss by theft or any other damage suffered or incurred by Tenant in connection with any unauthorized entry into the Premises or any other breach of security with respect to the Premises. Tenant shall be solely responsible for the personal safety of Tenant's officers, employees, agents, contractors, guests and invitees while any such person is in, on or about the Premises and/or the Project. Tenant shall at Tenant's cost obtain insurance coverage to the extent Tenant desires protection against such criminal

acts.

34. **Force Majeure.** Except for the payment of Rent, neither Landlord nor Tenant shall be held responsible or liable for delays in the performance of its obligations hereunder when caused by, related to, or arising out of acts of God, sinkholes or subsidence, strikes, lockouts, or other labor disputes, embargoes, quarantines, extreme weather, national, regional, or local disasters, calamities/ or catastrophes, inability to obtain labor or materials (or reasonable substitutes therefor) at reasonable costs or failure of, or Inability to obtain, utilities necessary for performance, governmental restrictions, orders, limitations, regulations, or controls $_1$ national emergencies, delay in Issuance or revocation of permits, enemy or hostile governmental action, terrorism, insurrection, riots, civil disturbance or commotion, fire or other casualty, and other causes or events beyond their reasonable control **("Force Majeure").**

35. **Brokers.** Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, **"Broker")** in connection with this transaction and that no Broker brought about this transaction, other than Hughes Marino, Cushman & Wakefield and CBRE.

Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than other than Hughes Marino, Cushman & Wakefield and CBRE, claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as appllcable1 with regard to this leasing transaction.

36. **Limitation on Landlord's Liability.** NOTWITHSTANDING ANYTHING SET FORTH HEREIN OR IN ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT TO THE CONTRARY: (A) LANDLORD SHALL NOT BE LIABLE TO TENANT OR ANY OTHER PERSON FOR (AND TENANT AND EACH SUCH OTHER PERSON ASSUME ALL RISK OF} LOSS, DAMAGE OR INJURY, WHETHER ACTUAL OR CONSEQUENTIAL TO: TENANT'S PERSONAL PROPERTY OF EVERY KIND AND DESCRIPTION, INCLUDING, WITHOUT LIMITATION TRADE FIXTURES, EQUIPMENT, INVENTORY, SCIENTIFIC RESEARCH1 SCIENTIFIC EXPERIMENTS, LABORATORY ANIMALS, PRODUCT, SPECIMENS, SAMPLES, AND/OR SCIENTIFIC, BUSINESS, ACCOUNTING AND OTHER RECORDS OF EVERY KIND AND DESCRIPTION KEPT AT THE PREMISES AND ANY AND ALL INCOME DERIVED OR DERIVABLE THEREFROM; (B) THERE SHALL BE NO PERSONAL RECOURSE TO LANDLORD FOR ANY ACT OR OCCURRENCE IN, ON OR ABOUT THE PREMISES OR ARISING IN ANY WAY UNDER THIS LEASE OR ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT WITH RESPECT TO THE SUBJECT MATTER HEREOF AND ANY LIABILITY OF LANDLORD' HEREUNDER SHALL BE STRICTLY LIMITED SOLELY TO LANDLORD'S INTEREST IN THE PROJECT OR ANY PROCEEDS FROM SALE OR CONDEMNATION THEREOF AND ANY INSURANCE PROCEEDS PAYABLE IN RESPECT OF LANDLORD'S INTEREST IN THE PROJECT OR IN CONNECTION WITH ANY SUCH LOSS; AND (C) IN NO EVENT SHALL ANY PERSONAL LIABILITY BE ASSERTED AGAINST LANDLORD IN CONNECTION WITH THIS LEASE NOR SHALL ANY RECOURSE BE HAD TO ANY OTHER PROPERTY OR ASSETS OF LANDLORD OR ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS. UNDER NO CIRCUMSTANCES SHALL LANDLORD OR ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS BE LIABLE FOR INJURY TO TENANT'S BUSINESS OR FOR ANY LOSS OF INCOME OR PROFIT THEREFROM.

37. **Severability.** If any clause or provision of this Lease is illegal, invalid or unenforceable under present or future laws, then and in that event, it is the intention of the parties hereto that the remainder of this Lease shall not be affected thereby. It is also the intention of the parties to this Lease that in lieu- of each clause or provision of this Lease that is illegal, invalid or unenforceable, there be added, as a part of this Lease, a clause or provision as similar In effect to such illegal, invalid or unenforceable clause or provision as shall be legal, valid and enforceable.

38. **Signs; Exterior Appearance.** Tenant shall not, without the prior written consent of Landlord, which may be granted or withheld in Landlord's sole discretion: (i) attach any awnings, exterior lights, decorations, balloons, flags, pennants, banners, painting or other projection to any outside wall of the Project, (ii) use any curtains, blinds, shades or screens other than Landlord's standard window coverings, (iii) coat or otherwise sunscreen the interior or exterior of any windows, (iv) place any bottles, parcels, or other articles on the window sills, (v) place any equipment, furniture or other items of personal property on any exterior balcony, or (vi) paint, affix or exhibit on any part of the Premises

or the Project any signs, notices, window or door lettering, placards, decorations, or advertising media of any type which can be viewed from the exterior of the Premises. Building standard suite entry signage and signage on the directory tablet shall be inscribed, painted or affixed for Tenant by Landlord at the sole cost and expense of Landlord, and shall be of a size, color and type acceptable to Landlord. Nothing may be placed on the exterior of corridor walls or corridor doors other than Landlord's standard lettering. The directory tablet shall be provided exclusively for the display of the name and location of tenants.

39. **Right to Extend Term.** Tenant shall have the right to extend the Term of the Lease upon the following terms and conditions:

(a) **Extension Rights.** Tenant shall have 1 right (the **"Extension Right")** to extend the term of this Lease for a period of 2 years (the **"Extension Term")** on the same terms and conditions as this Lease (except as otherwise provided in this Section 39) by giving Landlord written notice of its election to exercise the Extension Right at least 6 months prior to the expiration of the Base Term.

Tenant shall commence paying base rent ("Base Rent") with respect to the Premises In the amount of $63.60 per rentable square foot of the Premises per year on the commencement date of the Extension Term. Base Rent shall increase to $65.51 per rentable square foot of the Premises per year on the first anniversary of the commencement date of the Extension Term. In addition, Landlord may impose a market rent for the parking rights provided hereunder.

(b) **Rights Personal.** The Extension Right is personal to Tenant and is not assignable without Landlord's consent, which may be granted or withheld in Landlord's sole discretion separate and apart from any consent by Landlord to an assignment of Tenant's interest in the Lease.

(c) **Exceptions.** Notwithstanding anything set forth above to the contrary, the Extension Right shall, at Landlord's option, not be in effect and Tenant may not exercise the Extension Right:

(i) Lease;or during any period of time that Tenant is In Default under any provision of this

(ii) if Tenant has been in Default under any provision of this Lease 3 or more times, whether or not the Defaults are cured, during the 12 month period immediately prior to the date that Tenant intends to exercise the Extension Right, whether or not the Defaults are cured.

(d) **No Extensions.** The period of time within which the Extension Right may be exercised shall not be extended or enlarged by reason of Tenant's inability to exercise the Extension Right.

(e) **Termination.** The Extension Right shall, at Landlord's option, terminate and be of no further force or effect even after Tenant's due and timely exercise of the Extension Right, if, after such exercise, but prior to the commencement date of the Extension Term, (i) Tenant falls to timely cure any default by Tenant under this Lease; or (ii) Tenant has Defaulted 3 or more times during the period from the date of the exercise of the Extension Right to the date of the commencement of the Extension Term, whether or not such Defaults are cured.

40. **Regional Amenities.**

(a) **Generally.** Located at project commonly known as 10996 Torreyana Road, San Diego, California **("The Alexandria"),** which is owned by an affiliate of Landlord **("The Alexandria Landlord"),** are certain amenities which include, without limitation, shared conference facilities (the **"The Alexandria Shared Conference Facilities"),** a fitness center and restaurant (collectively, the **11 The Alexandria Amenities").** Located at the project commonly known as 10290 Campus Point and 10300 Campus Point Drive, San Diego, California (collectively, the **"Campus Point Project"),** which is owned by another affiliate or affiliates of Landlord (collectively, the **"Campus Point Landlord"),** are certain amenities which include, without limitation, shared conference facilities (the "C**ampus Point Shared Conference Facilities"),** a fitness center and restaurant (collectively, the **"Campus Point Amenities").** The Alexandria Shared Conference Facilities and the Campus Point Shared Conference Facilities may be collectively referred to herein as the **"Shared Conference Facilities."** The Alexandria Amenities and the Campus Point Amenities may be collectively referred to herein as the "**Alexandria Regional Amenities."** The Alexandria Regional Amenities are available for non-exclusive use by (a) Tenant, (b) other tenants of the Project, (c) Landlord, (d) the tenants of The Alexandria Landlord and the Campus Point Landlord, (e) The Alexandria Landlord, (f) other

affiliates of Landlord, The Alexandria Landlord, the Campus Point Landlord and Alexandria Real Estate Equities, Inc. **("ARE")** (g) the tenants of such other affiliates of Landlord, The Alexandria Landlord, the Campus Point Landlord and ARE, and (h) any other parties permitted by The Alexandria Landlord and Campus Point Landlord (collectively, **"Users").** Landlord, The Alexandria Landlord, Campus Point Landlord, ARE, and all affiliates of Landlord, The Alexandria Landlord, Campus Point Landlord and ARE may be referred to collectively herein as the **"ARE Parties."** Notwithstanding anything to the contrary contained herein, Tenant acknowledges and agrees that (i) The Alexandria Landlord shall have the right, at the sole discretion of The Alexandria Landlord, to not make The Alexandria Amenities available for use by some or all currently contemplated Users (including Tenant), and Campus Point Landlord shall have the right, at the sole discretion of Campus Point Landlord, to not make the Campus Point Amenities available for use by some or all currently contemplated Users (including Tenant). The Alexandria Landlord and Campus Point Landlord shall have the sole right to determine all matters related to The Alexandria Amenities and the Campus Point Amenities, respectively, Including, without limitation, relating to the reconfiguration, relocation, modification or removal of any of The Alexandria Amenities or the Campus Point Amenities, respectively, and/or to revise, expand or discontinue any of the services (if any) provided in connection with The Alexandria Amenities or the Campus Point Amenities, respectively. Tenant acknowledges and agrees that Landlord has not made any representations or warranties regarding the availability of the Alexandria Regional Amenities and that Tenant is not entering into this Lease relying on the continued availability of the Alexandria Regional Amenities to Tenant.

(b) **License.** Commencing on the Commencement Date, and so long as The Alexandria, the Campus Point Project and the Project continue to be owned by affiliates of ARE, Tenant (and, subject to Landlord's approval, which may be granted or withheld in Landlord's reasonable discretion with respect to each prospective subtenant, the subtenants of Tenant) shall have the non-exclusive right to the use of the available Alexandria Regional Amenities in common with other Users pursuant to the terms of this Section 40. Fitness center passes shall be issued to Tenant for all full time employees of Tenant employed at the Premises. Commencing on the Commencement Date, Tenant shall commence paying Landlord a fixed fee during the Base Term equal to $2.16 per rentable square foot of the Premises per year **("Amenities Fee"),** which Amenities Fee shall by payable on the first day of each month during the Term whether or not Tenant elects to use any or all of the Alexandria Regional Amenities. The Amenities Fee shall be increased annually on each anniversary of the Commencement Date by 3%.

(c) **Shared Conference Facilities.** Use by Tenant of the Shared Conference Facilities and restaurants at The Alexandria and the Campus Point Project shall be in common with other Users with scheduling procedures reasonably determined by The Alexandria Landlord or the Campus. Point Landlord, as applicable, or The Alexandria Landlord's or Campus Point Landlord's then designated event operator (each, an **"Event Operator").** Tenant's use of the Shared Conference Facilities shall be subject to the payment by Tenant to The Alexandria Landlord or the Campus Point Landlord, as applicable, of a fee equal to The Alexandria Landlord's or Campus Point Landlord's, as applicable, quoted rates for the usage of the Shared Conference Facilities in effect at the time of Tenant's scheduling. Tenant's use of the conference rooms in the Shared Conference Facilities •shall be subject to availability and The Alexandria Landlord and Campus Point Landlord, as applicable, (or, If applicable, the applicable Event Operator) reserves the right to exercise its reasonable discretion in the event of conflicting scheduling requests among Users. Tenant hereby acknowledges that {I) Biocom/San Diego, a California non-profit corporation **("Biocom")** has the right to reserve the Alexandria Shared Conference Facilities and any reservable dining area(s) included within The Alexandria Amenities for up to 50% of the time that The Alexandria Shared Conference Facilities and reservable dining area(s) are available for use by Users each calendar month, and (ii) Illumina, Inc., a Delaware corporation, has the exclusive use of the main conference room within The Alexandria Shared Conference Facilities for up to 4 days per calendar month.

Tenant shall be required to use the food service operator designated by The Alexandria Landlord at The Alexandria and the food service operator designated by the Campus Point Landlord at the Campus Point Project (as applicable, the **"Designated Food and Beverage Operator")** for any food and/or beverage service or catered events held by Tenant in the Shared Conference Facilities. As of the date of this Lease, the Designated Food and Beverage Operator at The Alexandria is The Farmer and the Seahorse and the Designated Food and Beverage Operator at the Campus Point Project is Stellar Bleu. The Alexandria Landlord and the Campus Point Landlord have the right, in their sole and absolute discretion, to change the Designated Food and Beverage Operator at any time. Tenant may not use any vendors other than the Designated Food and Beverage Operator nor

may Tenant supply its own food and/or beverages in connection with any food and/or beverage service or catered events held by Tenant in the Shared Conference Facilities.

Tenant shall, at Tenant's sole cost and expense, (i) be responsible for the set up of the Shared Conference Facilities in connection with Tenant's use (including, without limitation ensuring that Tenant has a sufficient number of chairs and tables and the appropriate equipment), and (ii} surrender the Shared Conference Facilities after each time that Tenant uses the Shared Conference Facilities free of Tenant's personal property, in substantially the same set up and same condition as received, and free of any debris and trash. If Tenant falls to restore and surrender the Shared Conference Facilities as required by sub-section (ii) of the immediately preceding sentence, such failure shall constitute a "S**hared Facilities Default."** Each time that Landlord reasonably determines that Tenant has committed a Shared Facilities Default, Tenant shall be required to pay Landlord a penalty within 5 days after notice from Landlord of such Shared Facilities Default. The penalty payable by Tenant in connection with the first Shared Facilities Default shall be $200. The penalty payable shall increase by $50 for each subsequent Shared Facilities Default (for the avoidance of doubt, the penalty shall be $250 for the second Shared Facilities Default, shall be $300 for the third Shared Facilities Default, etc.). In addition to the foregoing, Tenant shall be responsible for reimbursing The Alexandria Landlord, the Campus Point Landlord or Landlord, as applicable, for all costs expended by The Alexandria Landlord, the Campus Point Landlord or Landlord, as applicable, in repairing any damage to the Shared Conference Facilities, the Alexandria Regional Amenities, The Alexandria or the Campus Point Project caused by Tenant or any Tenant Related Party. The provisions of this Section 40(c) shall survive the expiration or earlier termination of this Lease.

(d) **Rules and Regulations.** Tenant shall be solely responsible for paying for any and all ancillary services (e.g., audio visual equipment) provided to Tenant, all food services operators and any other third party vendors providing services to Tenant at The Alexandria or the Campus Point Project. Tenant shall use the Alexandria Regional Amenities (including, without limitation, The Alexandria Shared Conference Facilities and the Campus Point Shared Conference Facilities) in compliance with all applicable Legal Requirements and any rules and regulations imposed by The Alexandria .Landlord or the Campus Point Landlord, respectively, or Landlord from time to time and in a manner that will not interfere with the rights of other Users. The use of the Alexandria Regional Amenities other than the Shared Conference Facilities by employees of Tenant shall be in accordance with the terms and conditions of the standard licenses, Indemnification and waiver agreement required by The Alexandria Landlord, the Campus Point Landlord or any operator of the Alexandria Regional Amenities, as applicable, to be executed by all persons wishing to use such Alexandria Regional Amenities. Neither The Alexandria Landlord, the Campus Point Landlord nor Landlord (nor, if applicable, any other affiliate of Landlord) shall have any liability or obligation for the breach of any rules or regulations by other Users with respect to the Alexandria Regional Amenities. Tenant shall not make any alterations, additions, or improvements of any kind to any of the Alexandria Regional Amenities, The Alexandria or the Campus Point Project.

Tenant acknowledges and agrees that The Alexandria Landlord and the Campus Point Landlord, shall have the right at any time and from time to time to reconfigure, relocate, modify or remove any of the Alexandria Regional Amenities at The Alexandria or the Campus Point Project, respectively, and/or to revise, expand or discontinue any of the services (if any) provided in connection with the Alexandria Regional Amenities.

(e) **Waiver of Liability and Indemnification.** Tenant warrants that It will use reasonable care to prevent damage to property and injury to persons while on The Alexandria or the Campus Point Project. Tenant waives any claims it or any Tenant Parties may have against any ARE Parties relating to, arising out of or in connection with the use by Tenant and/or any Tenant Parties of the Alexandria Regional Amenities and any entry by Tenant and/or_ any Tenant Parties onto The Alexandria of the Campus Point Project, and Tenant releases and exculpates all ARE Parties from any liability relating to, arising out of or in connection with the Alexandria Regional Amenities and any entry by Tenant and/or any Tenant Parties onto The Alexandria and/or the Campus Point Project, except, in each case, to the extent caused by the willful misconduct or gross negligence of any ARE Party. Tenant hereby agrees to indemnify, defend, and hold harmless the ARE Parties from any claim of damage to property or injury to person relating to, arising out of or In connection with (i) the use of the Alexandria Regional Amenities by Tenant or any Tenant Parties, and (ii) any entry by Tenant and/or any Tenant Parties onto The Alexandria and/or the Campus Point Project, except to the extent caused by the willful misconduct or negligence of any ARE Party. The provisions of this Section 40 shall survive the expiration or earlier termination of this Lease.

(f) **Insurance.** As of the Commencement Date, Tenant shall cause The Alexandria

Landlord and the Campus Point Landlord to be named as additional insureds under the commercial general liability policy of insurance that Tenant is required to maintain pursuant to Section 17 of this Lease.

41. **Landlord's Right to Relocate Tenant.** Landlord shall have the right to relocate Tenant, upon 90 days' prior written notice, from all or part of the Premises to another area in. th.e Project designated by Landlord (the **"Relocation Premises"),** provided that: (a) the size of the Relocation Premises is at least equal to the size of the Premises, and (b) Landlord pays the reasonable costs of moving Tenant and improving the Relocation Premises to a substantially similar standard as that of the. Premises, and reimburses Tenant for all reasonable costs directly incurred by Tenant as a result of relocation, including without limitation all costs incurred by Tenant replacing Tenant's letterhead, promotional materials, business cards and similar items. Tenant shall cooperate with Landlord in all reasonable ways to facilitate relocation.

42. **Miscellaneous.**

(a) **Notices.** All notices or other communications between the parties shall be in writing and shall be deemed duly given upon delivery or refusal to accept delivery by the addressee thereof if delivered in person, or upon actual receipt If delivered by reputable overnight guaranty courier, addressed and sent to the parties at their addresses set forth above. Landlord and Tenant may from time to time by written notice to the other designate another address for receipt of future notices.

(b) **Joint and Several Liability.** If and when included within the term **"Tenant,"** as used in this instrument, there is more than one person or entity, each shall be jointly and severally liable for the obligations of Tenant.

(c) **Financial Information.** Tenant shall furnish Landlord with true and complete copies of {i) Tenant's most recent unaudited (or the extent available, audited) annual financial statements within 90 days of the end of each of Tenant's fiscal years during the Term, (ii) Tenant's most recent unaudited quarterly financial statements within 45 days of the end of each of Tenant's first three fiscal quarters of each of Tenant's fiscal years during the Term, (iii) at Landlord's request from time to time (but no more than once per year), updated business p[ans, including cash flow projections and/or proforma balance sheets and income statements, all of which shall be treated by Landlord as confidential information belonging to Tenant, (iv) corporate brochures and/or profiles prepared by Tenant for prospective investors, and (v) any other financial information or summaries that Tenant typically provides to its lenders or shareholders. So long as Tenant is a "public company" and Its financial information is publicly available, then the foregoing delivery requirements of this Section 42(c) shall not apply.

(d) **Recordation.** Neither this Lease nor a memorandum of lease shall be filed by or on behalf of Tenant in any public record. Landlord may prepare and file, and upon request by Landlord Tenant will execute, a memorandum of lease.

(e) **Interpretation.** The normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Lease or any exhibits or amendments hereto. Words of any gender used in this Lease shall be held and construed to include any other gender, and words in the singular number shall be held to include the plural, unless the context otherwise requires. The captions inserted in this Lease are for convenience only and in no way define, limit or otherwise describe the scope or intent of this Lease, or any provision hereof, or in any way affect the interpretation of this Lease.

(f) **Not Binding Until Executed.** The submission by Landlord to Tenant of this Lease shall have no binding force or effect, shall not constitute an option for the leasing of the Premises, nor confer any right or impose any obligations upon either party until execution of this Lease by both parties.

(g) **Limitations on Interest.** It is expressly the intent of Landlord and Tenant at all times to comply with applicable law governing the maximum rate or amount of any interest payable on or in connection with this Lease. If applicable law is ever judicially interpreted so as to render usurious any interest called for under this Lease, or contracted for, charged, taken, reserved, or received with

respect to this Lease, then it is Landlord's and Tenant's express Intent that all excess amounts theretofore collected by Landlord be credited on the applicable obligation (or, if the obligation has been or would thereby be paid In full, refunded to Tenant), and the provisions of this Lease immediately shall be deemed reformed and the amounts thereafter collectible hereunder reduced, without the necessity of the execution of any new document, so as to comply with the applicable law1 but so as to permit the recovery of the fullest amount otherwise called for hereunder.

(h) **Choice of Law.** Construction and interpretation of this Lease shall be governed by the internal laws of the state in which the Premises are located, excluding any principles of conflicts of laws.

(i) **Time.** Time is of the essence as to the performance of Tenant's obligations under this Lease.

U) **OFAC.** Tenant and Landlord are currently (a) in compliance with and shall at all times during the Term of this Lease remain in compliance with the regulations of the Office of Foreign Assets Control **("OFAC")** of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the **"OFAC Rules"),** (b) not listed on, and shall not during the term of this Lease be listed on, the Specially Designated Nationals and Blocked Persons List, Foreign Sanctions Evaders List, or the Sectoral Sanctions Identification List, which are all maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

(k) **Incorporation by Reference.** All exhibits and addenda attached hereto are hereby Incorporated into this Lease and made a part hereof. If there is any conflict between such exhibits or addenda and the terms of this Lease, such exhibits or addenda shall control.

(I) **Entire Agreement.** This Lease, including the exhibits attached hereto, constitutes the entire agreement between Landlord and Tenant pertaining to the subject matter hereof and supersedes all prior and contemporaneous agreements, understandings, letters of intent, negotiations and discussions, whether oral or written, of the parties, and there are no warranties, representations or other agreements, express or implied, made to either party by the other party in connection with the subject matter hereof except as specifically set forth herein.

(m) **No Accord and Satisfaction.** No payment by Tenant or receipt by Landlord of a lesser amount than the monthly installment of any Rent will be other than on account of the earliest stipulated Rent, nor will any endorsement or statement on any check or letter accompanying a check for payment of Rent be an accord and satisfaction. Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or to pursue any other remedy provided in this Lease.

(n) **Hazardous Activities.** Notwithstanding any other provision of this Lease, Landlord, for itself and its employees, agents and contractors, reserves the right to refuse to perform any repairs or services in any portion of the Premises which, pursuant to Tenant's routine safety guidelines, practices or custom or prudent industry practices, require any form of protective clothing or equipment other than safety glasses. In any such case, Tenant shall contract with parties who are acceptable to Landlord, in Landlord's reasonable discretion, for all such repairs and services, and Landlord shall, to the extent required, equitably adjust Tenant's Sh re of Operating Expenses rn respect of such repairs or services to reflect that Landlord is not providing such repairs or services to Tenant.

(o) **Redevelopment of Project.** Tenant acknowledges that Landlord, in its sole discretion, may from time to time expand, renovate and/or reconfigure the Project as the same may exist from time to time and, in connection therewith or in addition thereto, as the case may be, from time to time without limitation: (a) change the shape, size, location, number and/or extent of any improvements, buildings, structures, lobbies, hallways, entrances, exits, parking and/or parking areas relative to any portion of the Project; (b) modify, eliminate and/or add any buildings, improvements, and parking structure(s) either above or below grade, to the Project, the Common Areas and/or any other portion of the Project and/or make any other changes thereto affecting the same; and (c) make any other changes, additions and/or deletions in any way affecting the Project and/or any portion thereof as

Landlord may elect from time to time, Including without limitation, additions to and/or deletions from the land comprising the Project, the Common Areas and/or any other portion of the Project. Notwithstanding anything to the contrary contained in this Lease, Tenant shall have no right to seek damages (including abatement of Rent) or to cancel or terminate this Lease because of any proposed changes, expansion, renovation or reconfiguration of the Project nor shall Tenant have the right to restrict, inhibit or prohibit any such changes, expansion, renovation or reconfiguration; provided, however, Landlord shall not change the size, dimensions, location or Tenant's Permitted Use of the Premises. Landlord shall use reasonable efforts to cause the redevelopment contemplated pursuant to this Section 45(0) to be performed in a manner that does not materially and adversely affect Tenant's beneficial use and occupancy of the Premises and/or access to or use of parking at the Project, other than on a temporary basis while construction and related work may be ongoing. No expansion, renovation and/or reconfiguring of the Project pursuant to this paragraph will result In Tenant having fewer parking spaces available for its use other than on a temporary basis while construction and related work may be ongoing, and during such periods Landlord shall provide substitute parking in reasonable proximity to the Project.

(p) **Discontinued Use.** If, at any time following the Commencement Date, Tenant .does not continuously operate Its business in the Premises for a period of 90 consecutive days, Landlord may, but is not obligated to, elect to terminate this Lease upon 30 days' written notice to Tenant, whereupon this Lease shall terminate'30 days' after Landlord's delivery of such written notice **("Termination Date"),** and Tenant shall vacate the Premises and deliver possession thereof to Landlord in the condition required by the terms of this Lease on or before the Termination Date and Tenant shall have no further obligations under this Lease except for those accruing prior to the Termination Date and those which, pursuant to the terms of the Lease, survive the expiration or early termination of the Lease.

(q) **EV Charging Stations.** Landlord shall not unreasonably withhold its consent to Tenant's written request to install 1 or more electric vehicle car charging stations **("EV Stations")** in the parking area serving the Project; provided, however, that Tenant complies with all reasonable requirements, standards1 rules and regulations which may be imposed by Landlord, at the time Landlord's consent is granted, in connection with Tenant's installation, maintenance, repair and operation of such EV Stations, which may include, without limitation, the charge to Tenant of a reasonable monthly rental amount for the parking spaces used by Tenant for such EV Stations, Landlord's designation of the location of Tenant's EV Stations, and Tenant's payment of all costs whether incurred by Landlord or Tenant in connection with the installation, maintenance, repair and operation of each Tenant's EV Station(s). Nothing contained In this paragraph is Intended to increase the number of parking spaces which Tenant is otherwise entitled to use at the Project under Section 10 of this Lease nor impose any additional obligations on Landlord with respect to Tenant's parking rights at the Project.

(r) **California Accessibility Disclosure.** For purposes of Section 1938(a) of the California Civil Code, Landlord hereby discloses to Tenant, and Tenant hereby acknowledges, that the Project has not undergone inspection by a Certified Access Specialist (CASp). In addition, the following notice is hereby provided pursuant to Section 1938(e) of the California Civil Code: **11**A Certified Access Specialist (CASp) can inspect the subject premises and determine whether the subject premises comply with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the subject premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the subject premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction ..,related accessibility standards within the premises." In furtherance of and in connection with such notice: (i) Tenant, having read such notice and understanding Tenant's right to request and obtain a CASp inspection, hereby elects not to obtain such CASp inspection and forever waives its rights to obtain a CASp inspection with respect to the Premises, Building and/or Project to the extent permitted by Legal Requirements; and (ii) if the waiver set forth in clause (i) hereinabove is not enforceable pursuant to Legal Requirements, then Landlord and Tenant hereby agree as follows (which constitutes the mutual agreement of the parties as to the matters described in the last sentence of the foregoing notice): (A) Tenant shall have the one-time right to request for and obtain a CASp inspection, which request must be made, if at all, in a written notice delivered by Tenant to Landlord; (B) any CASp inspection timely requested by Tenant shall be conducted (1) at a time mutually agreed to by Landlord and Tenant, (2) in a professional manner by

a CASp designated by Landlord and without any testing that would damage the Premises, Building or Project in any way, and (3) at Tenant's sole cost and expense, including, without limitation, Tenant's payment of the fee for such CASp inspection, the fee for any reports.prepared by the CASp in connection with such CASp inspection (collectively, the **"CASp Reports")** and all other costs and expenses in connection therewith; (C) the CASp Reports shall be delivered by the CASp simultaneously to Landlord and Tenant; (D) Tenant, at its sole cost and expense, shall be responsible for making any improvements, alterations, modifications and/or repairs *to* or within the Premises to correct violations of construction-related accessibility standards Including, without limitation, any violations disclosed by such CASp inspection; and (E) if such CASp Inspection identifies any improvements, alterations, modifications and/or repairs necessary to correct violations of construction-related accessibility standards relating to those items of the Building and Project located outside the Premises that are Landlord's obligation to repair as set forth In this Lease, then Landlord shall perform such improvements, alterations, modifications and/or repairs as and to .the extent required by Legal Requirements to correct such violations, and Tenant shall reimburse Landlord for the cost of such improvements, alterations, modifications and/or repairs within 1O business days after Tenant's receipt of an invoice therefor from Landlord.

(s) **Counterparts.** This Lease may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature process complying w1th the U.S. federal ESIGN Act of 2000} or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Lease and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

[Signatures on next page]

IN WITNESS WHEREOF, Landlord and Tenant have executed this Lease as of the day and year first above written. TENANT:

TENANT:

SINGULAR GENOMICS SYSTEMS, INC.,
a Delaware corporation

By: _____ Name: Eli Glezer Its: CSO

LANDLORD:

ARE-SD Region NO. 35, LLC,
a Delaware limited liability company

By: Alexandria Real Estate Equities, Inc., a Maryland corporation,
managing member

By: Name: Gary Dean
Its: Senior Vice President – Real Estate Legal Affairs

EXHIBIT A TO LEASE
DESCRIPTION OF PREMISES
[Omitted]

EXHIBIT B TO LEASE
DESCRIPTION OF PROJECT
[Omitted]

EXHIBIT C TO LEASE
INTENTIONALLY OMITTED
[Omitted]

EXHIBIT D TO LEASE
ACKNOWLEDGMENT OF COMMENCEMENT DATE
[Omitted]

EXHIBIT E TO LEASE
RULES AND REGULATIONS
[Omitted]

EXHIBIT F TO LEASE
TENANT'S PERSONAL PROPERTY
[Omitted]

EXHIBIT G TO LEASE
MAINTENANCE OBLIGATIONS
[Omitted]

EXHIBIT H TO LEASE
CONTROL AREAS
[Omitted]

FIRST AMENDMENT TO LEASE

THIS FIRST AMENDMENT TO LEASE (this **"First Amendment")** is made as of February 24**,** 2020, by and between **ARE..SD REGION NO. 35, LLC,** a Delaware limited liability company **("Landlord"),** and **SINGULAR GENOMICS SYSTEMS, INC.,** a Delaware corporation **("Tenant").**

RECITALS

A.Landlord and Tenant entered into that certain Lease Agreement dated as of November 15, 2019 (the **"Lease").** Pursuant to the Lease, Tenant leases certain premises consisting of approximately 15,796 rentable square feet **("Premises")** in a building located at 3033 Science Park Road, San Diego, California. The Premises are more particularly described in the Lease. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

B. Landlord and Tenant desire to amend the Lease as provided in this First Amendment.

NOW, THEREFORE, in consideration of the foregoing Recitals, which are incorporated herein by this reference, the mutual promises and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. **Long Term Lease.** As of the date of this First Amendment, the final paragraph of Section 2(c} of the Lease Is hereby deleted in its entirety and replaced with the following:

"(c) Notwithstanding anything to the contrary contained in this Lease, Tenant and Landlord acknowledge and agree that if, for any reason, Tenant and Landlord (or an affiliate of Landlord) have not mutually entered into a long term lease agreement pursuant to which Tenant will lease a minimum of 70,000 rentable square feet of space from Landlord (or an affiliate of Landlord) at a project owned by Landlord (or an affiliate of Landlord) in. the San Diego area **("Long Term Lease")** on or before May 30_1 2020, which Long Term Lease shall be on terms and conditions reasonably acceptable to Landlord (or Landlord's affiliate) and Tenant, then this Lease shall automatically terminate on May 30, 2020. If the Lease is so terminated pursuant to this paragraph, Tenant shall voluntarily surrender the Premises on such date in accordance with all surrender requirements contained in the Lease and in the condition in which Tenant is required to surrender the Premises as of the expiration of the.Lease, Tenant shall have no further rights of any kind with respect to the any portion of the Premises and neither Landlord nor Tenant shall have any further rights, duties or obligations under this Lease, except with respect to provisions which expressly survive termination of this Lease. Landlord shall have no liability whatsoever to Tenant relating to or arising from the failure of the Long Term Lease to be entered into."

2. **OFAC.** Tenant and Landlord are currently (a) in compliance with and shall at all times during the Term of the Lease remain in compliance with the regulations of the Office of Foreign Assets Control **("OFAC")** of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectlvely$_1$ the **"OFAC Rules"),** (b) not listed on, and shall not during the Term of the Lease be listed on, the Specially Designated Nationals and Blocked Persons List maintained by OFAC and/or on any other similar, list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

3. **California Accessibility Disclosure.** Section 42(r) of the Lease is hereby incorporated into this First Amendment by reference.

4. **Brokers.** Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, **"Broker")** in connection with the transaction reflected in this Fourth Amendment and that no Broker brought about this transaction, other

than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Jnc. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Inc. claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction.

5. Miscellaneous.

a. This First Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. This First Amendment may be amended only by an agreement in writing, signed by the parties hereto.

b. This First Amendment is binding upon and shall Inure to the benefit of the parties hereto, their respective agents, employees, representatives, officers, directors, divisions, subsidiaries, affillates, assigns, heirs, successors in interest and shareholders.

c. This Fourth Amendment may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Fourth Amendment and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

d. Except as amended and/or modlfied by this First Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this First Amendment. In the event of any conflict between the provisions of this First Amendment and the provisions of the Lease, the provisions of this First Amendment shall prevail. Whether or not speclfically amended by this First Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this First Amendment.

[Signatures are on the next page]

IN WITNESS WHEREOF, the parties hereto have executed this First Amendment as of the day and year first above written.

TENANT:

SINGULAR GENOMICS SYSTEMS, INC.,
a Delaware corporation

By: _ Name: Drew Spaventa Its: CEO

LANDLORD:

ARE-SD Region No. 35, LLC,
a Delaware limited liability company

By: Alexandria Real Estate Equities, Inc., a Maryland corporation,
managing member

By: _ Name: Gary Dean
Its: Senior Vice President – Real Estate Legal Affairs

SECOND AMENDMENT TO LEASE

THIS SECOND AMENDMENT TO LEASE (this "Second Amendment") is made as of May 7, 2020, by and between ARE-SD REGION NO. 35, LLC, a Delaware limited liability company ("Landlord"), and SINGULAR GENOMICS SYSTEMS, INC., a Delaware corporation ("Tenant").

RECITALS

A.Landlord and Tenant entered into that certain Lease Agreement dated as of November 15, 2019, as amended by that certain First Amendment to Lease dated as of February 24, 2020 (as amended, the "Lease"). Pursuant to the Lease, Tenant leases certain premises consisting of approximately 15,796 rentable square feet ("Premises") in a building located at 3033 Science Park Road, San Diego, California. The Original Premises are more particularly described in the Lease. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

B. Landlord and Tenant desire to amend the Lease as provided in this Second Amendment.

NOW, THEREFORE, in consideration of the foregoing Recitals, which are incorporated herein by this reference, the mutual promises and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. Long Term Lease. As of the date of this Second Amendment, the final paragraph of Section 2(c) of the Lease is hereby deleted in its entirety and replaced with the following:

> "(c) Notwithstanding anything to the contrary contained in this Lease, Tenant and Landlord acknowledge and agree that if, for any reason, Tenant and Landlord (or an affiliate of Landlord) have not mutually entered into a long term lease agreement pursuant to which Tenant will lease a minimum of 70,000 rentable square feet of space from Landlord (or an affiliate of Landlord) at a project owned by Landlord (or an affiliate of Landlord) in the San Diego area ("Long Term Lease") on or before December 31, 2020, which Long Term Lease shall be on terms and conditions reasonably acceptable to Landlord (or Landlord's affiliate) and Tenant, then this Lease shall automatically terminate on December 31, 2020. If the Lease is so terminated pursuant to this paragraph, Tenant shall voluntarily surrender the Premises on such date in accordance with all surrender requirements contained in the Lease and in the condition in which Tenant is required to surrender the Premises as of the expiration of the Lease, Tenant shall have no further rights of any kind with respect to the any portion of the Premises and neither Landlord nor Tenant shall have any further rights, duties or obligations under this Lease, except with respect to provisions which expressly survive termination of this Lease. Landlord shall have no liability whatsoever to Tenant relating to or arising from the failure of the Long Term Lease to be entered into."

2. OFAC. Tenant and Landlord are currently (a) in compliance with and shall at all times during the Term of the Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("OFAC") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "OFAC Rules"), (b) not listed on, and shall not during the Term of the Lease be listed on, the Specially Designated Nationals and Blocked Persons List maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

3. **Brokers.** Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, **"Broker")** in connection with the transaction reflected in this Second Amendment. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction.

4. **Miscellaneous.**

a. This Second Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written

agreements and discussions. Tbis Second Amendment may be amended only by an agreement in writing, signed by the parties hereto.

b. This Second Amendment is binding upon and shall inure to the benefit of the parties hereto, their respective agents, employees, representatives, officers, directors, divisions, subsidiaries, affiliates, assigns, heirs, successors in interest and shareholders.

c. This Second Amendment may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Second Amendment and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

d. Except as amended and/or modified by this Second Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this Second Amendment. In the event of any conflict between the provisions of this Second Amendment and the provisions of the Lease, the provisions of this Second Amendment shall prevail. Whether or not specifically amended by this Second Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this Second Amendment.

[Signatures are on the next page]

IN **WITNESS WHEREOF,** the patties hereto have executed this Second Amendment as of the day and year first above written.

TENANT:

SINGULAR GENOMICS SYSTEMS, INC.,
a Delaware corporation

By: _ Name: Drew Spaventa Its: CEO

LANDLORD:

ARE-SD Region No. 35, LLC,
a Delaware limited liability company

By: Alexandria Real Estate Equities, Inc., a Maryland corporation,
managing member

By: __ Name: Gary Dean
Its: Senior Vice President – Real Estate Legal Affairs

THIRD AMENDMENT TO LEASE

THIS THIRD AMENDMENT TO LEASE (this **"Third Amendment")** is made as of June 19, 2020, by and between **ARE-SD REGION NO. 35, LLC,** a Delaware limited liability company **("Landlord"),** and **SINGULAR GENOMICS SYSTEMS, INC.,** a Delaware corporation **("Tenant").**

RECITALS

A.Landlord and Tenant entered into that certain Lease Agreement dated as of November 15, 2019, as amended by that certain First Amendment to Lease dated as of February 24, 2020, and as further amended by that certain Second Amendment to Lease dated as of May 7, 2020 (as amended, the **"Lease").** Pursuant to the Lease, Tenant leases certain premises consisting of approximately 15,796 rentable square feet (the **"Original Premises")** in a building located at 3033 Science Park Road, San Diego, California. The Original Premises are more particularly described in the Lease. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

B.Landlord and Tenant desire, subject to the terms and conditions set forth below, to amend the Lease to, among other things, expand the size of the Original Premises by adding that certain space in the Building commonly known as Suite A, containing approximately 12,685 rentable square feet, as more particularly described on **Exhibit A** attached hereto (the **"Expansion Premises").**

NOW, THEREFORE, in consideration of the foregoing Recitals, which are incorporated herein by this reference, the mutual promises and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. **Expansion Premises.** In addition to the Original Premises, commencing on the Expansion Premises Commencement Date (as defined in Section 2 below), Landlord leases to Tenant and Tenant leases from Landlord, the Expansion Premises,

2. **Delivery.** Landlord shall use reasonable efforts to deliver the Expansion Premises to Tenant **("Delivery"** or **"Deliver")** on or before the Target Expansion Premises Commencement Date. If Landlord fails to timely Deliver the Expansion Premises, Landlord shall not be liable to Tenant for any loss or damage resulting therefrom, and the Lease with respect to the Expansion Premises shall not be void or voidable.

The **"Expansion Premises Commencement Date"** shall be the date Landlord Delivers the Expansion Premises to Tenant. The **"Target Expansion Premises Commencement Date"** shall be January 1, 2022. Upon the request of Landlord, Tenant shall execute and deliver a written acknowledgment of the Expansion Premises Commencement Date in the form of the "Acknowledgement of Expansion Premises Commencement Date" attached to the Lease as **Exhibit B:** provided, however, Tenant's failure to execute and deliver such acknowledgment shall not affect Landlord's rights hereunder.

Except as set forth in this Third Amendment: (i) Tenant shall accept the Expansion Premises In their "as-is" condition as of the Expansion Premises Commencement Date; (ii) Landlord shall have no obligation for any defects in the Expansion Premises; and (iii) Tenant's taking possession of the Expansion Premises shall be conclusive evidence that Tenant accepts the Expansion Premises and that the Expansion Premises were in good condition at the time possession was taken.

During the Term, Tenant shall have the right to use, at no additional cost, the furniture, fixtures and equipment, if any, belonging lo Landlord located in the Expansion Premises as of the Expansion Premises Commencement Date **("Landlord's Expansion Premises Furniture").** Tenant shall have no right to *remove* any of Landlord's Expansion Premises Furniture from the Expansion Premises at any time during the Term. Tenant shall use reasonable efforts to maintain Landlord's Expansion Premises Furniture and return the same to Landlord at the expiration or earlier termination of the Term in the same condition as received by Tenant, subject to ordinary wear and tear.

Tenant agrees and acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of all or any portion of the Expansion Premises, and/or the suitability of the Expansion Premises for the conduct of Tenant's business, and Tenant waives any implied warranty that the Expansion Premises are suitable for the Permitted Use.

3. **Premises and Building.** Commencing on the Expansion Premises Commencement Date, the defined terms for **"Premises"** and **"Rentable Area of Premises"** on page 1 of the Lease are deleted in their entirety and replaced with the following:

> **"Premises:** That portion of the Building (i) commonly known as Suite F, containing approximately 3,722 rentable square feet (the **"Initial Premises"),** (ii) commonly known as Suite B and Suite C, containing approximately 12,074 rentable square feet **("Subsequent Premises"),** and (iii) commonly known as Suite A, containing approximately 12,685 rentable square feet **("Expansion Premises"),** all as determined by Landlord, as shown on **Exhibit A."**
>
> **"Rentable Area of Premises:** 28,481 sq. ft."

As of the Expansion Premises Commencement Date, **Exhibit A** to the Lease shall be amended to include the Expansion Premises described on **Exhibit A** attached to this Third Amendment.

4. **Base Rent.**

(a) **Original Premises.** Tenant shall continue to pay Base Rent with respect to the Original Premises through the expiration dale of the Lease.

(b) **Expansion Premises.** Beginning on the Expansion Premises Commencement Date, Tenant shall (in addition to Base Rent for the Original Premises) commence paying Base Rent for the Expansion Premises at the rate of $60.00 per rentable square foot of the Expansion Premises per year, and the same shall be automatically increased on each anniversary of the Expansion Premises Commencement Date by the Rent Adjustment Percentage (i.e., 3%).

5. **Tenant's Share.** Commencing on the Expansion Premises Commencement Date, the defined term **"Tenant's Share of Operating Expenses of Building"** on page 1 of the Lease is deleted in its entirety and replaced with the following:

"Tenant's Share of Operating Expenses of Building: 27.67% (3.62% with respect to the Initial Premises, 11.73% with respect to the Subsequent Premises and 12.32% with respect to the Expansion Premises)"

6. **Base Term.** Commencing on the Expansion Premises Commencement Date, the defined term **"Base Term"** on page 1 of the Lease is deleted in its entirety and replaced with the following:

> **"Base Term:** Beginning (i) with respect to the Initial Premises on the Commencement Date, (ii) with respect to the Subsequent Premises on the Subsequent Premises Commencement Date, and (iii) with respect to the Expansion Premises on the Expansion Premises Commencement Date, and ending on the date that is 30 days after the Commencement Date (as defined in the Long Term Lease) of the Long Term Lease."

7. **Regional Amenities.** Tenant shall continue paying the Amenities Fee with respect to the Original Premises as provided in the Lease through the expiration date of the Lease. Commencing on the Expansion Premises Commencement Date, the terms of Section 40 of the Lease shall apply with respect to the Expansion Premises and Tenant shall commence paying the Amenities Fee with respect to the Expansion Premises at the same rate per rentable square foot that Tenant is then paying with respect to the Original Premises (as adjusted pursuant to Section 40(b) of the Lease).

8. **Control Areas.** Notwithstanding anything to the contrary contained in the Lease, commencing on the Expansion Premises Commencement Date, Tenant shall have the use of 100% of the control area designated as 2A on **Exhibit C** attached hereto, in connection with its occupancy of the Expansion Premises.

9. **Parking.** In addition to the parking spaces allocated to Tenant with respect to the Original Premises pursuant to Section 10 of the Lease, Tenant shall have the right to' use, subject to the terms of Section 10 of the Lease, an additional 2.5 parking spaces per 1,000 rentable square feet of the Expansion Premises.

10. **Hazardous Materials Storage Area.** In connection with its use of the Premises, Tenant shall have the right, during the Term, to the use of the area shown on **Exhibit D** attached to this Third Amendment **("Tenant's HazMat Safety Storage Area")** for the storage of Tenant's Hazardous Materials waste and other Hazardous Materials. Tenant shall maintain appropriate records, obtain and maintain appropriate insurance, implement reporting procedures, and take or cause to be taken all other actions necessary or required under applicable state and federal Legal Requirements in connection with the use of the Tenant's HazMat Safety Storage Area. Tenant shall, at Tenant's sole cost and expense, surrender Tenant's HazMat Safety Storage Area free of any debris and trash and free of any Hazardous Materials in accordance with the requirements of Section 28 of this Lease, normal wear and tear excluded.

11. **OFAC.** Tenant and Landlord are currently (a) in compliance with and shall at all times during the Term of the Lease remain in compliance with the regulations of the Office of Foreign Assets Control **("OFAC")** of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the **"OFAC Rules"),** (b) not listed on, and shall not during the Term of the Lease be listed on, the Specially Designated Nationals and Blocked Persons List maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

12. **California Accessibility Disclosure.** Section 42(r) of the Lease is hereby incorporated into this Third Amendment by reference.

13. **Brokers.** Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, **"Broker")** in connection with the transaction reflected in this Fourth Amendment and that no Broker brought about this transaction, other than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Inc. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Inc., claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction.

14. **Miscellaneous.**

a. This Third Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. This Third Amendment may be amended only by an agreement in writing, signed by the parties hereto.

b. This Third Amendment is binding upon and shall inure to the benefit of the parties hereto, their respective agents, employees, representatives, officers, directors, divisions, subsidiaries, affiliates, assigns, heirs, successors in interest and shareholders.

c. This Third Amendment may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly

delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Third Amendment and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

d. Except as amended and/or modified by this Third Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this Third Amendment. In the event of any conflict between the provisions of this Third Amendment and the provisions of the Lease, the provisions of this Third Amendment shall prevail. Whether or not specifically amended by this Third Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this Third Amendment.

[Signatures are on the next page]

IN WITNESS WHEREOF, the parties hereto have executed this Third Amendment as of the day and year first above written.

TENANT:

SINGULAR GENOMICS SYSTEMS, INC.,
a Delaware corporation

By: _ Name: Drew Spaventa Its: CEO

LANDLORD:

ARE-10933 NORTH TORREY PINES, LLC,
a Delaware limited liability company

By: Alexandria Real Estate Equities, Inc., a Maryland corporation,
managing member

By: _ Name: Gary Dean
Its: Senior Vice President – Real Estate Legal Affairs

EXHIBIT A
Expansion PREMISES
[Omitted]

EXHIBIT B
Acknowledgment of Expansion Premises Commencement Date

[Omitted]

EXHIBIT C
Expansion Premises Control Areas

[Omitted]

EXHIBIT D
Tenant's Hazmat Safety Storage Area

[Omitted]

FOURTH AMENDMENT TO LEASE

THIS FOURTH AMENDMENT TO LEASE (this "**Fourth Amendment**") is made as of April 20, 2021, by and between **ARE-SD REGION NO. 35, LLC**, a Delaware limited liability company ("**Landlord**"), and **SINGULAR GENOMICS SYSTEMS, INC.**, a Delaware corporation ("**Tenant**").

RECITALS

A.Landlord and Tenant entered into that certain Lease Agreement dated as of November 15, 2019, as amended by that certain First Amendment to Lease dated as of February 24, 2020, as further amended by that certain Second Amendment to Lease dated as of May 7, 2020, and as further amended by that certain Third Amendment to Lease dated as of June 19, 2020 (as amended, the "**Lease**"). Pursuant to the Lease, Tenant leases certain premises consisting of approximately 28,481 rentable square feet (the "**Existing Premises**") in a building located at 3033 Science Park Road, San Diego, California. The Existing Premises are more particularly described in the Lease. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

B.Tenant has entered into a Lease Agreement dated as of June 26, 2020 with ARE-SD REGION NO. 27, LLC for the lease of certain premises consisting of approximately 76,778 rentable square feet in a building located at 3010 Science Park Road, San Diego, California (the "**Long Term Lease**").

C.The Term of the Lease is scheduled to expire on the date that is 30 days after the Commencement Date (as defined in the Long Term Lease) (the "**Existing Expiration Date**").

D.Landlord and Tenant desire, subject to the terms and conditions set forth below, to amend the Lease to, among other things, (i) extend the term of the Lease through twenty-four months following the Existing Expiration Date (the "**Fourth Amendment Expiration Date**"), and (ii) expand the size of the Existing Premises by adding certain space in the Building commonly known as (a) Suite 250, containing approximately 5,749 rentable square feet, as more particularly described on **Exhibit A-1** attached hereto (the "**250 Expansion Premises**"), and (b) Suite 260, containing approximately 3,183 rentable square feet, as more particularly described on **Exhibit A-2** attached hereto (the "**260 Expansion Premises**").

NOW, THEREFORE, in consideration of the foregoing Recitals, which are incorporated herein by this reference, the mutual promises and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. **Term**. The Term of the Lease is hereby extended through the Fourth Amendment Expiration Date. Tenant's occupancy of the Premises through the Fourth Amendment Expiration Date shall be on an "as-is" basis, and Landlord shall have no obligation to provide any tenant improvement allowance or make any alterations to the Premises. Tenant shall have no further right to extend the term of the Lease.

2. **250 Expansion**,

a.250 Expansion Premises. In addition to the Existing Premises, commencing on the 250 Expansion Premises Commencement Date (as defined in Section 2(b) below), Landlord shall lease to Tenant and Tenant shall lease from Landlord, the 250 Expansion Premises.

b.Delivery of 250 Expansion Premises. Landlord shall use reasonable efforts to deliver the 250 Expansion Premises to Tenant on or before the 250 Target Expansion Premises Commencement Date. If Landlord fails to timely deliver the 250 Expansion Premises, Landlord

shall not be liable to Tenant for any loss or damage resulting therefrom, and the Lease with respect to the 250 Expansion Premises shall not be void or voidable.

The "**250 Expansion Premises Commencement Date**" shall be the date Landlord delivers the 250 Expansion Premises to Tenant. The "**250 Target Expansion Premises Commencement Date**" shall be December 1, 2021. Upon the request of Landlord, Tenant shall execute and deliver a written acknowledgment of the 250 Expansion Premises Commencement Date in the form of the "Acknowledgement of 250 Expansion Premises Commencement Date" attached hereto as **Exhibit B-1**; provided, however, Tenant's failure to execute and deliver such acknowledgment shall not affect Landlord's rights hereunder.

Except as set forth in this Fourth Amendment: (i) Tenant shall accept the 250 Expansion Premises in their "as-is" condition as of the 250 Expansion Premises Commencement Date; (ii) Landlord shall have no obligation for any defects in the 250 Expansion Premises; and (iii) Tenant's taking possession of the 250 Expansion Premises shall be conclusive evidence that Tenant accepts the 250 Expansion Premises and that the 250 Expansion Premises were in good condition at the time possession was taken.

During the Term from and after the 250 Expansion Premises Commencement Date, Tenant shall have the right to use, at no additional cost, the furniture, fixtures and equipment belonging to Landlord located in the 250 Expansion Premises as of the 250 Expansion Premises Commencement Date, as detailed on **Exhibit C-1** attached hereto ("**Landlord's 250 Expansion Premises Furniture**"). Tenant shall have no right to remove any of Landlord's 250 Expansion Premises Furniture from the 250 Expansion Premises at any time during the Term. Tenant shall use reasonable efforts to maintain Landlord's 250 Expansion Premises Furniture and return the same to Landlord at the expiration or earlier termination of the Term in the same condition as received by Tenant, subject to ordinary wear and tear.

Tenant agrees and acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of all or any portion of the 250 Expansion Premises, and/or the suitability of the 250 Expansion Premises for the conduct of Tenant's business, and Tenant waives any implied warranty that the 250 Expansion Premises are suitable for the Permitted Use.

c.Premises and Building in Following 250 Expansion. Commencing on the 250 Expansion Premises Commencement Date, the defined terms for "**Premises**" and "**Rentable Area of Premises**" on page 1 of the Lease are deleted in their entirety and replaced with the following:

> "**Premises:** That portion of the Building (i) commonly known as Suite F, containing approximately 3,722 rentable square feet (the "**Initial Premises**"), (ii) commonly known as Suite B and Suite C, containing approximately 12,074 rentable square feet ("**Subsequent Premises**"), (iii) commonly known as Suite A, containing approximately 12,685 rentable square feet ("**Expansion Premises**"), and (iv) commonly known as Suite 250, containing approximately 5,749 rentable square feet (the "**250 Expansion Premises**"), all as determined by Landlord, as shown on **Exhibit A**."
>
> "**Rentable Area of Premises:** 34,230 sq. ft."

As of the Expansion Premises Commencement Date, **Exhibit A** to the Lease shall be amended to include the Expansion Premises described on **Exhibit A-1** attached to this Fourth Amendment.

d.Tenant's Share Following 250 Expansion. Commencing on the 250 Expansion Premises Commencement Date, the defined term "**Tenant's Share of Operating Expenses of Building**" on page 1 of the Lease is deleted in its entirety and replaced with the following:

> "**Tenant's Share of Operating Expenses of Building:** 33.25% (3.62% with respect to the Initial Premises, 11.73% with respect to the Subsequent Premises, 12.32% with respect to the Expansion Premises, and 5.58% with respect to the 250 Expansion Premises)"

e.Base Term Following 250 Expansion. Commencing on the 250 Expansion Premises Commencement Date, the defined term "**Base Term**" on page 1 of the Lease is deleted in its entirety and replaced with the following:

> "**Base Term:** Beginning (i) with respect to the Initial Premises on the Commencement Date, (ii) with respect to the Subsequent Premises on the Subsequent Premises Commencement Date, (iii) with respect to the Expansion Premises on the Expansion Premises Commencement Date, and (iv) with respect to the 250 Expansion Premises on the 250 Expansion Premises Commencement Date, and ending on Fourth Amendment Expiration Date."

3. 260 Expansion.

a.260 Expansion Premises. In addition to the Existing Premises, commencing on the 260 Expansion Premises Commencement Date (as defined in Section 3(b) below), Landlord shall lease to Tenant and Tenant shall lease from Landlord, the 260 Expansion Premises.

b.Delivery of 260 Expansion Premises. Landlord shall use reasonable efforts to deliver the 260 Expansion Premises to Tenant on or before the 260 Target Expansion Premises Commencement Date. If Landlord fails to timely deliver the 260 Expansion Premises, Landlord shall not be liable to Tenant for any loss or damage resulting therefrom, and the Lease with respect to the 260 Expansion Premises shall not be void or voidable.

The "**260 Expansion Premises Commencement Date**" shall be the date Landlord delivers the 260 Expansion Premises to Tenant. The "**260 Target Expansion Premises Commencement Date**" shall be February 1, 2022. Upon the request of Landlord, Tenant shall execute and deliver a written acknowledgment of the 260 Expansion Premises Commencement Date in the form of the "Acknowledgement of 260 Expansion Premises Commencement Date" attached hereto as **Exhibit B-2**; provided, however, Tenant's failure to execute and deliver such acknowledgment shall not affect Landlord's rights hereunder.

Except as set forth in this Fourth Amendment: (i) Tenant shall accept the 260 Expansion Premises in their "as-is" condition as of the 260 Expansion Premises Commencement Date; (ii) Landlord shall have no obligation for any defects in the 260 Expansion Premises; and (iii) Tenant's taking possession of the 260 Expansion Premises shall be conclusive evidence that Tenant accepts the 260 Expansion Premises and that the 260 Expansion Premises were in good condition at the time possession was taken.

During the Term from and after the 260 Expansion Premises Commencement Date, Tenant shall have the right to use, at no additional cost, the furniture, fixtures and equipment belonging to Landlord located in the 260 Expansion Premises as of the 260 Expansion Premises Commencement Date, as detailed on **Exhibit C-2** attached hereto ("**Landlord's 260 Expansion Premises Furniture**"). Tenant shall have no right to remove any of Landlord's 260 Expansion Premises Furniture from the 260 Expansion Premises at any time during the Term. Tenant shall use reasonable efforts to maintain Landlord's 260 Expansion Premises Furniture and return the

same to Landlord at the expiration or earlier termination of the Term in the same condition as received by Tenant, subject to ordinary wear and tear.

Tenant agrees and acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of all or any portion of the 260 Expansion Premises, and/or the suitability of the 260 Expansion Premises for the conduct of Tenant's business, and Tenant waives any implied warranty that the 260 Expansion Premises are suitable for the Permitted Use.

c.Premises and Building in Following 260 Expansion. Commencing on the 260 Expansion Premises Commencement Date, the defined terms for "**Premises**" and "**Rentable Area of Premises**" on page 1 of the Lease are deleted in their entirety and replaced with the following:

> "**Premises:** That portion of the Building (i) commonly known as Suite F, containing approximately 3,722 rentable square feet (the "**Initial Premises**"), (ii) commonly known as Suite B and Suite C, containing approximately 12,074 rentable square feet ("**Subsequent Premises**"), (iii) commonly known as Suite A, containing approximately 12,685 rentable square feet ("**Expansion Premises**"), (iv) commonly known as Suite 250, containing approximately 5,749 rentable square feet (the "**250 Expansion Premises**"), and (v) commonly known as Suite 260, containing approximately 3,183 rentable square feet (the "**260 Expansion Premises**"), all as determined by Landlord, as shown on **Exhibit A**."
>
> "**Rentable Area of Premises:** 37,413 sq. ft."

As of the Expansion Premises Commencement Date, **Exhibit A** to the Lease shall be amended to include the Expansion Premises described on **Exhibit A-2** attached to this Fourth Amendment.

d.Tenant's Share Following 260 Expansion. Commencing on the 260 Expansion Premises Commencement Date, the defined term "**Tenant's Share of Operating Expenses of Building**" on page 1 of the Lease is deleted in its entirety and replaced with the following:

> "**Tenant's Share of Operating Expenses of Building:** 36.35% (3.62% with respect to the Initial Premises, 11.73% with respect to the Subsequent Premises, 12.32% with respect to the Expansion Premises, 5.58% with respect to the 250 Expansion Premises, and 3.10% with respect to the 260 Expansion Premises)"

e.Base Term Following 260 Expansion. Commencing on the 260 Expansion Premises Commencement Date, the defined term "**Base Term**" on page 1 of the Lease is deleted in its entirety and replaced with the following:

> "**Base Term:** Beginning (i) with respect to the Initial Premises on the Commencement Date, (ii) with respect to the Subsequent Premises on the Subsequent Premises Commencement Date, (iii) with respect to the Expansion Premises on the Expansion Premises Commencement Date, (iv) with respect to the 250 Expansion Premises on the 250 Expansion Premises Commencement Date, and (v) with respect to the 260 Expansion Premises on the 260 Expansion Premises Commencement Date, and ending on Fourth Amendment Expiration Date."

4. **Base Rent**.

a.Existing Premises. Tenant shall continue to pay Base Rent with respect to the Existing Premises through the Existing Expiration Date. Beginning on May 15, 2022, Tenant shall pay Base Rent with respect to the Existing Premises at the rate of $63.60 per rentable square foot of the Existing Premises per year, and beginning on May 15, 2023, the Base Rent with respect to the Existing Premises shall increase to a rate of $65.51 per rentable square foot of the Existing Premises per year.

b.250 Expansion Premises. Beginning on the 250 Expansion Premises Commencement Date, Tenant shall (in addition to Base Rent for the Existing Premises) commence paying Base Rent for the 250 Expansion Premises at the rate of $72.00 per rentable square foot of the 250 Expansion Premises per year, and the same shall be automatically increased on each anniversary of the 250 Expansion Premises Commencement Date by the Rent Adjustment Percentage (i.e., 3%).

c.260 Expansion Premises. Beginning on the 260 Expansion Premises Commencement

Date, Tenant shall (in addition to Base Rent for the Existing Premises and the 250 Expansion Premises) commence paying Base Rent for the 260 Expansion Premises at the rate of $72.00 per rentable square foot of the 260 Expansion Premises per year, and the same shall be automatically increased on each anniversary of the 250 Expansion Premises Commencement Date by the Rent Adjustment Percentage (i.e., 3%).

5. **Regional Amenities**. Tenant shall continue paying the Amenities Fee with respect to the Existing Premises as provided in the Lease through the Fourth Amendment Expiration Date. Commencing on the 250 Expansion Premises Commencement Date, the terms of Section 40 of the Lease shall apply with respect to the 250 Expansion Premises and Tenant shall commence paying the Amenities Fee with respect to the 250 Expansion Premises at the same rate per rentable square foot that Tenant is then paying with respect to the Existing Premises (as adjusted pursuant to Section 40(b) of the Lease). Commencing on the 260 Expansion Premises Commencement Date, the terms of Section 40 of the Lease shall apply with respect to the 260 Expansion Premises and Tenant shall commence paying the Amenities Fee with respect to the 260 Expansion Premises at the same rate per rentable square foot that Tenant is then paying with respect to the Existing Premises (as adjusted pursuant to Section 40(b) of the Lease).

6. **Control Areas**. Notwithstanding anything to the contrary contained in the Lease, commencing on the 250 Expansion Premises Commencement Date, Tenant shall have the use of 100% of the control area designated as Control Area 1 on **Exhibit D** attached hereto, in connection with its occupancy of the 250 Expansion Premises, and commencing on the 260 Expansion Premises Commencement Date, Tenant shall have the use of 16% of the control area designated as Control Area 3 on **Exhibit D** attached hereto, in connection with its occupancy of the 260 Expansion Premises.

7. **Parking**. In addition to the parking spaces allocated to Tenant with respect to the Existing Premises pursuant to the Lease, Tenant shall have the right to use, subject to the terms of Section 10 of the Lease, an additional 2.5 parking spaces per 1,000 rentable square feet of (a) the 250 Expansion Premises beginning on the 250 Expansion Premises Commencement Date, and (b) the 260 Expansion Premises beginning on the 260 Expansion Premises Commencement Date.

8. **Security Deposit**. Tenant shall deposit with Landlord, upon delivery of an executed copy of this Fourth Amendment to Landlord, a security deposit (the "**Security Deposit**") for the performance of all of Tenant's obligations hereunder in the amount of $204,541.30, which Security Deposit shall be in the form of an unconditional and irrevocable letter of credit (the "**Letter of Credit**"): (i)

in form and substance satisfactory to Landlord, (ii) naming Landlord as beneficiary, (iii) expressly allowing Landlord to draw upon it at any time from time to time by delivering to the issuer notice that Landlord is entitled to draw thereunder, (iv) issued by an FDIC-insured financial institution satisfactory to Landlord, and (v) redeemable by presentation of a sight draft in the state of Landlord's choice. If Tenant does not provide Landlord with a substitute Letter of Credit complying with all of the requirements hereof at least 10 days before the stated expiration date of any then current Letter of Credit, Landlord shall have the right to draw the full amount of the current Letter of Credit and hold the funds drawn in cash without obligation for interest thereon as the Security Deposit. The Security Deposit shall be held by Landlord as security for the performance of Tenant's obligations under the Lease. The Security Deposit is not an advance rental deposit or a measure of Landlord's damages in case of Tenant's default. Upon each occurrence of a Default (as defined in Section 20 of the Lease), Landlord may use all or any part of the Security Deposit to pay delinquent payments due under the Lease, future rent damages under California Civil Code Section 1951.2, and the cost of any damage, injury, expense or liability caused by such Default, without prejudice to any other remedy provided herein or provided by law. Landlord's right to use the Security Deposit under this Section 8 includes the right to use the Security Deposit to pay future rent damages following the termination of the Lease pursuant to Section 21(c) of the Lease. Upon any use of all or any portion of the Security Deposit, Tenant shall pay Landlord on demand the amount that will restore the Security Deposit to the amount set forth in this Section 8. Tenant hereby waives the provisions of any law, now or hereafter in force, including, without limitation, California

Civil Code Section 1950.7, which provide that Landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of Rent, to repair damage caused by Tenant or to clean the Premises, it being agreed that Landlord may, in addition, claim those sums reasonably necessary to compensate Landlord for any other loss or damage, foreseeable or unforeseeable, caused by the act or omission of Tenant or any officer, employee, agent or invitee of Tenant. Upon bankruptcy or other debtor-creditor proceedings against Tenant, the Security Deposit shall be deemed to be applied first to the payment of Rent and other charges due Landlord for periods prior to the filing of such proceedings. If Tenant shall fully perform every provision of the Lease to be performed by Tenant, the Security Deposit, or any balance thereof (i.e., after deducting therefrom all amounts to which Landlord is entitled under the provisions of the Lease), shall be returned to Tenant (or, at Landlord's option, to the last assignee of Tenant's interest hereunder) within 90 days after the expiration or earlier termination of the Lease.

If Landlord transfers its interest in the Project or the Lease, Landlord shall either (a) transfer any Security Deposit then held by Landlord to a person or entity assuming Landlord's obligations under this Section 8, or (b) return to Tenant any Security Deposit then held by Landlord and remaining after the deductions permitted herein. Upon such transfer to such transferee or the return of the Security Deposit to Tenant, Landlord shall have no further obligation with respect to the Security Deposit, and Tenant's right to the return of the Security Deposit shall apply solely against Landlord's transferee. The Security Deposit is not an advance rental deposit or a measure of Landlord's damages in case of Tenant's default. Landlord's obligation respecting the Security Deposit is that of a debtor, not a trustee, and no interest shall accrue thereon.

9. **OFAC**. Tenant and Landlord are currently (a) in compliance with and shall at all times during the Term of the Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the Term of the Lease be listed on, the Specially Designated Nationals and Blocked Persons List maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

10. **California Accessibility Disclosure**. Section 42(r) of the Lease is hereby incorporated into this Fourth Amendment by reference.

11. **Brokers**. Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, "**Broker**") in connection with the transaction reflected in this Fourth Amendment and that no Broker brought about this transaction, other than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Inc. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Inc., claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction.

12. **Miscellaneous**.

a.This Fourth Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. This Fourth Amendment may be amended only by an agreement in writing, signed by the parties hereto.

b.This Fourth Amendment is binding upon and shall inure to the benefit of the parties hereto, their respective agents, employees, representatives, officers, directors, divisions, subsidiaries, affiliates, assigns, heirs, successors in interest and shareholders.

c.This Fourth Amendment may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Fourth Amendment and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

d.Except as amended and/or modified by this Fourth Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this Fourth Amendment. In the event of any conflict between the provisions of this Fourth Amendment and the provisions of the Lease, the provisions of this Fourth Amendment shall prevail. Whether or not specifically amended by this Fourth Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this Fourth Amendment.

[Signatures are on the next page]

IN WITNESS WHEREOF, the parties hereto have executed this Fourth Amendment as of the day and year first above written.

TENANT:

SINGULAR GENOMICS SYSTEMS, INC.,
a Delaware corporation

By: _ Name: Drew Spaventa _ Its: CEO

LANDLORD:

ARE-10933 NORTH TORREY PINES, LLC,
a Delaware limited liability company

By: Alexandria Real Estate Equities, Inc., a Maryland corporation,
managing member

By: _ Name: Gary Dean _
Its: Executive Vice President – Real Estate Legal Affairs

EXHIBIT A-1
250 Expansion PREMISES
[Omitted]

EXHIBIT A-2
260 Expansion PREMISES
[Omitted]

EXHIBIT B-1
Acknowledgment of 250 Expansion Premises Commencement Date

[Omitted]

EXHIBIT B-2
Acknowledgment of 260 Expansion Premises Commencement Date

[Omitted]

EXHIBIT C-1
Landlord's 250 Expansion Premises Furniture
[Omitted]

EXHIBIT C-2
Landlord's 260 Expansion Premises Furniture
[Omitted]

EXHIBIT D
Control Areas

[Omitted]

FIFTH AMENDMENT TO LEASE

THIS FIFTH AMENDMENT TO LEASE (this "**Fifth Amendment**") is made as of January _19_, 2022, by and between **ARE-SD REGION NO. 35, LLC**, a Delaware limited liability company ("**Landlord**"), and **SINGULAR GENOMICS SYSTEMS, INC.**, a Delaware corporation ("**Tenant**").

RECITALS

A.Landlord and Tenant entered into that certain Lease Agreement dated as of November 15, 2019, as amended by that certain First Amendment to Lease dated as of February 24, 2020, as further amended by that certain Second Amendment to Lease dated as of May 7, 2020, as further amended by that certain Third Amendment to Lease dated as of June 19, 2020, and as further amended by that certain Fourth Amendment to Lease dated as of April 20, 2021 (as amended, the "**Lease**"). Pursuant to the Lease, Tenant leases certain "**Premises**" consisting of (i) Suites A-C and Suite F, consisting approximately, 28,481 rentable square feet (the "**Suites A-C/F Premises**"), (i) Suite 250, containing approximately 5,749 rentable square feet (the "**Suite 250 Expansion Premises**"), and (iii) Suite 260, containing approximately 3,183 rentable square feet (the "**Suite 260 Expansion Premises**"), all in the building located at 3033 Science Park Road, San Diego, California. The Premises are more particularly described in the Lease. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

B.Concurrently with this Fifth Amendment, Tenant is entering into a new lease with ARE- 10933 North Torrey Pines, LLC, a Delaware limited liability company, an affiliate of Landlord, pursuant to which Tenant will lease those certain to-be-constructed buildings currently referred to as Building 3 and Building 4, containing approximately 205,666 rentable square feet in the aggregate (the "**New Lease**").

C.The Term of the Lease is scheduled to expire on the Fourth Amendment Expiration Date (as defined in the Fourth Amendment).

D.Landlord and Tenant desire, subject to the terms and conditions set forth below, to amend the Lease to, among other things, extend the Term of the Lease with respect to the entire Premises through the date which is 30 days after the Commencement Date (as defined in the New Lease) (the "**Fifth Amendment Expiration Date**").

NOW, THEREFORE, in consideration of the foregoing Recitals, which are incorporated herein by this reference, the mutual promises and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. **Term**. The Term of the Lease with respect to the entire Premises is hereby extended through the Fifth Amendment Expiration Date; provided, however, that in the event the New Lease terminates prior to the Commencement Date (as defined in the New Lease), then the Fifth Amendment Expiration Date shall be amended to be the date that is 180 days after the date on which the New Lease is terminated. Tenant's occupancy of the Premises through the Fifth Amendment Expiration Date shall be on an "as-is" basis, and Landlord shall have no obligation to provide any tenant improvement allowance or make any alterations to the Premises. Tenant shall have no right to extend the Term of the Lease.

2. **Base Rent**.

a.Suites A-C/F Premises. Tenant shall continue to pay Base Rent with respect to the Suites A-C/F Premises as provided under the Lease through the Fourth Amendment Expiration Date; provided, however, that on May 15, 2024, the Base Rent with respect to the Suites A-C/F Premises shall increase to a rate of $67.48 per rentable square foot of the Suites A-C/F Premises

per year, and the same shall be automatically increased on each May 15 thereafter by the Rent Adjustment Percentage (i.e., 3%).

b.Suite 250 Expansion Premises and Suite 260 Expansion Premises. Tenant shall continue to pay Base Rent with respect to the Suite 250 Expansion Premises and the Suite 260 Expansion Premises as provided under the Lease.

3. **Regional Amenities**. Tenant shall continue paying the Amenities Fee with respect to the Premises as provided in the Lease through the Fifth Amendment Expiration Date.

4. **OFAC**. Tenant and Landlord are currently (a) in compliance with and shall at all times during the Term of the Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the Term of the Lease be listed on, the Specially Designated Nationals and Blocked Persons List maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

5. **California Accessibility Disclosure**. Section 42(r) of the Lease is hereby incorporated into this Fifth Amendment by reference.

6. **Brokers**. Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, "**Broker**") in connection with the transaction reflected in this Fifth Amendment and that no Broker brought about this transaction, other than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Inc. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Inc., claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction. Landlord shall be responsible for all commissions due to Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE arising out of the execution of this Fifth Amendment in accordance with the terms of a separate written agreement between Landlord, on the one hand, and Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, on the other hand.

7. **Miscellaneous**.

a.This Fifth Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. This Fifth Amendment may be amended only by an agreement in writing, signed by the parties hereto.

b.This Fifth Amendment is binding upon and shall inure to the benefit of the parties hereto, their respective agents, employees, representatives, officers, directors, divisions, subsidiaries, affiliates, assigns, heirs, successors in interest and shareholders.

c.This Fifth Amendment may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Fifth Amendment and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

d.Except as amended and/or modified by this Fifth Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this Fifth Amendment. In the event of any conflict between the provisions of this Fifth Amendment and the provisions of the Lease, the provisions of this Fifth Amendment shall prevail.

Whether or not specifically amended by this Fifth Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this Fifth Amendment.

[Signatures are on the next page]

IN WITNESS WHEREOF, the parties hereto have executed this Fifth Amendment as of the day and year first above written.

TENANT:

SINGULAR GENOMICS SYSTEMS, INC.,
a Delaware corporation

By: _ Name: Drew Spaventa _ Its: CEO

LANDLORD:

ARE-SD Region No. 35, LLC,
a Delaware limited liability company

By: Alexandria Real Estate Equities, Inc., a Maryland corporation,
managing member

By: _ Name: Gary Dean
Its: Executive Vice President – Real Estate Legal Affairs

SIXTH AMENDMENT TO LEASE

THIS SIXTH AMENDMENT TO LEASE (this "**Sixth Amendment**") is made as of July 19, 2023, by and between **ARE-SD REGION NO. 35, LLC**, a Delaware limited liability company ("**Landlord**"), and **SINGULAR GENOMICS SYSTEMS, INC.**, a Delaware corporation ("**Tenant**").

RECITALS

A. Landlord and Tenant entered into that certain Lease Agreement dated as of November 15, 2019 (the "**Original Lease**"), as amended by that certain First Amendment to Lease dated as of February 24, 2020, as further amended by that certain Second Amendment to Lease dated as of May 7, 2020, as further amended by that certain Third Amendment to Lease dated as of June 19, 2020, as further amended by that certain Fourth Amendment to Lease dated as of April 20, 2021, as further amended by that certain Fifth Amendment to Lease dated as of January 19, 2022 (the "**Fifth Amendment**") (as amended, the "**Lease**"). Pursuant to the Lease, Tenant leases certain premises consisting of approximately 37,413 rentable square feet (the "**Premises**"), consisting of (i) Suites A-C and Suite F containing approximately 28,481 rentable square feet (the "**Suites 200/230/240/270 Premises**"), (ii) suite 250 containing approximately 5,749 rentable square feet (the "**Suite 250 Premises**") and (iii) Suite 260 containing approximately 3,183. Rentable square feet (the "**Suite 260 Premises**"), all in a building located at 3033 Science Park Road, San Diego, California. The Premises are more particularly described in the Lease. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

B. Pursuant to the Fifth Amendment, the Term of the Lease was extended through the date that is 30 days after the Commencement Date of the New Lease (as defined in Recital B of the Fifth Amendment). Concurrently with this Sixth Amendment, Tenant is entering into an Agreement For Termination of Lease (the "**Termination Agreement**") with respect to the New Lease referenced in Recital B of the Fifth Amendment. The effectiveness of such Termination Agreement is expressly conditioned on a certain contingency set forth therein (the "**Termination Contingency**").

D. Subject to the Termination Contingency being satisfied such that the Termination Agreement is effective, Landlord and Tenant desire, subject to the terms and conditions set forth below, to amend the Lease to, among other things, extend the Term of the Lease through October 31, 2036 (the "**Sixth Amendment Expiration Date**").

NOW, THEREFORE, in consideration of the foregoing Recitals, which are incorporated herein by this reference, the mutual promises and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. S**ixth Amendment Contingency**. This Sixth Amendment is expressly conditioned upon the Termination Contingency being satisfied such that the Termination Agreement is effective to terminate the New Lease. In the event the Termination Contingency is not satisfied, then this Sixth Amendment shall be deemed null and void and of no further force or effect.

2. **Term/Designation of Suite Numbers**. Provided the Termination Contingency is satisfied, then the Term of the Lease is hereby extended through the Sixth Amendment Expiration Date. Tenant shall have no further right to extend the Term of the Lease.

The Suite designations for the Premises are hereby amended and restated to be as follows: (i) that certain 12,685 rentable square feet of space previously designated as Suite A is hereby designated as Suite 200, (ii) that certain 6,477 rentable square feet of space previously designated as Suite B is hereby designated as Suite 230, (iii) that certain 5,597 rentable square feet of space previously designated as Suite C is hereby designated as Suite 240, (iv) that certain

3,722 rentable square feet previously designated as Suite F is hereby designated as Suite 270, (v) that certain 5,749 rentable square feet of space designated as Suite 250 shall continue to be designated as Suite 250, and (vi) that certain 3,183 rentable square feet of space designated as Suite 260 shall continue to be designated as Suite 260. The Premises and location of the various suites that consist of the Premises are reflected in **Exhibit B** attached hereto.

3. **Base Rent**. Tenant shall continue to pay Base Rent with respect to the Premises through the Sixth Amendment Expiration Date and the Base Rent shall continue to escalate at 3% on each applicable Base Rent escalation date set forth in the Lease (i.e., with respect to (I) the Suites 200/230/240/270 Premises, the Base Rent shall escalate on each May 15th, (II) the Suite 250 Premises, the Base Rent shall escalate on each December 13th, and (III) the Suite 260 Premises, the Base Rent shall escalate on each December 13th). In order to permit Landlord to construct the Suite 260 Improvements contemplated in Exhibit A, Tenant agrees to vacate the Suite 260 Premises promptly following the satisfaction of the Termination Contingency and Tenant acknowledges that it shall not have any access to the Suite 260 Premises during the course of Landlord's construction of the Suite 260 Improvements and that Tenant shall continue to pay Rent with respect to the Suite 260 Premises during such time.

4. **TI Allowance**. The Work Letter attached hereto as **Exhibit A**, among other things, provides for a TI Allowance as defined, and on the terms and conditions set forth in, the Work Letter. The terms of the Work Letter and the Landlord's obligation to perform any Landlord's Work and/or furnish the TI Allowance is expressly subject to the Termination Contingency being satisfied.

5. **As-Is Condition**. Except for the completion of the Landlord's Work (as defined in the Work Letter), Tenant shall lease the Premises in their as-is condition. The foregoing shall not be deemed to limit, abridge or diminish Landlord's express repair and maintenance obligations under the Lease.

6. **Tenant's Share of Operating Expenses**. Tenant shall continue to pay Tenant's Share of Operating Expenses throughout the Term of the Lease. The parties hereby agree that clause (z) in the second grammatical paragraph of Section 5 of the Original Lease shall be amended and restated as follows: "(z) and the costs of Landlord's third party property manager or, if there is no third party property manager, administration rent in the amount of 3% of Base Rent,…"

7. **Right to Expand**.

a. **Expansion in the Building**. In the event the Termination Contingency is satisfied, then subject to the rights of existing tenants of the Project and to the terms of this Section 7, Tenant shall have a one-time right following the satisfaction of the Termination Contingency, but not the obligation, subject to the terms of this Section 7, to expand the Premises (the "**Expansion Right**") to include the Expansion Space upon the terms and conditions in this Section 7. For purposes of this Section 7(a), "**Expansion Space**" shall mean space on Floor 3 of the Building, which is not occupied by a tenant or which is occupied by a then-existing tenant whose lease is expiring within 18 months or less and such tenant does not wish to renew (whether or not such tenant has a right to renew) its occupancy of such space. If all or a portion of the Expansion Space becomes available and the Termination Contingency has been satisfied, Landlord shall, at such time as Landlord shall elect so long as Tenant's rights hereunder are preserved, deliver to Tenant written notice (the "**Expansion Notice**") of the availability of such Expansion Space, together with the terms and conditions on which Landlord is prepared to lease Tenant such Expansion Space (it being agreed that it shall be co- terminous with the Sixth Amendment Expiration Date if the Expansion Notice is delivered prior to October 31, 2026). For the avoidance of doubt, Tenant shall be required to exercise its right under this Section 7(a) with respect to all of the space described in the Expansion Notice ("**Identified Space**"). Tenant acknowledges and agrees that the term of this Lease with respect

to the Identified Space may not be co-terminous with the Sixth Amendment Expiration Date; provided, however, that if the Expansion Notice is delivered prior to October 31, 2026, then the Expansion Notice shall specify a term for the Identified Space that is coterminous with the Sixth Amendment Expiration Date. In no event shall the Work Letter apply with respect to the Identified Space. Tenant shall have 5 days following receipt of the Expansion Notice to deliver to Landlord written notification of Tenant's exercise of the Expansion Right ("**Exercise Notice**") with respect to the Identified Space. If Tenant does not deliver an Exercise Notice to Landlord within such 5 day period, then Tenant shall be deemed to have waived its rights under this Section 7(a) to lease the Identified Space, and Landlord shall have the right to lease the Identified Space to any third party on any terms and conditions acceptable to Landlord. Notwithstanding anything to the contrary contained herein, Tenant shall have no right to exercise the Expansion Right and the provisions of this Section 7(a) shall no longer apply after the date that is 24 months prior to the Sixth Amendment Expiration Date. For the avoidance of doubt, this Expansion Right shall not be effective unless and until the Termination Contingency has been satisfied.

b. Amended Lease. If: (i) Tenant fails to timely deliver an Exercise Notice, or (ii) after the expiration of a period of 10 business days after Landlord's delivery to Tenant of a lease amendment for Tenant's lease of the Identified Space, no lease amendment for the Identified Space acceptable to both parties each in their reasonable discretion after using diligent good faith efforts negotiate the same, has been executed, Tenant shall, notwithstanding anything to the contrary contained herein, be deemed to have forever waived its right to lease such Identified Space.

c. Exceptions. Notwithstanding the above, the Expansion Right shall, at Landlord's option, not be in effect and may not be exercised by Tenant:

i. during any period of time that Tenant is in default under any provision of the Lease (beyond any applicable notice and cure periods); or

ii. during any period that Tenant (and/or any sublessee or assignee pursuant to a Control Permitted Assignment) is occupying less than 75% of the Premises; or

iii. if Tenant has been in default (beyond any applicable notice and cure periods) under any provision of the Lease 3 or more times, whether or not such defaults have been cured, during the 12 month period prior to the date on which Tenant seeks to exercise the Expansion Right.

d. Termination. The Expansion Right shall, at Landlord's option, terminate and be of no further force or effect even after Tenant's due and timely delivery of an Exercise Notice, if, after such delivery, but prior to the commencement date of the lease of such Identified Space, (i) Tenant fails to cure any default by Tenant under the Lease prior to the expiration or any applicable notice and cure periods; or (ii) Tenant has defaulted (beyond any applicable notice and cure periods) 3 or more times during the period commencing on the date of delivery of an Exercise Notice through the date of the commencement of the lease of the Identified Space, whether or not such defaults have been cured.

e. Subordinate. Tenant's Expansion Right granted pursuant to Section 7(a) above are and shall remain subject and subordinate to the right of Landlord and/or Landlord's affiliates (and/or any of their respective affiliates, successors and/or assigns) to occupy all or a portion of the Identified Space for its own purposes as a management and/or marketing office and Landlord's right to elect to use all or a portion of the Identified Space for common amenities serving the Project. In addition, Tenant's rights in connection with the Expansion Right are and

shall be subject to and subordinate to any expansion rights existing as of the date of this Sixth Amendment.

f. Rights Personal. The Expansion Right is personal to Tenant and are not assignable without Landlord's consent, which may be granted or withheld in Landlord's sole discretion separate and apart from any consent by Landlord to an assignment of Tenant's interest in the Lease, except that it may be assigned in connection with any Permitted Assignment (as defined in Section 22 of the Original Lease).

g. No Extensions. The period of time within which the Expansion Right may be exercised shall not be extended or enlarged by reason of Tenant's inability to exercise the Expansion Right.

8. Assignment and Subletting. Section 22 of the Original Lease is hereby amended and restated as follows:

"22. **Assignment and Subletting**.

(a) General Prohibition. Without Landlord's prior written consent subject to and on the conditions described in this Section 22, Tenant shall not, directly or indirectly, voluntarily or by operation of law, assign this Lease or sublease the Premises or any part thereof or mortgage, pledge, or hypothecate its leasehold interest or grant any concession or license within the Premises, and any attempt to do any of the foregoing shall be void and of no effect. Except as otherwise provided in Section 22(b) in connection with a Permitted Assignment, if Tenant is a corporation, partnership or limited liability company, the shares or other ownership interests thereof which are not actively traded upon a stock exchange or in the over-the-counter market, a transfer or series of transfers whereby 50% or more of the issued and outstanding shares or other ownership interests of such corporation are, or voting control is, transferred (but excepting transfers upon deaths of individual owners) from a person or persons or entity or entities which were owners thereof at time of execution of this Lease to persons or entities who were not owners of shares or other ownership interests of the corporation, partnership or limited liability company at time of execution of this Lease, shall be deemed an assignment of this Lease requiring the consent of Landlord as provided in this Section 22. Notwithstanding the foregoing, Tenant shall have the right to obtain financing from investors (including venture capital funding and corporate partners) or undergo a public offering which results in a change in control of Tenant without such change of control constituting an assignment under this Section 22 requiring Landlord consent, provided that (i) Tenant notifies Landlord in writing of the financing at least 5 business days prior to the closing of the financing, and (ii) provided that in no event shall such financing result in a change in use of the Premises from the use contemplated by Tenant at the commencement of the Term.

(b) Permitted Transfers. If Tenant desires to assign, sublease, hypothecate or otherwise transfer this Lease or sublet the Premises, other than pursuant to a Permitted Assignment (as defined below), then at least 15 business days, but not more than 150 days, before the date Tenant desires the assignment or sublease to be effective (the "**Assignment Date**"), Tenant shall give Landlord a notice (the "**Assignment Notice**") containing such information about the proposed assignee or sublessee, including the proposed use of the Premises and any Hazardous Materials proposed to be used, stored handled, treated, generated in or released or disposed of from the Premises, the Assignment Date, any relationship between Tenant and the proposed assignee or sublessee, and all material terms and conditions of the proposed assignment or sublease, including a copy of any proposed assignment or sublease in its final form,

and such other information as Landlord may deem reasonably necessary or appropriate to its consideration whether to grant its consent. Landlord may, by giving written notice to Tenant within 15 business days after receipt of the Assignment Notice: (i) grant such consent (provided that Landlord shall further

have the right to review and approve or disapprove the proposed form of sublease prior to the effective date of any such subletting), or (ii) refuse such consent, in its reasonable discretion; or (iii) other than with respect to any Permitted Assignment, with respect to any assignment or with respect to any sublease that would result in more than 50% of the Premises being subleased for all or substantially all of the remainder of the Term, terminate this Lease with respect to the space described in the Assignment Notice as of the Assignment Date (an "**Assignment Termination**"). Among other reasons, it shall be reasonable for Landlord to withhold its consent in any of these instances: (1) the proposed assignee or subtenant is a governmental agency; (2) in Landlord's reasonable judgment, the use of the Premises by the proposed assignee or subtenant would entail any alterations that would lessen the value of the leasehold improvements in the Premises, or would require increased services by Landlord; (3) in Landlord's reasonable judgment, the proposed assignee or subtenant is engaged in areas of scientific research or other business concerns that are controversial such that they may (i) attract or cause negative publicity for or about the Buildings or the Project, (ii) negatively affect the reputation of the Buildings, the Project or Landlord, or (iii) attract protestors to the Buildings or the Project; (4) in Landlord's reasonable judgment, the proposed assignee or subtenant lacks the creditworthiness to support the financial obligations it will incur under the proposed assignment or sublease;
(5) Landlord has experienced previous defaults by or is in litigation with the proposed assignee or subtenant; (6) the use of the Premises by the proposed assignee or subtenant will violate any applicable Legal Requirement; or (7) the assignment or sublease is prohibited by Landlord's lender. If Landlord delivers notice of its election to exercise an Assignment Termination, Tenant shall have the right to withdraw such Assignment Notice by written notice to Landlord of such election within 5 business days after Landlord's notice electing to exercise the Assignment Termination. If Tenant withdraws such Assignment Notice, this Lease shall continue in full force and effect. If Tenant does not withdraw such Assignment Notice, this Lease, and the term and estate herein granted, shall terminate as of the Assignment Date with respect to the space described in such Assignment Notice. No failure of Landlord to exercise any such option to terminate this Lease, or to deliver a timely notice in response to the Assignment Notice, shall be deemed to be Landlord's consent to the proposed assignment, sublease or other transfer. Tenant shall pay to Landlord a fee equal to Two Thousand Five Hundred Dollars ($2,500) in connection with its consideration of any Assignment Notice and/or its preparation or review of any consent documents. Notwithstanding the foregoing, Landlord's consent to an assignment of this Lease or a subletting of any portion of the Premises to any entity controlling, controlled by or under common control with Tenant (a "**Control Permitted Assignment**") shall not be required, provided that Landlord shall have the right to approve, in Landlord's reasonable discretion, the form of any such sublease or assignment. In addition, Tenant shall have the right to assign this Lease, upon 30 days prior written notice to Landlord ((x) unless Tenant is prohibited from providing such notice by applicable Legal Requirements in which case Tenant shall notify Landlord promptly thereafter, and (y) if the transaction is subject to confidentiality requirements, Tenant's advance notification shall be subject to Landlord's execution of a non-disclosure agreement reasonably acceptable to Landlord and Tenant) but without obtaining Landlord's prior written consent, to a corporation or other entity which is a successor-in-interest to Tenant, by way of merger, consolidation or corporate reorganization, or by the purchase of all or substantially all of the assets or the ownership interests of Tenant provided that (i) such merger or consolidation, or such acquisition or assumption, as the case may be, is for a good business purpose and not principally for the purpose of transferring the Lease, and (ii) the net worth (as determined in accordance with generally accepted accounting principles ("**GAAP**")) of the assignee (or the

assignee's ultimate parent provided that such ultimate parent executes a guaranty of this Lease in favor of Landlord in form and content reasonably acceptable to Landlord in its good faith determination) immediately following such transfer shall not be less than the greater of the net worth (as determined in accordance with GAAP) of Tenant as of (A) the Commencement Date, or (B) as of the date of Tenant's most current quarterly or annual financial statements, and (iii) such assignee shall agree in writing to assume all of the terms, covenants and conditions of this Lease (a "**Corporate Permitted Assignment**"). Control Permitted Assignments and Corporate Permitted Assignments are hereinafter referred to as "**Permitted Assignments**."

Notwithstanding anything to the contrary contained in this Lease, Tenant may from time to time enter into agreements (each, a "**Shared Space Arrangement**") with Tenant's agents, contractors, consultants or affiliates pursuant to which such agents, contractors, consultants or affiliates may occupy up to 20% of the Premises as "**Shared Space Area**", and such agreements shall not require Landlord's consent under this Section 22; provided, however, that Tenant shall be required to provide Landlord with a copy of each such license agreement and, prior to the effective date of each such license agreement, Tenant and each licensee shall be required to execute Landlord's reasonable form of acknowledgment pursuant to which Tenant and the licensee acknowledge and agree, among other things, that: (i) the terms of the Shared Space Arrangement are subject and subordinate to the terms of the Lease, (ii) if the Lease terminates, then the Shared Space Arrangement shall terminate concurrently therewith, (iii) each licensee shall, during the term of its applicable Shared Space Arrangement, maintain the same insurance as is required of Tenant under the Lease and provide Landlord with insurance certificates evidencing the same and naming the Landlord Parties as additional insureds, and (iv) the waivers and releases set forth in the second to last paragraph of Section 17 that apply as between Landlord and Tenant shall also apply as between Landlord and licensee. Tenant shall be fully responsible for the conduct of such companies within the Shared Space Area and the Project, and Tenant's indemnification obligations set forth in this Lease shall apply with respect to the conduct of such parties within the Shared Space Area and Project.

(c) Additional Conditions. As a condition to any such assignment or subletting, whether or not Landlord's consent is required, Landlord may require:

i. that any assignee or subtenant agree, in writing at the time of such assignment or subletting, that if Landlord gives such party notice that Tenant is in default under this Lease, such party shall thereafter make all payments otherwise due Tenant directly to Landlord, which payments will be received by Landlord without any liability except to credit such payment against those due under the Lease, and any such third party shall agree to attorn to Landlord or its successors and assigns should this Lease be terminated for any reason; provided, however, in no event shall Landlord or its successors or assigns be obligated to accept such attornment; and

ii. A list of Hazardous Materials, certified by the proposed assignee or sublessee to be true and correct, which the proposed assignee or sublessee intends to use, store, handle, treat, generate in or release or dispose of from the Premises, together with copies of all documents relating to such use, storage, handling, treatment, generation, release or disposal of Hazardous Materials by the proposed assignee or subtenant in the Premises or on the Project, prior to the proposed assignment or subletting, including, without limitation: permits; approvals; reports and correspondence; storage and management plans; plans relating to the installation of any storage tanks to be installed in or under the Project (provided, said installation of tanks shall only be permitted after Landlord

has given its written consent to do so, which consent may be withheld in Landlord's sole and absolute discretion); and all closure plans or any other documents required by any and all federal, state and local Governmental Authorities for any storage tanks installed in, on or under the Project for the closure of any such tanks. Neither Tenant nor any such proposed assignee or subtenant is required, however, to provide Landlord with any portion(s) of the such documents containing information of a proprietary nature which, in and of themselves, do not contain a reference to any Hazardous Materials or hazardous activities.

(d)No Release of Tenant, Sharing of Excess Rents. Notwithstanding any assignment or subletting, Tenant and any guarantor or surety of Tenant's obligations under this Lease shall at all times remain fully and primarily responsible and liable for the payment of Rent and for compliance with all of Tenant's other obligations under this Lease. Except in the case of a Permitted Assignment, if the Rent due and payable by a sublessee or assignee (or a combination of the rental payable under such sublease or assignment plus any other consideration therefor or incident thereto in any form) exceeds the sum of the Base Rent and Operating Expenses payable under this Lease with respect to the applicable portion of the Premises (excluding however, any Rent payable under this Section) and actual and reasonable brokerage fees, legal costs and any design or construction fees directly related to and required pursuant to the terms of any such sublease ("**Excess Rent**"), then Tenant shall be bound and obligated to pay Landlord as Additional Rent hereunder 50% of such Excess Rent within 30 days following receipt thereof by Tenant. If Tenant shall sublet the Premises or any part thereof, Tenant hereby immediately and irrevocably assigns to Landlord, as security for Tenant's obligations under this Lease, all rent from any such subletting, and Landlord as assignee, or a receiver for Tenant appointed on Landlord's application, may collect such rent and apply it toward Tenant's obligations under this Lease; except that, until the occurrence of a Default, Tenant shall have the right to collect such rent.

(e)No Waiver. The consent by Landlord to an assignment or subletting shall not relieve Tenant or any assignees of this Lease or any sublessees of the Premises from obtaining the consent of Landlord to any further assignment or subletting nor shall it release Tenant or any assignee or sublessee of Tenant from full and primary liability under the Lease. The acceptance of Rent hereunder, or the acceptance of performance of any other term, covenant, or condition thereof, from any other person or entity shall not be deemed to be a waiver of any of the provisions of this Lease or a consent to any subletting, assignment or other transfer of the Premises.

(f) Prior Conduct of Proposed Transferee. Notwithstanding any other provision of this Section 22, other than in connection with a Permitted Assignment, if (i) the proposed assignee or sublessee of Tenant has been required by any prior landlord, lender or Governmental Authority to take remedial action in connection with Hazardous Materials contaminating a property, where the contamination resulted from such party's action or use of the property in question, (ii) the proposed assignee or sublessee is subject to an enforcement order issued by any Governmental Authority in connection with the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials (including, without limitation, any order related to the failure to make a required reporting to any Governmental Authority), or (iii) because of the existence of a pre- existing environmental condition in the vicinity of or underlying the Project, the risk that Landlord would be targeted as a responsible party in connection with the remediation of such pre-existing environmental condition would be materially increased or exacerbated by the proposed use of Hazardous Materials by such proposed assignee or sublessee, Landlord shall have the absolute right to refuse to consent to any assignment or subletting to any such party."

9. **Solar Array**. Notwithstanding anything to the contrary in the Lease, Landlord, in its sole discretion, shall have the right (but shall in no event be obligated) to install, maintain, repair and

remove, or cause a third party to install, maintain, repair and remove, a solar array on the roof of the Building or any other area of the Project reasonably designated by Landlord (the "**Solar Array**"), so long as such Solar Array does not materially adversely affect Tenant's use of the Premises for the Permitted Use. During the initial connection and activation of the Solar Array and during any repairs, alterations or modifications to the Solar Array, Tenant acknowledges that there may be a planned interruption in the electrical service to the Premises and that Landlord shall not be liable to Tenant with respect thereto. Landlord shall provide at least 2 business days advance written notice to Tenant prior to any planned interruption of electrical service during the initial activation of the Solar Array and/or arising from any alterations, modifications or repairs of the Solar Array. Landlord shall schedule any such planned interruption during a time to minimize any impact on Tenant's operations. Landlord or the third party designated by Landlord to install the Solar Array shall be responsible for the initial construction costs to acquire and install the Solar Array. Repair and maintenance costs of the Solar Array shall be excluded from Operating Expenses. Tenant acknowledges that any environmental or tax benefits arising from or accruing with respect to the Solar Array shall be the sole property of Landlord or Landlord's designee. Landlord shall have the right to contract (on terms acceptable to Landlord in its discretion) for the purchase of the electricity generated from the Solar Array for purposes of supplying all or a portion of the electricity for the Project. Tenant acknowledges that any costs incurred by Landlord to purchase power generated from the Solar Array shall be an Operating Expense; provided such costs shall not exceed the costs of purchasing power from the local utility provider.

10. **Regional Amenities**. Tenant shall continue paying the Amenities Fee with respect to the Premises as provided in the Lease through the Term of the Lease.

11. **OFAC**. Tenant and Landlord are currently (a) in compliance with and shall at all times during the Term of the Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the Term of the Lease be listed on, the Specially Designated Nationals and Blocked Persons List maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

12. **California Accessibility Disclosure**. Section 42(r) of the Lease is hereby incorporated into this Sixth Amendment by reference.

13. **Brokers**. Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, "**Broker**") in connection with the transaction reflected in this Sixth Amendment and that no Broker brought about this transaction, other than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Inc. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than Hughes Marino, Inc., Cushman & Wakefield of San Diego, Inc. and CBRE, Inc., claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction.

14. **Miscellaneous**.

a. This Sixth Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. This Sixth Amendment may be amended only by an agreement in writing, signed by the parties hereto.

b. This Sixth Amendment is binding upon and shall inure to the benefit of the parties hereto, their respective agents, employees, representatives, officers, directors, divisions, subsidiaries, affiliates, assigns, heirs, successors in interest and shareholders.

c. This Sixth Amendment may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf

or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Sixth Amendment and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

d. Except as amended and/or modified by this Sixth Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this Sixth Amendment. In the event of any conflict between the provisions of this Sixth Amendment and the provisions of the Lease, the provisions of this Sixth Amendment shall prevail. Whether or not specifically amended by this Sixth Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this Sixth Amendment.

[Signatures are on the next page]

TENANT:

SINGULAR GENOMICS SYSTEMS, INC.,
a Delaware corporation

By: _ Name: Dalen Meeter___ Its: CFO

LANDLORD:

ARE-SD Region No. 35, LLC,
a Delaware limited liability company

By: Alexandria Real Estate Equities, Inc., a Maryland corporation,
managing member

By:_ Name: Gary Dean
Its: Executive Vice President – Real Estate Legal Affairs

EXHIBIT A
Work Letter
[Omitted]

EXHIBIT A-1
Suite 260 Space Plans
[Omitted]

EXHIBIT B
ASuite Designation for Premises

[Omitted]

AGREEMENT FOR TERMINATION OF LEASE

This Agreement for Termination of Lease (this "**Agreement**") is made and entered into as of July 19, 2023, by and between **ARE-10933 NORTH TORREY PINES, LLC**, a Delaware limited liability company ("**Landlord**"), and **SINGULAR GENOMICS SYSTEMS, INC.**, a Delaware corporation ("**Tenant**"), with reference to the following:

RECITALS

i. Pursuant to that certain Lease Agreement dated as of January 19, 2022 (the "**Lease**"), Landlord leased to Tenant all of those to-be-constructed laboratory/office buildings referred to as "Building 3" and "Building 4" in San Diego, California (the "**Premises**"), as more particularly described in the Lease. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

ii. The term of the Lease has not yet commenced.

iii. Subject to the satisfaction of the Contingency (as defined below), Tenant and Landlord desire, subject to the terms and conditions set forth below, to terminate the Lease.

iv. Landlord's affiliate and Tenant are parties to a certain Lease Agreement dated as of June 26, 2020 (as amended, the "**3010 SPR Lease**"), pursuant to which Tenant leases from Landlord's affiliate certain space in a building located at 3010 Science Park Road, San Diego, California.

v. Landlord's affiliate and Tenant are parties to a certain Lease Agreement dated as of November 15, 2019 (as amended, the "**3033 SPR Lease**"), pursuant to which Tenant leases from Landlord's affiliate certain space in a building located at 3033 Science Park Road, San Diego, California.

vi. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

NOW, THEREFORE, in consideration of the foregoing and of the mutual promises made herein, and for other good and valuable consideration the receipt of which is hereby acknowledged, Landlord and Tenant agree as follows:

1. **Termination of Lease**. Subject to the satisfaction of the Contingency (as defined below), Landlord and Tenant agree to terminate the Lease as of the date that the Contingency is satisfied (the "**Termination Date**"). The parties hereby agree that this Agreement is expressly conditioned (such condition being the "**Contingency**") upon Landlord and a third party tenant (the "**New Tenant**") executing a new lease agreement (the "**New Lease**") for the entirety of Building 4 and a portion of Building 3 (the "**Contemplated Premises**") on such terms and conditions as are acceptable to Landlord in its sole and absolute discretion; provided, however, in the event the New Lease with the New Tenant covers a smaller (or larger) rentable area than the Contemplated Premises, then Landlord shall have the right, in it its sole discretion to declare the Contingency satisfied. In the event the Contingency is not satisfied by September 1, 2023, then this Agreement shall be automatically null and void and of no further force or effect. In order to permit Landlord the opportunity to negotiate the New Lease with the New Tenant, Tenant hereby agrees that Landlord shall be permitted to cease any further planning, designing and construction with respect to the Landlord's Work contemplated in the Work Letter attached as **Exhibit C** to the Lease; provided, however, if

the Contingency is not satisfied, then Landlord shall again recommence the planning, design and construction with respect to the Landlord's Work contemplated in the Lease. If the Contingency is not satisfied and Landlord again commences the planning, design and construction of the Landlord's Work, then Tenant acknowledges that Landlord shall have the right to provide an updated schedule with respect to the completion of the Landlord's Work and, in connection therewith, unilaterally revise the Target Commencement Date in the Lease (which shall serve to defer any abatement and termination rights set forth in the Lease that are based on the Target Commencement Date).

Provided that the Continency is satisfied and provided further that Tenant is not in default (beyond any applicable cure or grace period) under either the 3010 SPR Lease and/or the 3033 SPR Lease, then Landlord shall, within 10 business days after the date that the Contingency is satisfied, deliver to Tenant funds in the amount of $1,840,388.58 (the "Initial Termination Payment"), as consideration for Tenant's agreement to accelerate the expiration date of the Term of the Lease as provided in this Agreement. In addition, provided that the Contingency is satisfied and provided further that Tenant is not in default (beyond any applicable cure or grace period) under either the 3010 SPR Lease and/or the 3033 SPR Lease, then Landlord shall, no later than the date that is 135 days after the date that the Contingency is satisfied, deliver to Tenant funds in the amount of $982,619.74 (the "Second Termination Payment"), as further consideration for Tenant's agreement to accelerate the expiration date of the Term of the Lease as provided in this Agreement.

3. **Base Rent and Security Deposit**. Concurrent with the Tenant's execution of the Lease, Tenant paid to Landlord prepaid Base Rent in the amount of $1,110,596.40 (the "**Prepaid Base Rent**") and a Security Deposit in the form of a Letter of Credit in the amount of $1,110,596.40. If the Contingency is satisfied, then within 60 days of the satisfaction of the Contingency, Landlord shall refund to Tenant the Prepaid Base Rent and return the Letter of Credit.

4. **Termination and Surrender**. After the Termination Date, Tenant shall have no further rights of any kind with respect to the Premises. Notwithstanding the foregoing, as provided in Section 5 hereof, those provisions of the Lease which, by their terms, survive the termination of the Lease shall survive the termination of the Lease provided for herein.

6. **No Further Obligations**. Landlord and Tenant each agree that the other is excused as of the Termination Date from any further obligations under the Lease with respect to the Premises, excepting only such obligations under the Lease which are, by their terms, intended to survive termination of the Lease and except as provided for in this Agreement. Nothing herein shall excuse Tenant from its obligations under the Lease, as modified by this Agreement, prior to the Termination Date.

7. **Release of Liability**. As of the Termination Date, Tenant releases and exculpates Landlord from any liability arising from the Lease with respect to the Premises. Tenant acknowledges that this release and waiver are an essential and material term of this Agreement, without which Landlord would not become a party to this Agreement.

9. **Acknowledgment**. Tenant acknowledges that it has read the provisions of this Agreement, understands them, and is bound by them. Time is of the essence in this Agreement.

10. **No Assignment**. Tenant represents and warrants that Tenant has not assigned, mortgaged, subleased, pledged, encumbered or otherwise transferred any interest in the Lease and that Tenant holds the interest in the Premises as set forth in the Lease as of the date of this Agreement.

11. **No Modification**. This Agreement may not be modified or terminated except in writing signed by all parties. This Agreement may be signed in counterparts which taken together shall constitute one agreement binding upon the parties.

12. **Successors and Assigns**. The covenants and agreements herein contained shall inure to the benefit and be binding upon the parties and their respective successors and assigns.

13.**Attorneys' Fees**. In the event of a dispute between the parties, the prevailing party shall be entitled to have its reasonable attorneys' fees and costs paid by the other party. Each party shall be responsible for its own costs and legal fees in connection with the negotiation, execution and delivery of this Agreement and the consummation of the transactions contemplated hereby.

14.**Conflict of Laws**. This Agreement shall be governed by the laws of the state in which the Premises are located.

15.**OFAC**. Tenant and all beneficial owners of Tenant are currently (a) in compliance with and shall at all times during the Term of the Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the term of the Lease be listed on, the Specially Designated Nationals and Blocked Persons List, Foreign Sanctions Evaders List or the Sectoral Sanctions Identifications List, which are all maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

[Signatures are on the next page]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

TENANT:

SINGULAR GENOMICS SYSTEMS, INC.,
a Delaware corporation

By: _____ Name: Dalen Meeter Its: CFO

[X] I hereby certify that the signature, name, and title above are my signature, name and title

LANDLORD:

ARE-10933 NORTH TORREY PINES, LLC,
a Delaware limited liability company

By: Alexandria Real Estate Equities, Inc., a Maryland corporation, managing member

By: Name: Gary Dean
Its: Executive Vice President – Real Estate Legal Affairs

[X] I hereby certify that the signature, name, and title above are my signature, name and title

FIRST AMENDMENT TO AGREEMENT FOR TERMINATION OF LEASE

THIS FIRST AMENDMENT TO AGREEMENT FOR TERMINATION OF LEASE (this "**First Amendment**") is made as of August 31, 2023, by and between **ARE-10933 NORTH TORREY PINES, LLC**, a Delaware limited liability company ("**Landlord**"), and **SINGULAR GENOMICS SYSTEMS, INC.**, a Delaware corporation ("**Tenant**").

RECITALS

A. Landlord and Tenant are parties to that certain Agreement for Termination of Lease dated as of July 19, 2023 (the "**Termination Agreement**"), in connection with that certain Lease Agreement dated as of January 19, 2022 (the "**Lease**"), pursuant to which Landlord leased to Tenant all of those to-be- constructed laboratory/office buildings referred to as "Building 3" and "Building 4" in San Diego, California. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Termination Agreement.

B. Landlord and Tenant desire, subject to the terms and conditions set forth below, to amend the Termination Agreement as provided in this First Amendment.

NOW, THEREFORE, in consideration of the foregoing Recitals, which are incorporated herein by this reference, the mutual promises and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. **Contingency Date**. Notwithstanding anything to the contrary contained in the Termination Agreement, the reference in Section 1 of the Termination Agreement to "September 1, 2023," is hereby deleted in its entirety and replaced with "September 15, 2023." As a result thereof, in the event the Contingency is not satisfied by September 15, 2023, then the Termination Agreement shall be automatically null and void and of no further force or effect.

2. **OFAC**. Tenant and all beneficial owners of Tenant are currently (a) in compliance with and shall at all times during the Term of the Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the Term of the Lease be listed on, the Specially Designated Nationals and Blocked Persons List, Foreign Sanctions Evaders List or the Sectoral Sanctions Identifications List, which are all maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

3. **Miscellaneous**.

a. This First Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. This First Amendment may be amended only by an agreement in writing, signed by the parties hereto.

b. This First Amendment is binding upon and shall inure to the benefit of the parties hereto, their respective agents, employees, representatives, officers, directors, divisions, subsidiaries, affiliates, assigns, heirs, successors in interest and shareholders.

c. This First Amendment may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic

signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this First Amendment and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

d. Except as amended and/or modified by this First Amendment, the Termination Agreement is hereby ratified and confirmed and all other terms of the Termination Agreement shall remain in full force and effect, unaltered and unchanged by this First Amendment. In the event of any conflict between the provisions of this First Amendment and the provisions of the Termination Agreement, the provisions of this First Amendment shall prevail. Whether or not specifically amended by this First Amendment, all of the terms and provisions of the Termination Agreement are hereby amended to the extent necessary to give effect to the purpose and intent of this First Amendment.

[Signatures are on the next page]

IN WITNESS WHEREOF, the parties hereto have executed this First Amendment as of the day and year first above written.

TENANT:

SINGULAR GENOMICS SYSTEMS, INC.,
a Delaware corporation

By: _____ Name: Dalen Meeter Its: CFO

X□ I hereby certify that the signature, name,
and title above are my signature, name and title

LANDLORD:

ARE-10933 NORTH TORREY PINES, LLC,
a Delaware limited liability company

By: Alexandria Real Estate Equities, Inc., a Maryland
corporation,
managing member

By: Name: Gary Dean
Its: Executive Vice President – Real Estate Legal Affairs

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Andrew Spaventa, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Singular Genomics Systems, Inc.;

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

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

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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 and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

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

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

Date: November 14, 2023

By: /s/ Andrew Spaventa

Andrew Spaventa
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Dalen Meeter, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Singular Genomics Systems, Inc.;

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

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

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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 and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

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

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

Date: November 14, 2023

By: /s/ Dalen Meeter

Dalen Meeter
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Exhibit 32.1

CERTIFICATIONS OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Singular Genomics Systems, Inc. (the "Company") on Form 10-Q for the period ended September 30, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Andrew Spaventa, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

Date: November 14, 2023

By: /s/ Andrew Spaventa

Andrew Spaventa
Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATIONS OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Singular Genomics Systems, Inc. (the "Company") on Form 10-Q for the period ended September 30, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Dalen Meeter, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

Date: November 14, 2023

By: /s/ Dalen Meeter

Dalen Meeter
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)