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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2019

OR

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

For the transition period from_____ to _____

Commission File Number: 001-39035

10x Genomics, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**45-5614458**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

6230 Stoneridge Mall Road
Pleasanton, California 94588
(Address of principal executive offices and zip code)

(925) 401-7300
(Registrant's 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
Class A common stock, par value $0.00001 per share	**TXG**	**The Nasdaq Stock Market LLC**

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, anon-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

Emerging growth company ☒

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

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

As of October 31, 2019, the registrant had 20,900,524 shares of Class A common stock, $0.00001 par value per share, outstanding and 75,269,430 shares of Class B common stock, $0.00001 par value per share, outstanding.

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10x Genomics, Inc.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which are subject to the "safe harbor" created by those sections. All statements, other than statements of historical facts included in this Quarterly Report on Form 10-Q, including statements concerning our plans, objectives, goals, beliefs, business strategies, future events, business conditions, results of operations, financial position, business outlook, business trends and other information, may be forward-looking statements. Forward-looking statements generally can be identified by the use of forward-looking terminology such as "may," "will," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project" "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negatives of these terms or variations of them or similar terminology. Although we believe that the expectations reflected in these forward-looking statements are reasonable, we cannot provide any assurance that these expectations will prove to be correct and actual results may vary materially from what is expressed in or indicated by the forward-looking statement. Such statements reflect the current views of our management with respect to our business, results of operations and future financial performance.

You should not rely upon forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this Quarterly Report on Form 10-Q primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, results of operations and prospects. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors, including those described in the section titled "Risk Factors" and elsewhere in this Quarterly Report on Form 10-Q. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this Quarterly Report on Form 10-Q. We cannot assure you that the results, events and circumstances reflected in the forward-looking statements will be achieved or occur, and actual results, events or circumstances could differ materially from those described in the forward-looking statements. For a more detailed discussion of the risks, uncertainties and other factors that could cause actual results to differ, please refer to the "Risk Factors" we previously disclosed in our prospectus filed with the Securities and Exchange Commission ("SEC") on September 12, 2019, and in this Quarterly Report on Form 10-Q, as such risk factors may be updated from time to time in our periodic filings with the SEC. Such prospectus and our periodic filings are accessible on the SEC's website at www.sec.gov.

The forward-looking statements made in this Quarterly Report on Form10-Q relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this Quarterly Report on Form 10-Q to reflect events or circumstances after the date of this Quarterly Report on Form 10-Q or to reflect new information or the occurrence of unanticipated events, except as required by law. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance and events and circumstances reflected in the forward-looking statements will be achieved or occur and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this Quarterly Report on Form 10-Q, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

Unless otherwise stated or the context otherwise indicates, references to "we," "us," "our," "the Company" and similar references refer to 10x Genomics, Inc.

Channels for Disclosure of Information

Investors and others should note that we may announce material information to the public through filings with the SEC, our website (https://www.10xGenomics.com), press releases, public conference calls, public webcasts and our social media accounts (https://twitter.com/10xGenomics, https://www.facebook.com/10xGenomics/ and https://www.linkedin.com/company/10xgenomics/). We use these channels to communicate with our customers and the public about the Company, our products, our services and other matters. We encourage our investors, the media and others to review the information disclosed through such channels as such information could be deemed to be material information. The information on such channels, including on our website and our social media accounts, is not incorporated by reference in this Quarterly Report on Form 10-Q and shall not be deemed to be incorporated by reference into any other filing under the Securities Act or the Exchange Act, except as expressly set forth by specific reference in such a filing. Please note that this list of disclosure channels may be updated from time to time.

10x Genomics, Inc.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

10x Genomics, Inc.
Condensed Consolidated Balance Sheets
(In thousands, except share and per share data)

	September 30, 2019 (Unaudited)	December 31, 2018 (Note 1)
Assets		
Current assets:		
Cash and cash equivalents	$ 427,436	$ 65,080
Accounts receivable, net	26,150	28,088
Inventory	13,305	8,570
Prepaid expenses and other current assets	7,253	4,498
Total current assets	474,144	106,236
Property and equipment, net	46,840	11,127
Restricted cash	50,053	5,008
Other assets	1,778	1,939
Total assets	$ 572,815	$ 124,310
Liabilities, convertible preferred stock and stockholders' equity (deficit)		
Current liabilities:		
Accounts payable	$ 11,959	$ 8,792
Accrued compensation and related benefits	7,850	7,047
Accrued expenses and other current liabilities	14,267	8,172
Term loans, current portion	7,383	4,187
Accrued legal expenses	3,695	1,769
Deferred revenue, current	3,082	2,395
Total current liabilities	48,236	32,362
Term loans, noncurrent portion	22,307	25,489
Accrued contingent liabilities	62,501	38,000
Deferred revenue, noncurrent	1,202	1,102
Deferred rent, noncurrent	16,170	3,329
Other noncurrent liabilities	951	771
Total liabilities	151,367	101,053
Commitments and contingencies (Note 6)		
Convertible preferred stock, $0.00001 par value, no shares authorized and no shares issued and outstanding as of September 30, 2019; 67,904,871 shares authorized and 67,704,278 shares issued and outstanding as of December 31, 2018; aggregate liquidation preference of $242,588 as of December 31, 2018	—	243,244
Stockholders' equity (deficit):		
Preferred stock, $0.00001 par value; 100,000,000 shares authorized, no shares issued and outstanding as of September 30, 2019 and December 31, 2018	—	—
Common stock, $0.00001 par value; 1,100,000,000 shares authorized as of September 30, 2019, 96,118,804 shares issued and outstanding as of September 30, 2019; 190,955,000 shares authorized as of December 31, 2018, 14,549,801 shares issued and outstanding as of December 31, 2018	2	1
Additional paid-in capital	676,839	11,165
Accumulated deficit	(255,233)	(231,116)
Accumulated other comprehensive loss	(160)	(37)
Total stockholders' equity (deficit)	421,448	(219,987)
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	$ 572,815	$ 124,310

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

10x Genomics, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(In thousands, except share and per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Revenue	$ 61,207	$ 36,607	$ 170,604	$ 95,759
Cost of revenue	15,480	5,241	44,451	13,761
Gross profit	45,727	31,366	126,153	81,998
Operating expenses:				
Research and development	22,209	11,085	55,208	34,457
In-process research and development	—	16,104	—	22,310
Selling, general and administrative	32,614	19,110	92,078	61,030
Accrued contingent liabilities	—	—	1,360	—
Total operating expenses	54,823	46,299	148,646	117,797
Loss from operations	(9,096)	(14,933)	(22,493)	(35,799)
Other income (expense):				
Interest income	481	294	986	755
Interest expense	(708)	(659)	(2,087)	(1,721)
Other expenses, net	(272)	(31)	(413)	(151)
Total other expense	(499)	(396)	(1,514)	(1,117)
Loss before provision for income taxes	(9,595)	(15,329)	(24,007)	(36,916)
Provision for income taxes	8	16	110	45
Net loss	$ (9,603)	$ (15,345)	$ (24,117)	$ (36,961)
Other comprehensive income (loss):				
Foreign currency translation adjustment	(126)	1	(123)	17
Comprehensive loss	$ (9,729)	$ (15,344)	$ (24,240)	$ (36,944)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.33)	$ (1.13)	$ (1.21)	$ (2.80)
Weighted-average shares of common stock used in computing net loss per share attributable to common stockholders, basic and diluted	29,184,218	13,587,288	19,904,184	13,188,322

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

10x Genomics, Inc.
Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(Unaudited)
(In thousands, except share data)

	Convertible Preferred Stock		Common Stock					
	Shares	Amount	Shares	Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehen-sive Income (Loss)	Total Stockholders' Equity (Deficit)
Balance as of December 31, 2018	67,704,278	$ 243,244	14,549,801	$ 1	$ 11,165	$ (231,116)	$ (37)	$ (219,987)
Issuance of Class A common stock upon exercise of stock options	—	—	898,858	—	923	—	—	923
Vesting of shares subject to repurchase, including early exercised options	—	—	—	—	72	—	—	72
Stock-based compensation	—	—	—	—	1,359	—	—	1,359
Net loss	—	—	—	—	—	(3,636)	—	(3,636)
Other comprehensive loss	—	—	—	—	—	—	(24)	(24)
Balance as of March 31, 2019	67,704,278	243,244	15,448,659	1	13,519	(234,752)	(61)	(221,293)
Issuance of Class A common stock upon exercise of stock options	—	—	696,723	—	1,082	—	—	1,082
Vesting of shares subject to repurchase, including early exercised options	—	—	—	—	89	—	—	89
Stock-based compensation	—	—	—	—	3,025	—	—	3,025
Net loss	—	—	—	—	—	(10,878)	—	(10,878)
Other comprehensive income	—	—	—	—	—	—	27	27
Balance as of June 30, 2019	67,704,278	243,244	16,145,382	1	17,715	(245,630)	(34)	(227,948)
Issuance of Class A common stock upon exercise of stock options	—	—	508,120	—	1,013	—	—	1,013
Conversion of convertible preferred stock into Class B common stock	(67,704,278)	(243,244)	67,704,278	1	243,243	—	—	243,244
Issuance of Class A common stock upon initial public offering, net of issuance costs	—	—	11,500,000	—	410,824	—	—	410,824
Cashless exercise of Class A common stock warrants	—	—	261,024	—	—	—	—	—
Vesting of shares subject to repurchase, including early exercised options	—	—	—	—	170	—	—	170
Stock-based compensation	—	—	—	—	3,874	—	—	3,874
Net loss	—	—	—	—	—	(9,603)	—	(9,603)
Other comprehensive loss	—	—	—	—	—	—	(126)	(126)
Balance as of September 30, 2019	—	$ —	96,118,804	$ 2	$676,839	$ (255,233)	$ (160)	$ 421,448

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

10x Genomics, Inc.
Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(Unaudited)
(In thousands, except share data)

	Convertible Preferred Stock		Common Stock					
	Shares	Amount	Shares	Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehen-sive Income (Loss)	Total Stockholders' Deficit
Balance as of December 31, 2017	59,730,213	$158,414	12,883,930	$ 1	$ 6,136	$ (118,631)	$ (15)	$ (112,509)
Issuance of Class A common stock upon exercise of stock options	—	—	463,400	—	313	—	—	313
Issuance of warrants to purchase common stock	—	—	—	—	150	—	—	150
Vesting of shares subject to repurchase, including early exercised options	—	—	—	—	9	—	—	9
Stock-based compensation	—	—	—	—	488	—	—	488
Net loss	—	—	—	—	—	(15,693)	—	(15,693)
Other comprehensive loss	—	—	—	—	—	—	(11)	(11)
Balance as of March 31, 2018	59,730,213	158,414	13,347,330	1	7,096	(134,324)	(26)	(127,253)
Issuance of Series D convertible preferred stock, net of issuance cost	5,224,658	49,878	—	—	—	—	—	—
Issuance of Class A common stock upon exercise of stock options	—	—	184,775	—	148	—	—	148
Vesting of shares subject to repurchase, including early exercised options	—	—	—	—	9	—	—	9
Stock-based compensation	—	—	—	—	518	—	—	518
Net loss	—	—	—	—	—	(5,923)	—	(5,923)
Other comprehensive income	—	—	—	—	—	—	27	27
Balance as of June 30, 2018	64,954,871	208,292	13,532,105	1	7,771	(140,247)	1	(132,474)
Issuance of Class A common stock upon exercise of stock options	—	—	410,231	—	291	—	—	291
Vesting of shares subject to repurchase, including early exercised options	—	—	—	—	166	—	—	166
Stock-based compensation	—	—	—	—	589	—	—	589
Net loss	—	—	—	—	—	(15,345)	—	(15,345)
Other comprehensive income	—	—	—	—	—	—	1	1
Balance as of September 30, 2018	64,954,871	$208,292	13,942,336	$ 1	$ 8,817	$ (155,592)	$ 2	$ (146,772)

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

10x Genomics, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(In thousands)

	Nine Months Ended September 30,	
	2019	2018
Operating activities:		
Net loss	$ (24,117)	$(36,961)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	4,221	3,015
Stock-based compensation	8,258	1,595
Loss on disposal of property and equipment	614	195
Accretion of discount on term loan	72	326
Changes in operating assets and liabilities:		
Accounts receivable	1,938	(5,756)
Inventory	(4,735)	(2,011)
Prepaid expenses and other current assets	(2,756)	(1,030)
Other assets	49	(835)
Accounts payable	2,686	(1,825)
Accrued compensation and other related benefits	838	(199)
Deferred revenue	787	1,300
Accrued contingent liabilities	24,501	—
Accrued expenses and other current liabilities	2,550	16,211
Deferred rent, noncurrent	12,841	470
Other noncurrent liabilities	180	95
Net cash provided by (used in) operating activities	27,927	(25,410)
Investing activities:		
Purchases of property and equipment	(36,186)	(3,880)
Net cash used in investing activities	(36,186)	(3,880)
Financing activities:		
Proceeds from term loans	—	19,512
Payments on term loans	—	(704)
Proceeds from borrowings under revolver	11,000	—
Payments on borrowings under revolver	(11,000)	—
Payments on capital lease obligations	—	(69)
Proceeds from issuance of common stock upon initial public offering, net of issuance costs	412,679	—
Proceeds from issuance of preferred stock, net of issuance costs	—	49,878
Proceeds from issuance of common stock upon exercise of stock options	3,018	872
Net cash provided by financing activities	415,697	69,489
Effect of exchange rates on changes in cash, cash equivalents, and restricted cash	(37)	9
Net increase in cash, cash equivalents, and restricted cash	407,401	40,208
Cash, cash equivalents, and restricted cash at beginning of period	70,088	47,857
Cash, cash equivalents, and restricted cash at end of period	$477,489	$ 88,065
Supplemental disclosures of cash flow information:		
Cash paid for interest	$ 1,722	$ 1,455
Cash paid for taxes	$ 22	$ —
Noncash investing and financing activities		
Purchases of property and equipment included in accounts payable and accrued expenses and other current liabilities	$ 6,511	$ 594
Conversion of convertible preferred stock into common stock upon initial public offering	$243,244	$ —
Deferred offering costs in accounts payable and accrued expenses and other current liabilities	$ 1,855	$ —

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

10x Genomics, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements

1. Description of Business and Basis of Presentation

Organization and Description of Business

10x Genomics, Inc. (the "Company") was incorporated in the state of Delaware on July 2, 2012. The Company's integrated solutions include the Company's Chromium instruments, which are referred to as "instruments", its enzymes, reagents, microfluidic chips and other consumable products, which are referred to as "consumables", and software for analyzing biological systems. These solutions guide customers through the workflow from sample preparation to next-generation sequencing to subsequent analysis and visualization. Each of the Company's solutions is designed to interrogate a major class of biological information that is impactful to researchers. The Company began commercial and manufacturing operations and selling its instruments and consumables in 2015. The Company's headquarters is located in Pleasanton, California and has wholly-owned subsidiaries in Sweden, Netherlands, Singapore, Germany and China.

Initial Public Offering

The Company's registration statement on Form S-1 related to its initial public offering ("IPO") was declared effective on September 11, 2019 by the Securities and Exchange Commission ("SEC"), and the Company's Class A common stock began trading on the Nasdaq Global Select Market on September 12, 2019. On September 16, 2019, the Company completed its IPO, in which the Company sold 11,500,000 shares of Class A common stock (which included 1,500,000 shares that were offered and sold pursuant to the full exercise of the IPO underwriters' option to purchase additional shares) at a price to the public of $39.00 per share. Including the option exercise, the Company received aggregate net proceeds of $410.8 million after deducting offering costs, underwriting discounts and commissions of $37.7 million.

Immediately prior to the completion of the IPO, 67,704,278 shares of convertible preferred stock then outstanding converted into an equivalent number of shares of Class B common stock, 8,050,000 shares of Historical Class A common stock converted into an equivalent number of shares of Class B common stock, and 8,095,382 shares of Historical Class B common stock converted into an equivalent number of shares of Class A common stock. The Company has reflected the renaming of Historical Class A common stock and Historical Class B common stock to Class B common stock and Class A common stock, respectively, throughout the document and all instances of Class A common stock and Class B common stock reflect this change. Immediately prior to the completion of the IPO, the Company filed its Amended and Restated Certificate of Incorporation, which authorizes a total of 1,000,000,000 shares of Class A common stock, 100,000,000 shares of Class B common stock and 100,000,000 shares of preferred stock. During the third quarter of 2019, 484,484 shares of Class B common stock were converted to Class A common stock. As of September 30, 2019, Class A common stock and Class B common stock issued and outstanding was 20,849,374 and 75,269,430, respectively. Each share of Class A common stock is entitled to one vote per share. Each share of Class B common stock is entitled to ten votes per share and is convertible at any time into one share of Class A common stock.

Basis of Presentation

The accompanying condensed consolidated financial statements are unaudited and have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The condensed consolidated balance sheets at December 31, 2018 have been derived from the audited consolidated financial statements of the Company at that date. Certain information and footnote disclosures typically included in the Company's audited consolidated financial statements have been condensed or omitted. The accompanying unaudited condensed consolidated financial statements have been prepared on the same basis as the annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary to state fairly the Company's financial position, results of operations, comprehensive loss and cash flows for the periods presented, but are not necessarily indicative of the results of operations to be anticipated for any future annual or interim period. All intercompany balances and transactions have been eliminated in consolidation.

The accompanying unaudited condensed consolidated financial statements and notes should be read in conjunction with the audited consolidated financial statements and related notes for the year ended December 31, 2018 included in the final prospectus for the IPO filed with the SEC on September 12, 2019.

Liquidity

While the Company has generated positive cash flows from operations of $27.9 million for the nine months ended September 30, 2019, the Company has incurred significant losses and has historically had negative cash flows from operations. As of September 30, 2019, the Company had cash and cash equivalents of $427.4 million and an accumulated deficit of $255.2 million. Management

expects to continue to incur significant expenses for the foreseeable future and to incur operating losses in the near term while the Company makes investments to support its anticipated growth. The Company believes that its cash and cash equivalents balance as of September 30, 2019, which includes the proceeds from the IPO, and borrowing capacity under existing credit agreements provide sufficient capital resources to continue its operations for at least 12 months from the issuance date of the accompanying condensed consolidated financial statements.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make judgments, estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements, disclosure of contingent assets and liabilities, and the reported amounts of revenue and expense. These judgments, estimates and assumptions are used for, but not limited to, revenue recognition, inventory valuation and write-downs, loss contingencies, accounting for assets acquisitions and the fair value of common stock and stock option awards. The Company bases its estimates on various factors and information, which may include, but are not limited to, history and prior experience, the Company's forecasts and future plans, current economic conditions and information from third-party professionals that management believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities and recorded amounts of expenses that are not readily apparent from other sources. Actual results may differ from those estimates, and the differences may be material.

Segment Information

The Company operates as a single operating segment. The Company's chief operating decision maker, its Chief Executive Officer, manages the Company's operations on a consolidated basis for the purposes of allocating resources, making operating decisions and evaluating financial performance.

Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments with an original maturity of three months or less from the date of purchase to be cash equivalents. Cash equivalents consist primarily of amounts invested in money market funds and are stated at fair value.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported on the condensed consolidated balance sheets that sum to the total of the same amounts shown in the condensed consolidated statements of cash flows (in thousands):

	September 30, 2019	December 31, 2018
Cash and cash equivalents	$ 427,436	$ 65,080
Restricted cash	50,053	5,008
Total cash, cash equivalents and restricted cash	$ 477,489	$ 70,088

Fair Value of Financial Instruments

The Company determines the fair value of an asset or liability based on the assumptions that market participants would use in pricing the asset or liability in an orderly transaction between market participants at the measurement date. The identification of market participant assumptions provides a basis for determining what inputs are to be used for pricing each asset or liability.

A fair value hierarchy has been established which gives precedence to fair value measurements calculated using observable inputs over those using unobservable inputs. This hierarchy prioritized the inputs into three broad levels as follows:

Level 1: Quoted prices in active markets for identical instruments

Level 2: Other significant observable inputs (including quoted prices in active markets for similar instruments)

Level 3: Significant unobservable inputs (including assumptions in determining the fair value of certain investments)

Money market funds are highly liquid investments and are actively traded. The pricing information for the Company's money market funds are readily available and can be independently validated as of the measurement date. This approach results in the classification of these securities as Level 1 of the fair value hierarchy. There were no transfers between Levels 1, 2 or 3 for any of the periods presented. As of September 30, 2019 and December 31, 2018, the Company held $406.9 million and $44.5 million in money market funds, respectively, with no unrealized gains or losses.

10x Genomics, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements

The Company has issued common stock warrants for which fair value is determined using Level 3 inputs. See Note 5 for more on the common stock warrants.

Accounts Receivable, Net

Accounts receivable consist of amounts due from customers for the sales of products and services. The Company reviews its accounts receivable and provides allowances of specific amounts if collectability is no longer reasonably assured based on historical experience and specific customer collection issues. The allowance for doubtful accounts was $0.1 million and $0.3 million as of September 30, 2019 and December 31, 2018, respectively.

Business Concentrations

The Company's instruments are mostly assembled and tested by a single contract manufacturer in the United States. The Company's agreement with the contract manufacturer expires in 2020 and may be terminated by either party for any reason by providing the other party with at least 30 days written notice. The Company's agreement with the contract manufacturer contains purchase commitments. In addition, the Company is reliant on several suppliers for key components for its reagent kits. A significant disruption in the operations of the contract manufacturer or suppliers may impact the production of the Company's products for a substantial period of time, which could have a material adverse effect on its business, financial condition and results of operations.

Concentrations

Financial instruments that potentially subject the Company to credit risk consist of cash equivalents and accounts receivable. The Company's cash and cash equivalents are primarily held with a large financial institution in the United States and deposits exceed the Federal Deposit Insurance Corporation's insurance limit. The Company's debt is with this same financial institution. The Company performs periodic evaluations of the risks associated with its investments and the relative credit standing of this financial institution.

The Company performs ongoing credit evaluations of its customers' financial condition. The Company does not require collateral from its customers but may require upfront payments from certain customers. The Company has not experienced significant credit losses to date. For the three and nine months ended September 30, 2018 and 2019, no single customer represented more than 10% of revenue. As of September 30, 2019 and December 31, 2018, no single customer represented more than 10% of the Company's outstanding accounts receivable.

Substantially all the Company's long-lived assets are located in the United States.

Inventory

Inventory is recorded at the lower of cost, determined ona first-in, first-out basis, or net realizable value. The Company uses judgment to analyze and determine if the composition of its inventory is obsolete, slow-moving or unsalable and frequently reviews such determinations. The Company writes down specifically identified unusable, obsolete, slow-moving or known unsalable inventory in the period that it is first recognized by using a number of factors including product expiration dates, open and unfulfilled orders and sales forecasts. Any write-down of its inventory to net realizable value establishes a new cost basis and will be maintained even if certain circumstances suggest that the inventory is recoverable in subsequent periods. Costs associated with the write-down of inventory are recorded to cost of revenue on the Company's consolidated statements of operations.

Property and Equipment, Net

Property and equipment, net is stated at cost, net of accumulated depreciation. Depreciation is computed using the straight-line method based on the estimated useful lives of the assets. Assets held under capital leases are recorded at the lower of the net present value of the minimum lease payments or the fair value of the leased assets at the inception of the lease. Amortization expense is computed using the straight-line method over the shorter of the estimated useful lives of the leased assets or the period of the related lease. Amortization of assets under capital leases is included in depreciation expense.

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Impairment of Long-Lived Assets

The Company evaluates long-lived assets, such as property and equipment and intangible assets, for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. If indicators of impairment exist and the undiscounted future cash flows that the assets are expected to generate are less than the carrying value of the assets, the Company reduces the carrying amount of the assets to their estimated fair values based on a discounted cash flow approach or, when available and appropriate, to comparable market values. There were no impairment losses recorded for the three and nine month periods ended September 30, 2019 and 2018.

Product Warranties

The Company generally provides a one-year warranty on its instruments. The Company reviews its exposure to estimated warranty obligations associated with instrument sales and establishes an accrual based on historical product failure rates and actual warranty costs incurred. This expense is recorded as a component of cost of revenue in the consolidated statements of operations and comprehensive loss.

Deferred Revenue

Deferred revenue consists of payments received in advance of revenue recognition primarily related to instrument service agreements, also referred to as extended warranties. Revenue under these agreements is recognized over the related service period. Deferred revenue that will be recognized during the 12 months following the balance sheet date is recorded as current portion of deferred revenue and the remaining portion is recorded as long term.

Accrued Contingent Liabilities

Accrued contingent liabilities represents the Company's estimates of possible losses on pending litigations, including related accrued royalties that are both probable and reasonably estimable. See Note 6.

Revenue Recognition

Commencing on January 1, 2019, the Company recognized revenues in accordance with*Accounting Standards Codification ("ASC") Topic 606 – Revenue from Contracts with Customers.*

The Company generates revenue from sales of products and services. The Company's products consist of instruments and consumables. The Company also sells instrument service agreements which relate to extended warranties.

The Company recognizes revenue when control of the products and services is transferred to its customers in an amount that reflects the consideration it expects to receive from its customers in exchange for those products and services. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract and recognizing revenue when the performance obligations have been satisfied. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. The Company considers a performance obligation satisfied once it has transferred control of a good or service to the customer, meaning the customer has the ability to use and obtain the benefit of the good or service.

Revenue from product sales is recognized when control of the product is transferred, which is generally upon shipment to the customer. In instances where right of payment or transfer of title is contingent upon the customer's acceptance of the product, revenue is deferred until all acceptance criteria have been met. Instrument service agreements, which relate to extended warranties, are typically entered into for one-year terms, following the expiration of the standard one-year warranty period. Revenue for extended warranties is recognized ratably over the term of the extended warranty period as a stand ready performance obligation. Revenue is recorded net of discounts, distributor commissions and sales taxes collected on behalf of governmental authorities. Customers are invoiced generally upon shipment, or upon order for services, and payment is typically due within 45 days. Cash received from customers in advance of product shipment or providing services 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 various combinations of products and services which are generally distinct and accounted for as separate performance obligations. The transaction price is allocated to each performance obligation in proportion to its standalone selling price. The Company determines standalone selling price using average selling prices with consideration of current market conditions. If the product or service has no history of sales or if the sales volume is not sufficient, the Company relies upon prices set by management, adjusted for applicable discounts.

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Contract Costs

Sales commissions earned by the Company's sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sale commissions related to the sale of extended warranties are deferred and amortized on a straight-line basis over the service term, which is typically greater than 1 year from the contract date. Amortization of deferred commissions is included in sales and marketing expenses in the accompanying condensed consolidated statements of operations and comprehensive loss.

Cost of Revenue

Costs of revenue primarily consist of manufacturing costs incurred in the production process, including personnel and related costs, component materials, labor and overhead, packaging and delivery costs and allocated costs including facilities and information technology. In addition, costs of product revenue includes royalty costs for licensed technologies included in the Company's products, warranty costs and provisions for slow-moving and obsolete inventory. In addition, cost of revenue includes estimated accrued royalties related to the Bio-Rad litigation. See Note 6.

Shipping and Handling Costs

Shipping and handling charged to customers are recorded as revenue. Shipping and handling costs are included in the Company's cost of revenue.

Research and Development

Research and development costs are expensed in the period incurred. Research and development expense consists of personnel and related costs, independent contractor costs, laboratory supplies, equipment maintenance, prototype and materials expenses, amortization of developed technology and intangibles and allocated costs including facilities and information technology.

See Note 3 for discussion of in-process research and development included on the consolidated statements of operations.

Stock-Based Compensation

The Company estimates the fair value of share-based payment awards granted to employees and directors on the grant date using the Black-Scholes option-pricing model. The fair value of share-based payment awards is recognized as compensation expense on a straight-line basis over the requisite service period in which the awards are expected to vest and forfeitures are recognized as they occur. Share-based payment awards that include a service condition and a performance condition are considered expected to vest when the performance condition is probable of being met.

The Black-Scholes model considers several variables and assumptions in estimating the fair value of stock-based awards. These variables include the per share fair value of the underlying common stock, exercise price, expected term, risk-free interest rate, expected annual dividend yield and the expected stock price volatility over the expected term. For all stock options granted, the Company calculated the expected term using the simplified method for "plain vanilla" stock option awards. The Company has limited publicly available stock information and therefore, the Company has used the historical volatility of the stock price of similar publicly traded peer companies. The risk-free interest rate is based on the yield available on U.S. Treasury zero-coupon issues similar in duration to the expected term of the equity-settled award.

Stock-based compensation expense for nonemployee stock options is measured based on fair market value using the Black-Scholes option pricing model and is recorded as the options vest. Prior to January 1, 2019, nonemployee stock options subject to vesting were revalued periodically over the requisite service period, which was generally the same as the vesting term of the award. From January 1, 2019, the grant date fair market value of nonemployee stock options is recognized in the consolidated statements of operations on a straight-line basis over the requisite service period and forfeitures are recognized as they occur.

Foreign Currency

For foreign subsidiaries where the functional currency is the local currency, assets and liabilities are translated to the U.S. dollar using month-end exchange rates, and revenue and expenses using average exchange rates. The adjustments resulting from these foreign currency translations are recorded in accumulated other comprehensive loss.

For foreign subsidiaries where the functional currency is the U.S. dollar, monetary assets and liabilities are remeasured using exchange rates in effect at the balance sheet dates and non-monetary assets and liabilities are remeasured at historical exchange rates. Revenue and expenses are remeasured at the average exchange rates for the period. Gains or losses from foreign currency remeasurement are included in other income (expense), net in the consolidated statements of operations and comprehensive loss. The Company recognized foreign currency transaction losses of $0.1 million and $0.1 million for the three months ended September 30, 2019 and 2018, respectively, and foreign currency transaction losses of $0.2 million and $0.2 million for the nine months ended September 30, 2019 and 2018, respectively.

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Income Taxes

The Company uses the asset and liability method of accounting for income taxes, in which deferred tax assets and liabilities are recognized for the future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using the enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be reversed. The effect on deferred tax assets and liabilities of a change in tax rates is recognized as income in the period that includes the enactment date. A valuation allowance is established if it is more likely than not that all or a portion of the deferred tax asset will not be realized.

The Company's tax positions are subject to income tax audits. The Company recognizes the tax benefit of an uncertain tax position only if it is more likely than not that the position is sustainable upon examination by the taxing authority, based on the technical merits. The tax benefit recognized is measured as the largest amount of benefit which is more likely than not (greater than 50% likely) to be realized upon settlement with the taxing authority. The Company recognizes interest accrued and penalties related to unrecognized tax benefits in its tax provision.

The Company calculates the current and deferred income tax provision based on estimates and assumptions that could differ from the actual results reflected in income tax returns filed in subsequent years. Adjustments based on filed income tax returns are recorded when identified. The amount of income tax paid is subject to examination by U.S. federal and state tax authorities. The estimate of the potential outcome of any uncertain tax issue is subject to management's assessment of the relevant risks, facts and circumstances existing at that time. To the extent the assessment of such tax position changes, the change in estimate is recorded in the period in which the determination is made.

Net Loss Per Share

Net loss per share of common stock is computed usingthe two-class method required for multiple classes of common stock and participating securities. The rights, including the liquidation and dividend rights and sharing of losses, of the Class A common stock and Class B common stock are identical, other than voting rights. As the liquidation and dividend rights and sharing of losses are identical, the undistributed earnings are allocated on a proportionate basis and the resulting net loss per share attributed to common stockholders will, therefore, be the same for both Class A and Class B common stock on an individual or combined basis.

The Company's participating securities included the Company's convertible preferred stock, as the holders are entitled to receive noncumulative dividends on a pari passu basis in the event that a dividend is paid on common stock. The Company also considers any shares issued on the early exercise of stock options subject to repurchase to be participating securities because holders of such shares have non-forfeitable dividend rights in the event a dividend is paid on common stock. The holders of convertible preferred stock, as well as the holders of early exercised shares subject to repurchase, do not have a contractual obligation to share in losses.

Basic net loss per share is computed by dividing net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period, adjusted for outstanding shares that are subject to repurchase.

For the calculation of diluted net loss per share, basic net loss per share attributable to common stockholders is adjusted by the effect of dilutive securities, including convertible preferred stock, awards under the Company's equity compensation plan and common stock warrants. Diluted net loss per share attributable to common stockholders is computed by dividing net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding. For periods in which the Company reports net losses, diluted net loss per share attributable to common stockholders is the same as basic net loss per share attributable to common stockholders because potentially dilutive shares of common stock are not assumed to have been issued if their effect is anti-dilutive.

Acquisitions of Assets

The Company evaluates acquisitions of assets and other similar transactions to assess whether or not the transaction should be accounted for as a business combination or asset acquisition by first applying a screen to determine if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets. If the screen is met the transaction is accounted for as an asset acquisition. If the screen is not met, further determination is required as to whether or not the Company has acquired inputs and processes that have the ability to create outputs which would meet the requirements of a business.

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The Company accounts for an asset acquisition under Accounting Standards Codification ("ASC"),*Business Combinations Topic 805, Subtopic 50*, which requires the acquiring entity in an asset acquisition to recognize net assets based on the cost to the acquiring entity on a relative fair value basis, which includes transaction costs in addition to consideration given. Goodwill is not recognized in an asset acquisition; any excess consideration transferred over the fair value of the net assets acquired is allocated to the non-monetary identifiable assets based on relative fair values. In-process research and development expense is expensed as incurred provided there is no alternative future use.

Contingent consideration payments in asset acquisitions are recognized when the contingency is resolved and the consideration is paid or becomes payable (unless the contingent consideration meets the definition of a derivative, in which case the amount becomes part of the basis in the asset acquired). Upon recognition of the contingent consideration payment, the amount is included in the cost of the acquired asset or group of assets.

Recently Adopted Accounting Pronouncements

In May 2014, the FASB issued ASUNo. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which supersedes the revenue recognition requirements in ASC 605, Revenue Recognition. This standard is based on the principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. The Company adopted this standard as of January 1, 2019 using the modified retrospective approach, which did not have a material impact on the condensed consolidated financial statements.

In June 2018, the FASB issued ASU2018-07, *Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*. This standard expands the scope of Topic 718, *Compensation—Stock Compensation* (which currently only includes share-based payments to employees) to include share-based payments issued to nonemployees for goods or services. Consequently, the accounting for share-based payments to nonemployees and employees will be substantially aligned. This standard is effective for annual periods beginning after December 15, 2019. The Company early adopted this standard on January 1, 2019 which did not have a material impact on the condensed consolidated financial statements.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASUNo. 2016-02, *Leases (Topic 842)*, which supersedes the guidance in former ASC 840, Leases. This standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. The classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similar to existing guidance for operating leases. This standard is effective for the Company for interim and annual periods beginning after December 15, 2019, with early adoption permitted. The Company is currently evaluating adoption methods and whether this standard will have a material impact on the condensed consolidated financial statements.

In October 2016, the FASB issued ASUNo. 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory* This standard will require entities to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs instead of when the asset is sold. This standard is effective for annual periods beginning after December 31, 2018. The Company is currently assessing the impact of this standard to the condensed consolidated financial statements but does not anticipate that it will have a material impact on the adoption due to the valuation allowance.

In August 2018, the FASB issued ASU2018-15, *Intangibles – Goodwill and Other – Internal Use Software (Subtopic 350-40) – Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract*, which aligns the accounting for implementation costs incurred in a hosting arrangement that is a service contract with the accounting for implementation costs incurred to develop or obtain internal-use software under ASC 350-40, in order to determine which costs to capitalize and recognize as an asset and which costs to expense. This standard is effective for annual periods beginning after December 15, 2020, and interim periods within annual periods beginning after December 15, 2021. Early adoption is permitted, including adoption in any interim period. This standard can be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. The Company is currently evaluating the impact of adopting this standard on the condensed consolidated financial statements.

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3. Acquisition

In March 2018, the Company acquired all of the outstanding shares of Epinomics, Inc. for $22.2 million inclusive of acquisition costs of $0.3 million. Of this amount, $6.2 million was due upon close of the acquisition and $16.0 million was due upon the amendment and assignment of a license agreement with the Board of Trustees of the Leland Stanford Junior University which occurred in August 2018. The technology licenses acquired in this transaction will enable the Company to develop products for epigenetics research. The transaction was accounted for as an asset acquisition. As the technology licenses acquired did not have alternative future use, the Company recognized charges of $16.0 million and $22.2 million during the three and nine months ended September 30, 2018, respectively, related to this transaction which are included as a component of in-process research and development on the condensed consolidated statements of operations and comprehensive loss.

4. Other Financial Statement Information

Inventory

Inventory was comprised of the following as of the dates indicated (in thousands):

	September 30, 2019	December 31, 2018
Purchased materials	$ 4,365	$ 3,052
Work in progress	4,525	2,553
Finished goods	4,415	2,965
Inventory	$ 13,305	$ 8,570

Accrued Compensation and Related Benefits

Accrued compensation and related benefits were comprised of the following as of the dates indicated (in thousands):

	September 30, 2019	December 31, 2018
Accrued bonus	$ 4,517	$ 3,545
Accrued commissions	1,757	2,299
Other	1,576	1,203
Accrued compensation and related benefits	$ 7,850	$ 7,047

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities were comprised of the following as of the dates indicated (in thousands):

	September 30, 2019	December 31, 2018
Accrued royalties for licensed technologies	$ 1,814	$ 1,571
Accrued property and equipment	5,367	990
Accrued consulting	763	741
Product warranties	409	804
Customer deposits	792	381
Taxes payable	740	738
Other	4,382	2,947
Accrued expenses and other current liabilities	$ 14,267	$ 8,172

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Product Warranties

Changes in the reserve for product warranties were as follows for the periods indicated (in thousands):

	September 30, 2019	December 31, 2018
Beginning of period	$ 804	$ 174
Additions charged to cost of revenue	408	1,685
Repairs and replacements	(803)	(1,055)
End of period	$ 409	$ 804

Revenue and Deferred Revenue

As of September 30, 2019, the aggregate amount of the transaction price allocated to remaining performance obligations was $4.3 million, of which approximately 72% is expected to be recognized to revenue in the next 12 months, with the remainder thereafter. These contract liabilities of $4.3 million consisted of deferred revenue related to extended warranty service agreements, and as of September 30, 2019, the short-term portion was $3.1 million. Revenue recorded during the three months and nine months ended September 30, 2019 included $0.6 million and $1.9 million, respectively, of previously deferred revenue that was included in contract liabilities as of the adoption date of January 1, 2019. Contract assets as of the adoption date of January 1, 2019 and September 30, 2019 were not material.

The following table represents revenue by source for the periods indicated (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Instruments	$10,377	$ 9,193	$ 25,527	$25,057
Consumables	49,745	26,810	142,134	69,292
Services	1,085	604	2,943	1,410
Total revenue	$61,207	$36,607	$170,604	$95,759

The following table presents revenue by geography based on the location of the customer for the periods indicated (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
North America	$35,838	$21,391	$ 97,293	$56,932
Europe, Middle East and Africa	12,136	8,228	36,634	21,953
China	7,046	4,248	22,453	9,710
Asia Pacific	6,187	2,740	14,224	7,164
Total revenue	$61,207	$36,607	$170,604	$95,759

Revenue for the United States, which is included in North America in the table above, was 57% and 56% of consolidated revenue for the three months ended September 30, 2019 and 2018, respectively, and 55% and 56% of consolidated revenue for the nine months ended September 30, 2019 and 2018, respectively.

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5. Debt

In September 2016, the Company entered into a loan and security agreement which includes a term loan and revolving line of credit facility, and initially borrowed $10.6 million as a term loan, known as Tranche A. In February 2018, the loan and security agreement was amended and restated. Under the terms of the amended and restated loan and security agreement, amounts available under Tranche A were increased to $30.0 million (the "Amended Tranche A"). As of the date of modification, the balance outstanding under Tranche A was $10.5 million. After giving consideration to the end of term payment, the Company borrowed an additional $19.5 million under the Amended Tranche A. Under the amended agreement, the Company had the option to borrow an additional $20.0 million as a term loan, known as the Amended Tranche B, beginning October 1, 2018 through June 30, 2019, or the date of an event of default if earlier, and the revolving line of credit facility was increased from $5.0 million to up to $25.0 million.

Monthly payments of interest were due under the Amended Tranche A term loan through June 30, 2019, with monthly installments of principal and interest due for 42 months thereafter. If the Amended Tranche B was borrowed, monthly installments of principal and interest were to be reduced to 36 months. In June 2019, the Company's loan and security agreement was amended to extend the Company's option to borrow the Amended Tranche B through December 31, 2019. Additionally, the interest-only period was extended to December 31, 2019, with monthly installments of principal and interest due for 36 months thereafter. The term loan accrues interest at the greater of the floating per annum rate equal to the greater of The Wall Street Journal prime rate plus 2.0% or 6.25%. Additionally, an end of term payment is due to the lender in the amount of $1.8 million upon maturity, prepayment or acceleration of the term loan, as amended. The end of term payment is being accreted as additional interest expense over the term of the debt using the effective interest method. In connection with the amendment, the Company paid a one-time fee of $50,000 to the lender.

The term loan can be repaid prior to the maturity date, however, a prepayment fee of 3.0% of the outstanding principal balance will be due in addition to all outstanding principal and interest, if the prepayment is made before the first anniversary date of the loan closing date. This prepayment fee decreases to 2.0% if the prepayment is made on or after the first anniversary of the loan closing date but before the second anniversary of the loan closing date and the fee decreases to 1.0% of the outstanding principal amount if paid after the second anniversary and prior to the maturity date.

The loan and security agreement provides the Company with a revolving line of credit of up to $25.0 million through December 2022. The amount available on the revolving line of credit is based on 80% of eligible receivables and is subject to a borrowing base calculation. Principal amounts outstanding under the revolving line of credit accrue interest at the greater of a floating per annum rate equal to the greater of The Wall Street Journal prime rate plus 0.25% or 4.5% and are repayable monthly. Upon termination of the agreement for any reason prior to the revolving credit facility's maturity date, a termination fee of $250,000 will be due in addition to all outstanding principal and interest. Additionally, the revolving line of credit has a nonrefundable annual commitment fee of $62,500 payable on each anniversary date. In August 2019, the Company borrowed $11.0 million under the revolving line of credit. As of September 30, 2019, the entire $11.0 million was repaid.

In connection with the amendment of the loan and security agreement, the Company issued the lender a warrant to purchase 125,000 Class A common shares with an exercise price per share of $1.62. The warrants had an estimated fair value of $150,000 which has been recorded as a debt discount. The Company had previously issued warrants to purchase an aggregate of 141,099 additional Class A common shares in connection with the loan. Thus, following the amendment of the loan and security agreement, the Company had issued warrants to purchase an aggregate of 266,099 Class A common shares. In September 2019, all then-outstanding warrants were net exercised which resulted in the issuance of an aggregate of 261,024 shares of common stock. If the Company borrows under the Amended Tranche B term loan, the Company is obligated to issue the lender a warrant to purchase an additional 133,000 Class A common shares with an exercise price per share of $1.62.

Amounts borrowed under the loan and security agreement are collateralized by all of the Company's assets, except for intellectual property, but including the proceeds from the sale of any of the Company's intellectual property. In addition, the Company has provided a negative pledge regarding its intellectual property and cannot encumber it without the lender's consent. The loan and security agreement contains various covenants for reporting, protecting and obtaining adequate insurance coverage for assets collateralized and for coverage of business operations, and complying with requirements, including the payment of all necessary taxes and fees for all federal, state and local government entities. Immediately upon the occurrence and during the continuance of an event of default, including the noncompliance with the above covenants, the lender may increase the interest rate per annum by 5.0% above the rate that is otherwise applicable; stop future loan advances; require the Company to deposit 105% of any undrawn letters of credit, or 110% if the letter of credit is denominated in a foreign currency; and take control over all assets collateralizing the loan and take necessary means to protect the collateral. The loan and security agreement contains a material adverse change clause, including terms for subjective acceleration. As of September 30, 2019 and as of the date these financial statements were available to be issued, the Company was in compliance with all loan covenants.

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6. Commitments and Contingencies

Litigation

The Company is currently a defendant in the lawsuits and proceedings described below. Other than with respect to the 2015 Delaware Action, losses are not probable or estimable for the described below.

The 2015 Delaware Action

In February 2015, Raindance Technologies, Inc. ("Raindance") and the University of Chicago filed suit against the Company in the U.S. District Court for the District of Delaware, alleging that substantially all of the Company's products that use the Company's GEM microfluidic chips infringe certain patents. In May 2017, Bio-Rad Laboratories, Inc. ("Bio-Rad") was substituted as the plaintiff following its acquisition of Raindance. In November 2018, a jury found that the accused products willfully infringed one or more of the asserted patents and awarded Bio-Rad approximately $24 million in damages through June 30, 2018. The Company appealed the jury verdict. Post-trial, Bio-Rad moved for a permanent injunction, treble damages for willful infringement, attorneys' fees, supplemental damages as well as pre- and post-judgment interest.

In response to the jury award, the Company established an accrual of $30.6 million as of December 31, 2018, which was recorded as an operating expense on the consolidated statement of operations for the year ended December 31, 2018. Additionally, beginning in the fourth quarter of 2018, the Company also began recording an accrual for estimated royalties to Bio-Rad as a cost of revenue on the consolidated statements of operations based on an estimated royalty rate of 15% of sales of the Company's Chromium instruments operating its GEM microfluidic chips and associated consumables. As a result, the Company recorded $7.4 million of royalties for the fourth quarter of 2018. As of December 31, 2018, the Company recorded a total accrual of $38 million related to this matter which represented the jury award plus the Company's estimate of additional damages for the period from June 30, 2018 to the trial date in November 2018 and the royalties accrued in the fourth quarter of 2018.

In July 2019, the Court awarded supplemental damages for the period from June 30, 2018 through the end of the trial in November 2018 and established the interest rates for pre- and post-judgment interest, which when combined with the original award, resulted in a $35 million preliminary judgment in favor of Bio-Rad for damages through November 2018 and interest. During the three and nine months ended September 30, 2019 the Company recorded royalties of $7.2 million and $23.1 million, respectively, as a cost of revenue and an additional $1.4 million during the nine months ended September 30, 2019 as an operating expense for estimated pre-and post- judgment interest. The Company's accrual of $62.5 million as of September 30, 2019 is comprised of the preliminary judgment, along with the Company's estimate of additional royalties and interest for the period from November 2018 through September 30, 2019. To date the Company has not made any payments related to the judgment or royalties. In July 2019, the Court denied Bio-Rad's other post-trial requests such as attorneys' fees and enhanced damages for willful infringement.

In July 2019, the Court also granted Bio-Rad a permanent injunction against the Company's GEM microfluidic chips and associated consumables that were found to infringe the Bio-Rad patents, which historically have constituted substantially all of the Company's product sales. Under the injunction, the Company is permitted to continue to sell its GEM microfluidic chips and associated consumables for use with its historical installed base of instruments provided that the Company pay a royalty of 15% into escrow on the Company's net revenue related to such sales commencing after the injunction effective date. The amounts will be held in escrow until the conclusion of the Company's appeal. These decisions were entered as a final judgment against the Company in August 2019, and the injunction became effective on August 28, 2019. The Company appealed the injunction to the Federal Circuit. The Federal Circuit granted an interim order staying the injunction pending resolution of the Company's motion with respect to the Company's Single Cell CNV and Linked-Read solutions subject to the 15% royalty payment described above. On September 24, 2019, the Federal Circuit extended the stay with respect to the Single Cell CNV and Linked-Read solutions for the pendency of the appeal, but otherwise denied the Company's request to stay the injunction. The Company also appealed the judgment to the Federal Circuit.

In August 2019, the Court ordered that the Company may post a bond in the amount of $52 million in lieu of payment of the final judgment. On September 13, 2019, the Company posted a $52 million bond (the "Bond") in lieu of payment of the judgment pending the Company's ongoing appeal. In connection with the Bond, the Company deposited $45 million as collateral in a segregated cash account, where it will be held until the conclusion of the appeal.

The ITC 1068 Action

On July 31, 2017, Bio-Rad and Lawrence Livermore National Security, LLC filed a complaint against the Company in the U.S. International Trade Commission ("ITC") pursuant to Section 337 of the Tariff Act of 1930, alleging that substantially all of the Company's products infringe certain asserted patents (the "ITC 1068 Action"). In September 2018, the judge found that the Company's GEM microfluidic chips infringe certain of the asserted patents, but also that the Company's gel bead manufacturing

microfluidic chip and Next GEM microfluidic chip do not infringe any claim asserted against them. The judge recommended entry of an exclusion order preventing the Company from importing its GEM microfluidic chips and a cease and desist order that would prevent the Company from selling such imported chips. A Final Determination is expected to be issued in December 2019, which is subject to a 60-day presidential review period before taking effect. The Company believes this proceeding is without merit and intends to vigorously defend itself.

The Northern District of California Action

On July 31, 2017, Bio-Rad and Lawrence Livermore National Security, LLC also filed suit against the Company in the U.S. District Court for the Northern District of California, alleging that substantially all of its products infringe certain patents in addition to the patents asserted in the ITC 1068 Action. The complaint seeks injunctive relief, unspecified monetary damages, costs and attorneys' fees. This litigation has been stayed pending resolution of the ITC 1068 Action. The Company believes that this lawsuit is without merit and intends to vigorously defend itself.

The Germany Action

On July 31, 2017, Bio-Rad filed suit against the Company in Germany in the Munich Region Court alleging that the Company infringed a European patent. Bio-Rad dismissed this action in August 2018.

On February 13, 2018, Bio-Rad filed suit against the Company in Germany in the Munich Region Court alleging that its Chromium instruments, GEM microfluidic chips and certain accessories infringe a German utility model. Bio-Rad seeks unspecified damages and an injunction prohibiting sales of these products in Germany and requiring the Company to recall these products sold in Germany subsequent to February 11, 2018. An initial hearing was held on November 27, 2018, and a subsequent hearing was held on May 15, 2019. The court is expected to issue a ruling on the merits on November 20, 2019. The Company believes that this lawsuit is without merit and intends to vigorously defend itself.

The 2018 Delaware Action

On October 25, 2018, Bio-Rad filed suit against the Company in the U.S. District Court for the District of Delaware alleging that the Company infringed certain patents. Discovery is in progress. On October 25, 2019, the Company filed petitions in the U.S. Patent and Trademark Office requesting *inter partes* review of the asserted patents. Bio-Rad seeks injunctive relief, unspecified monetary damages, costs and attorneys' fees. The Company believes that this lawsuit is without merit and intends to vigorously defend itself.

The 2019 Delaware Action

On September 11, 2019, Bio-Rad filed suit against the Company in the U.S. District Court for the District of Delaware alleging that the Company's Next GEM products infringe certain claims of U.S. Patent No. 8,871,444. On November 5, 2019, Bio-Rad amended the complaint to additionally allege that the Company's Next GEM products infringe certain claims of U.S. Patent Nos. 9,919,277 and 10,190,115. The Company believes that the asserted patents are invalid and not infringed and intends to defend itself vigorously.

The Becton, Dickinson Action

On November 15, 2018, Becton, Dickinson and Company ("BD") and Cellular Research, Inc. filed suit against the Company in the U.S. District Court for the District of Delaware, alleging that the Company infringed certain patents. In September 2019, the Company filed counterclaims alleging that BD and Cellular Research, Inc. (together, the "BD Entities") infringed a number of the Company's patents. This case was dismissed with prejudice on October 21, 2019 following the entrance by the parties into a settlement and patent cross license agreement. The Company considers this matter closed. See Note 10.

7. Equity Incentive Plans

2012 Stock Plan

In October 2012, the Company adopted the 10x Genomics, Inc. 2012 Stock Plan (the "2012 Stock Plan") which has been amended in subsequent years for increases in authorized shares, among other changes. The 2012 Stock Plan allowed for the issuance of incentive stock options ("ISOs"), non-statutory stock options ("NSOs") or restricted shares. As of September 30, 2019, the number of shares of Class A common stock issuable upon the exercise of stock options granted under the 2012 Stock Plan is 15,612,937. The 2012 Stock Plan did not allow for the issuance of shares of Class B common stock.

10x Genomics, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements

Upon the adoption of the 2019 Omnibus Incentive Plan in September 2019, any awards outstanding under the 2012 Stock Plan will continue to be governed by their existing terms but no further awards may be granted under the 2012 Stock Plan.

2019 Omnibus Incentive Plan

In July 2019, in connection with the IPO, the Company's board of directors adopted the 10x Genomics, Inc. 2019 Omnibus Incentive Plan (the "Omnibus Incentive Plan"), which was subsequently approved by the Company's stockholders. The Omnibus Incentive Plan went into effect on September 11, 2019. The Omnibus Incentive Plan allows for the issuance of ISOs, NSOs or restricted shares. ISOs may be granted only to the Company's employees (including officers and directors who are also considered employees). NSOs and restricted shares may be granted to the Company's employees and service providers. As of September 30, 2019, the number of shares of Class A common stock issuable upon the exercise of stock options granted under the Omnibus Incentive Plan is 339,240. The Omnibus Incentive Plan provides that the total number of shares of the Company's Class A common stock that may be issued under the Omnibus Incentive Plan is 11,000,000 (such share limit as increased from time to time, the "Absolute Share Limit"). However, the Absolute Share Limit shall be increased on the first day of each calendar year commencing on January 1, 2021 and ending on January 1, 2029 in an amount equal to the lesser of (i) 5% of the total number of shares of common stock outstanding on the last day of the immediately preceding fiscal year and (ii) such number of shares of the Company's Class A common stock as determined by the Company's board of directors. However, if on January 1 of a calendar year, the Company's board of directors has not either confirmed the 5% increase described in clause (i) or approved a lesser number of shares of the Company's Class A common stock for such calendar year, then the Company's board of directors will be deemed to have waived the automatic increase, and no such increase will occur for such calendar year. Of the Absolute Share Limit, no more than 11,000,000 shares of Class A common stock may be issued in the aggregate pursuant to the exercise of incentive stock options granted under the Omnibus Incentive Plan.

Options under the Omnibus Incentive Plan have a contractual term of 10 years. The exercise price of an ISO and NSO shall not be less than 100% of the fair market value of the shares on the date of grant.

2019 Employee Stock Purchase Plan

In July 2019, the Company's board of directors adopted the 10x Genomics, Inc. 2019 Employee Stock Purchase Plan (the "ESPP"), which was subsequently approved by the Company's stockholders. The ESPP went into effect on September 11, 2019. Subject to any limitations contained therein, the ESPP allows eligible employees to contribute, through payroll deductions, up to 15% of their eligible compensation to purchase the Company's Class A common stock at a discounted price per share. The ESPP generally provides for consecutive, overlapping 6-month offering periods. The initial offering periods runs from September 11, 2019 through May 14, 2020. Unless otherwise determined by the administrator of the ESPP, a participant may not sell, transfer or otherwise dispose of any shares of our Class A common stock purchased under the ESPP for 12 months following the applicable exercise date.

A total of 2,000,000 shares of Class A common stock were reserved for issuance under the ESPP. As of September 30, 2019, no shares of Class A common stock have been purchased under the ESPP. The ESPP provides that the maximum number of shares of the Company's Class A common stock made available for sale thereunder will be 2,000,000, which number will be automatically increased on the first day of each calendar year commencing on January 1, 2021 and ending on January 1, 2029 in an amount equal to the lesser of (i) 1% of the total number of shares of common stock outstanding on the last day of the immediately preceding fiscal year and (ii) such number of shares of the Company's Class A common stock as determined by the Company's board of directors. However, if on January 1 of a calendar year the Company's board of directors has not either confirmed the 1% described in clause (i) or approved a lesser number of shares of the Company's Class A common stock for such calendar year, the Company's board of directors will be deemed to have waived the automatic increase and no such increase will occur for such calendar year. The maximum number of shares available under the ESPP (and any share limitations thereunder, as applicable) will automatically be adjusted upon certain changes to the Company's capital structure.

10x Genomics, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements

Stock-based Compensation

The Company recorded stock-based compensation expense in the condensed consolidated statement of operations for the periods presented as follows (in thousands):

	Three months ended September 30,		Nine months ended September 30,	
	2019	2018	2019	2018
Cost of revenue	$ 81	$ 27	$ 171	$ 63
Research and development	1,650	230	3,448	670
Selling, general and administrative	2,143	332	4,639	862
Total stock-based compensation expense	$ 3,874	$ 589	$ 8,258	$ 1,595

8. Income Tax

The Company's provision for income taxes was $8,000 and $110,000 for the three and nine months ended September 30, 2019, respectively, with an effective tax rate of 0.1% and 0.5%, respectively, and $16,000 and $45,000 for the three and nine months ended September 30, 2018, respectively, with an effective tax rate of 0.1% and 0.1%, respectively. Deferred tax assets generated from the Company's domestic net operating losses have been fully reserved, as the Company believes it is not more likely than not that the benefit will be realized.

9. Net Loss Per Share

The following table sets forth the computation of basic and diluted net loss per share for the periods indicated (in thousands, except share and per share data):

	Three months ended September 30,		Nine months ended September 30,	
	2019	2018	2019	2018
Net loss attributable to common stockholders	$ (9,603)	$ (15,345)	$ (24,117)	$ (36,961)
Weighted average shares used in computing net loss per share attributable to common stockholders, basic and diluted	29,184,218	13,587,288	19,904,184	13,188,322
Net loss per share attributable to common stockholders, basic and diluted	$ (0.33)	$ (1.13)	$ (1.21)	$ (2.80)

10x Genomics, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements

The following outstanding shares of common stock equivalents were excluded from the computation of diluted net loss per share for the periods presented because including them would have had an anti-dilutive effect:

	September 30,	
	2019	2018
Convertible preferred stock (on an if-converted basis)	—	64,954,871
Stock-options to purchase common stock	15,952,177	12,226,166
Shares subject to repurchase	164,375	163,750
Common stock warrants	—	266,099
Shares committed under ESPP	2,438	—
Total	16,118,990	77,610,886

10. Subsequent Events

The 2015 Delaware Action

On October 10, 2019, the Court denied the Company's motion to decrease the bond amount and stayed any execution or enforcement of the judgment until the completion of appeal, and for thirty days thereafter.

The 2019 Becton, Dickinson Settlement and Patent Cross License Agreement

In October 2019, the Company entered into a settlement and patent cross license agreement (the "BD Agreement") with the BD Entities. The BD Agreement resolved all outstanding patent litigation between the parties (the "BD Litigation"), which was dismissed with prejudice on October 21, 2019. Under the terms of the BD Agreement, the BD Entities granted the Company and its affiliates, and the Company granted BD and its affiliates, a worldwide, royalty-free, non-exclusive, fully paid-up license to certain patents and patent applications relating to molecular barcoding and single cell analysis, including to all the patents asserted in the BD Litigation. Under the terms of the BD Agreement, the Company is obligated to make payments totaling $25.0 million to BD comprised of four annual payments of $6.25 million beginning in January 2020. As part of the BD Agreement, each party, on behalf of itself and its affiliates, has also entered into a covenant not to sue in certain fields related to each company's products. The companies have also agreed on behalf of themselves and their affiliates to refrain from challenging the patents and patent applications licensed under the BD Agreement.

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

You should read the following discussion of our financial condition and results of operations in conjunction with our unaudited condensed financial statements and the related notes and other financial information included elsewhere in this Quarterly Report on Form 10-Q and our audited consolidated financial statements and notes thereto and management's discussion and analysis of financial condition and results of operations for the fiscal year ended December 31, 2018 included in the final prospectus for our initial public offering dated as of September 11, 2019, and filed with the Securities and Exchange Commission pursuant to Rule 424(b) under the Securities Act of 1933, as amended, on September 12, 2019 (File No. 333-233361) (the "Prospectus"). As discussed in the section titled "Special Note Regarding Forward Looking Statements," the following discussion and analysis, in addition to historical financial information, contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth in the section titled "Risk Factors" under Part II, Item 1A below. In some cases, you can identify forward-looking statements by terminology such as "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potentially," "predict," "should," "will" or the negative of these terms or other similar expressions.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this Quarterly Report on Form 10-Q, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

We operate on a fiscal year that ends on December 31.

Overview

We are a life sciences technology company focused on building innovative products and solutions to interrogate, understand and master biological systems at resolution and scale that matches the complexity of biology. Our expanding suite of offerings leverages our cross-functional expertise across biology, chemistry, software and hardware to provide a comprehensive, dynamic and high-resolution view of complex biological systems. We have launched multiple products that enable researchers to understand and interrogate biological analytes in their full biological context. Our commercial product portfolio leverages our Chromium instruments, which we refer to as "instruments", and our proprietary microfluidic chips, slides, reagents and other consumables for both our Visium and Chromium solutions, which we refer to as "consumables". We bundle our software with these products to guide customers through the workflow, from sample preparation through analysis and visualization.

Our products cover a wide variety of applications and allow researchers to analyze biological systems at fundamental resolutions and on massive scales, such as at the single cell level for millions of cells. Our Chromium instruments and Chromium consumables are designed to work together exclusively. After buying a Chromium instrument, customers purchase consumables from us for use in their experiments. Accordingly, as the installed base of our instruments grows, we expect recurring revenue from consumable sales to become an increasingly important driver of our operating results. As such, our revenue growth is expected to outpace growth in our instrument placements as our business develops. In addition to instrument and consumable sales, we derive revenue from post-warranty service contracts for our Chromium instruments. For the three and nine months ended September 30, 2019, sales of our Chromium instruments accounted for 17% and 15% of our revenue, respectively, sales of our consumables accounted for 81% and 83% of our revenue, respectively, and sales of services accounted for 2% and 2% of our revenue, respectively.

We currently serve thousands of researchers in more than 40 countries. Our customers include a range of academic, government, biopharmaceutical, biotechnology and other leading institutions around the globe. In the three and nine months ended September 30, 2019, approximately 68% and 70%, respectively, of our direct sales revenue came from sales to academic institutions.

As of September 30, 2019, we employed a commercial team of over 200 employees. We follow a direct sales model in North America and certain regions of Europe, representing the majority of our revenue. We sell our products through third-party distributors in Asia, certain regions of Europe, South America, the Middle East and Africa. We currently sell our products for research use only. For the three and nine months ended September 30, 2019, sales within North America accounted for approximately 59% and 57% of our revenue, respectively.

We focus a substantial portion of our resources on developing new products and solutions. Our research and development efforts are centered around improving the performance of our existing assays and software, developing new Chromium solutions such as multi-omics solutions, developing our Visium platform, improving and developing new capabilities for our Chromium platform, developing combined software and workflows across multiple solutions and investigating new technologies. We intend to continue to make significant investments in this area for the foreseeable future. In addition, during the nine months ended September 30, 2018, we made acquisitions for an aggregate purchase price of $22.2 million. There were no similar acquisitions in the nine months ended September 30, 2019.

Our instrument manufacturing is contracted out to third-party contract manufacturers and we manufacture the majority of our consumable products in-house, with a small amount of our components outsourced to key suppliers. We have designed our operating model to be capital efficient and to scale efficiently as our product volumes grow.

Historically, we have financed our operations primarily from the sale of our instruments and consumable products, the issuance and sale of our convertible preferred stock and common stock and the issuances of debt. On September 16, 2019, we completed an initial public offering ("IPO"), in which we sold 11,500,000 shares of Class A common stock (which included 1,500,000 shares that were offered and sold pursuant to the full exercise of the IPO underwriters' option to purchase additional shares) at a price to the public of $39.00 per share. We received aggregate net proceeds of $410.8 million after deducting, offering costs, underwriting discounts and commissions of $37.7 million.

Since our inception in 2012, we have incurred net losses in each year. Our net losses were $9.6 million and $15.3 million for the three months ended September 30, 2019 and 2018, respectively, and $24.1 million and $37.0 million for the nine months ended September 30, 2019 and 2018, respectively. As of September 30, 2019, we had an accumulated deficit of $255.2 million and cash and cash equivalents totaling $427.4 million. We expect to continue to incur significant expenses for the foreseeable future and to incur operating losses in the near term. We expect our expenses will increase substantially in connection with our ongoing activities, as we:

- attract, hire and retain qualified personnel;
- scale our technology platforms and introduce new products and services;
- protect and defend our intellectual property;
- acquire businesses or technologies; and
- invest in processes, tools and infrastructure to support the growth of our business.

Recent acquisitions

In March 2018, we completed the acquisition of Epinomics Inc., a privately-held company based in California, for an all cash purchase price of $22.2 million. Epinomics Inc.'s patent portfolio includes foundational intellectual property and a worldwide exclusive license relating to ATAC-seq, which supplements our existing patent portfolio and enables us to provide ATAC-seq solutions for single cell and other epigenetic applications. All of our obligations under the Epinomics acquisition agreement have been fully performed.

In November 2018, we completed the acquisition of Spatial Transcriptomics Holding AB ("Spatial Transcriptomics"), a privately-held company based in Stockholm, Sweden, for an all cash purchase price of $38.6 million. With the acquisition of Spatial Transcriptomics, we obtained intellectual property relating to the spatial interrogation of biological analytes, which we believe will open up the possibilities for discoveries in oncology, neuroscience and immunology, as well as in the broader area of biology. Pursuant to the Spatial Transcriptomics acquisition agreement, we are obligated to make contingent payments to the sellers through December 31, 2022. Aside from this obligation, all of our obligations under the Spatial Transcriptomics acquisition agreement have been fully performed.

In November 2018, we completed the acquisition of a worldwide exclusive license to foundational intellectual property relating to spatial analysis technologies from Prognosys Biosciences, Inc. ("Prognosys"), for a combination of cash and common stock. All of our obligations under the Prognosys license agreement have been fully performed.

Key business metrics

We regularly review a number of operating and financial metrics, including the instrument installed base and consumable pull-through, to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions. We believe that these metrics are representative of our current business; however, we anticipate these may change or may be substituted for additional or different metrics as our business grows and as we introduce new products.

We believe the instrument installed base is one of the indicators of our ability to drive customer adoption of our products. We define the instrument installed base as the cumulative number of Chromium instruments sold since inception. Our instrument installed base grew from 491 as of December 31, 2017 to 1,021 as of December 31, 2018. Our goal is to continue to grow the instrument installed base and we expect to evaluate and report changes to our instrument installed base on an annual basis.

We do not believe the number of instruments installed in an individual quarter is an effective indicator of the current state of our business trends. Our quarterly instrument unit volumes can fluctuate due to a number of factors, including the procurement and budgeting cycles of many of our customers, especially government and academic institutions where unused funds may be forfeited or future budgets reduced if purchases are not made by their fiscal year end. Similarly, our biopharmaceutical customers typically have calendar year fiscal years which may result in a disproportionate amount of their purchasing activity occurring during our fourth quarter. For example, instrument unit sales decreased by 18% from the second half of 2018 to the first half of 2019. We believe this

decrease was largely caused by the procurement and budgeting cycles of our government and academic institution customers where unused funds are typically spent prior to fiscal year end. We also believe the timing of unit sales has been impacted and will continue to be impacted by the timing of product introductions and transitions which can either accelerate or delay demand of existing and new products depending on the needs of individual researchers to conclude existing studies or to use new and improved product capabilities. Further, the growth of our market in certain geographic regions and our continued efforts to service these regions impact unit volumes quarter to quarter. Finally, while our Chromium Controller instrument is user installable and does not require in-person training to use, we expect the timing of installation will be impacted when we begin selling our Chromium Connect instrument since these instruments will require installation and in-person training. We therefore believe that an annual representation of our instrument installed base is most appropriate for assessing trends in our business.

Our consumables portfolio includes proprietary microfluidic chips, slides, reagents and other consumables for both our Visium and Chromium solutions. Our Chromium instruments and Chromium consumables are designed to work together exclusively. This Chromium closed-system model generates recurring revenue from each instrument we sell. Our growth in the instrument installed base has been the largest contributor to our growth in consumable sales. In addition, we believe that annual consumable pull-through per instrument is an indicator of our ability to generate future consumable revenue and the rate of customer adoption of our new applications. We define consumable pull-through per instrument as the total consumables revenue in the given period divided by the average instrument installed base during that period. Our annual consumable pull-through per instrument grew slightly from $140,000 for the year ended December 31, 2017 to $148,000 for the year ended December 31, 2018. We expect our annual consumable pull-through per instrument to be relatively stable as the instrument installed base increases and we expect to evaluate and report changes to our annual consumable pull-through per instrument on an annual basis.

Our current customer base includes customers who purchase consumables for use on a shared or centralized instrument. We refer to customers who purchase consumables but do not own an instrument as “halo users”. For the nine months ended September 30, 2019, halo users represented approximately half of our revenue from sales of consumables. Halo users, as well as the future introduction of consumables that may not use instruments, such as our recently announced Visium solution, or Chromium instruments that are expected to use a greater amount of consumables, such as our Chromium Connect instrument, could reduce the utility of this metric and make it difficult to compare consumable pull-through per instrument metrics over time.

Key factors affecting our performance

We believe that our financial performance has been and in the foreseeable future will continue to be primarily driven by the following factors. While each of these factors presents significant opportunities for our business, they also pose important challenges that we must successfully address in order to sustain our growth and improve our results of operations. Our ability to successfully address the factors below is subject to various risks and uncertainties, including those described under the heading “Risk factors” under Item 1A below.

Instrument sales

Our financial performance has largely been driven by, and in the future will continue to be impacted by, the rate of sales of our Chromium instruments. Management focuses on instrument sales as an indicator of current business success and a leading indicator of likely future sales of consumables. We expect our instrument sales to continue to grow as we increase penetration in our existing markets and expand into, or offer new features and solutions that appeal to new markets.

We plan to grow our instrument sales in the coming years through multiple strategies including expanding our sales efforts globally and continuing to enhance the underlying technology and applications for life sciences research. We regularly solicit feedback from our customers and focus our research and development efforts on enhancing the Chromium Controller instrument and enabling its ability to use additional applications that address their needs, which we believe in turn helps to drive additional sales of our instruments and consumables. We are developing our Chromium Connect instrument, which is an automated version of our current Chromium Controller instrument, with a targeted release in 2020. We believe the automated features of the Chromium Connect will increase our addressable market by increasing utilization by biopharmaceutical customers.

Our sales process varies considerably depending upon the type of customer to whom we are selling. Our sales process with small laboratories and individual researchers is often short, and in some cases, we receive purchase orders from these customers in under a month. Our sales process with other institutions can be longer with most customers submitting purchase orders within six months. Given the variability of our sales cycle, we have in the past experienced, and likely will in the future experience, fluctuations in our instrument sales on a period-to-period basis.

Recurring consumable revenue

As our instrument installed base expands, consumables revenue on an absolute basis is expected to increase and over time should be an increasingly important contributor to our revenue. We expect our annual consumable pull-through per instrument to be relatively stable as the instrument installed base increases. Our expansion into new markets with less experienced users could adversely impact average pull-through, but we expect the introduction of our Visium products as well as the release of new products and applications for our Chromium instruments to increase consumable pull-through per instrument and offset these declines. We will initially report our Visium product revenue as part of consumable revenue and include it in the average annual pull-through per instrument calculation. Even though Visium is not processed through a Chromium instrument, we will sell the product primarily to Chromium instrument users and view it as pull-through from a business perspective.

Revenue mix and gross margin

Our revenue is derived from sales of our instruments, consumables and services. There have been fluctuations in the mix between instruments and consumables and amongst our consumables. Our consumable revenue as a percentage of total revenue has continued to grow. Each of our consumables solutions is designed to allow researchers to study a different aspect of biology, such as DNA, RNA, protein or epigenetics, at a resolution and scale that may be impractical or impossible using existing tools. As each of our solutions has been introduced, they have been initially purchased by a small number of early adopters. As these early adopters successfully perform experiments and publish scientific articles using our solutions, the utility of these solutions is more broadly understood and the solutions are then subsequently adopted by the larger research community. The revenue contribution from these and other consumable products has varied and is expected to vary on a quarterly basis due to several factors, including the publication of scientific papers demonstrating the value of the consumables, the availability of grants to fund research, budgetary timing and our introduction of new product features and new consumables offerings. However, sales of each of our consumable solutions have increased in absolute dollars in each of the periods presented.

For each of the nine months ended September 30, 2018 and 2019, our Single Cell Gene Expression consumables, which were introduced in 2016, accounted for the majority of our consumables revenue. For each of the nine months ended September 30, 2018 and 2019, the remaining consumables revenue was substantially comprised of sales of our Single Cell Immune Profiling consumables, which were introduced in 2017. Revenue from both our Single Cell Gene Expression consumables and our Single Cell Immune Profiling consumables increased in absolute dollars period over period. Revenue contribution from our Single Cell Gene Expression consumables decreased as a percentage of overall consumables revenue while revenue contribution from our Single Cell Immune Profiling consumables increased due to its introduction in the second quarter of 2017.

For each of the three months ended September 30, 2018 and 2019, our Single Cell Gene Expression consumables also accounted for the majority of our consumables revenue. For the three months ended September 30, 2018, the remaining consumables revenue was substantially comprised of revenue from our Single Cell Immune Profiling consumables. For the three months ended September 30, 2019, the remaining consumables revenue was substantially comprised of our Single Cell Immune Profiling and our Single Cell ATAC consumables. The mix in variance between these periods was attributable to the introduction of our Single Cell ATAC consumables in the fourth quarter of 2018 which was met with significant initial demand. Revenue contributions from each of our Single Cell Gene Expression, Single Cell Immune Profiling and Single Cell ATAC consumables increased in absolute dollars period over period. Revenue contribution from our Single Cell Gene Expression consumables decreased while revenue contribution from our Single Cell Immune Profiling and to a greater extent our Single Cell ATAC consumables increased as a percentage of overall consumable sales during the three months ended September 30, 2019. The factors driving this period to period variance were differences in the respective rates of growth in adoption and sales of these products and in the case of our Single Cell ATAC consumables, the significant initial demand for this product.

Over time, as our instrument installed base grows and our Visium products are introduced, we expect consumables revenue to constitute a larger percentage of revenue. In addition, our margins are higher for those instruments and consumables that we sell directly to customers as compared to those that we sell through distributors. While we expect the mix of direct sales as compared to sales through distributors to remain relatively constant in the near term, we are currently evaluating increasing our direct sales capabilities in certain geographies.

From the fourth quarter of 2016 to the first quarter of 2019, we offered two versions of the Chromium Controller, one at a $125,000 list price with firmware that enabled the use of all our Chromium consumables and another at a $75,000 list price with firmware that enabled the use of only our Single Cell Chromium consumables. Beginning in the first quarter of 2019, we standardized our instrument offering on the fully-enabled Chromium Controller with a list price of $75,000 and as a result our Chromium Controller average selling price decreased in the first nine months of 2019 from those realized in 2017 and 2018. The list prices of our consumables vary by solution. Future instrument and consumable selling prices and gross margins may fluctuate due to a variety of factors, including the introduction by others of competing products and solutions or the attempted integration by third-parties of

capabilities similar to ours into their existing products, such as sequencers. We aim to mitigate downward pressure on our average selling prices by increasing the value proposition offered by our instruments and consumables, primarily by, for example, expanding the applications for our instruments and increasing the quantity and quality of data that can be obtained using our consumables.

In the near term, we expect our expansion of manufacturing, warehousing and product distribution facilities, and the litigation described below under "Part II, Item 1 –Legal Proceedings", to have the greatest impact on our margins. In addition to the impact of competing products entering the market, the future margin profiles of our instruments and consumables will depend upon the outcome of such litigation, any royalties we are required to pay and the royalty rates and products to which such royalties apply.

Continued investment in growth

Our significant revenue growth has been driven by rapid innovation towards novel solutions that command price premiums and quick adoption of our solutions by our customer base. In 2018 alone, we introduced six new products or updates to existing products. We intend to continue to make focused investments to increase revenue and scale operations to support the growth of our business and therefore expect expenses in this area to increase. We have invested, and will continue to invest, significantly in our manufacturing capabilities and commercial infrastructure. The transition to our new Pleasanton global headquarters and research and development center in 2019 will help us achieve these goals in the near term by providing additional manufacturing, research and development and general office space. We plan to further invest in research and development as we hire employees with the necessary scientific and technical backgrounds to enhance our existing products and help us bring new products to market, and we expect to incur additional research and development expenses and higher stock-based compensation expenses as a result. We also plan to invest in sales and marketing activities, and we expect to incur additional general and administrative expenses and to have higher stock-based compensation expenses as we support our growth and status as a publicly traded company. As cost of revenue, operating expenses and capital expenditures fluctuate over time, we may experience short-term, negative impacts to our results of operations and cash flows, but we are undertaking such investments in the belief that they will contribute to long-term growth.

Acquisitions of key technologies

We have made, and intend to continue to make, investments that meet management's criteria to expand or add key technologies that we believe will facilitate the commercialization of new products in the future. Such investments could take the form of an asset acquisition, the acquisition of a business or the exclusive or non-exclusive license of patented technology. Any such acquisitions we make may affect our future financial results. For example, our 2018 acquisitions of Spatial Transcriptomics and Epinomics Inc. were largely comprised of purchases of intellectual property which were expensed as in-process research and development in the quarter during which such acquisitions occurred. While we have not previously entered into material joint-development, partnership or joint-venture agreements, we may in the future decide to do so and any such arrangements may limit our rights and the commercial opportunities of any jointly-developed technology.

Components of Results of Operations

Revenue

We generate virtually all of our revenue through the sale of our instruments and consumables to customers. We also generate a small portion of our revenue from instrument service agreements which relate to extended warranties. Our revenue is subject to fluctuation based on the foreign currency in which our products are sold, principally for sales denominated in the euro.

Revenue from consumables is largely driven by the size of our instrument installed base and the volume of consumables sold per instrument. Our instruments and consumables are generally sold without the right of return. Revenue is recognized as instruments and consumables are shipped. Revenue is recognized net of any sales incentive, distributor rebates and commissions and any taxes collected from customers. Some of our recently announced products, such as our Chromium Connect instrument, may result in our recognizing revenue with respect to such products upon installation rather than upon shipment. Instrument service agreements are typically entered into for a one-year term, with the coverage period beginning after the expiration of the standard one-year warranty period. Revenue from the sale of instrument service agreements are recognized ratably over the coverage period. Since its introduction in May 2019, the revenue attributable to our Next GEM microfluidics chips and associated consumables has continued to increase. We expect the transition to Next GEM to have a minimal impact on our revenue since we intend to sell those products at prices similar to the GEM products they are replacing.

Cost of revenue, gross profit and gross margin

Cost of revenue. Cost of revenue primarily consists of manufacturing costs incurred in the production process including personnel and related costs, costs of component materials, labor and overhead, packaging and delivery costs and allocated costs including facilities and information technology. We plan to hire additional employees as well as expand our manufacturing, warehousing and product

distribution facilities, including increasing manufacturing automation to support our growth. In addition, cost of revenue includes royalty costs for licensed technologies included in our products, warranty costs, provisions for slow-moving and obsolete inventory and personnel and related costs and component costs incurred in connection with our obligations under our instrument service agreements. Beginning with the three months ended December 31, 2018, we began recording royalty accruals relating to sales of our GEM microfluidic chips and associated consumables, which are the subject of the Bio-Rad litigation, as cost of revenue. We expect cost of revenue to increase in absolute dollars in future periods.

Gross profit/gross margin. Gross profit is calculated as revenue less cost of revenue. Gross margin is gross profit expressed as a percentage of revenue. Our gross profit in future periods will depend on a variety of factors, including: market conditions that may impact our pricing; sales mix changes among consumables, instruments and services; product mix changes between established products and new products; excess and obsolete inventories; royalties; our cost structure for manufacturing operations relative to volume; and product warranty obligations. We currently anticipate that we will experience an increase in absolute dollars of both revenue and cost of revenue as we grow our business. Additionally, we expect gross margins to gradually increase through the end of 2020 as the result of a reduced royalty accrual related to the Bio-Rad litigation. We expect these increases in gross margin from the reduced Bio-Rad royalty will be partially offset by expenses related to our planned increases in manufacturing and distribution capacity in our Pleasanton, California headquarters as well as in certain locations outside the United States.

As noted above, since its introduction in May 2019, we experienced improved gross profit for the nine months ended September 30, 2019, as we sold more Next GEM microfluidic chips and associated consumables which are not subject to the royalty for the Bio-Rad litigation. However, consumables subject to the 15% royalty accrual related to the Bio-Rad litigation still comprised a large percentage of our consumable sales for the three and nine months ended September 30, 2019. As we continue to transition customers to our Next GEM microfluidic chips and associated consumables we expect our gross margins to increase since these microfluidic chips and associated consumables are not subject to the 15% royalty accrual related to the Bio-Rad litigation discussed below under "Part II, Item 1 –Legal Proceedings. As a result, we expect a gradual increase to gross margins until the substantial majority of our consumables revenue has transitioned to Next GEM solutions. Further developments in our litigation with Bio-Rad could have a material impact on our gross margins, both in the near term and beyond.

Beginning on August 28, 2019, our cost of revenue no longer includes a 15% royalty accrual related to theBio-Rad litigation on our instruments, since all Chromium instruments that have been sold since that date operate exclusively with our Next GEM solutions. We expect that this will continue to lead to an increase in gross margins related to those instrument sales in the near term. Because the Next GEM product selling prices and product manufacturing costs are similar to the GEM products they are replacing, we do not anticipate that Next GEM selling prices and product manufacturing costs will have a significant effect on our gross margins.

Operating expenses

Research and development. Research and development expense primarily consists of personnel and related costs, independent contractor costs, laboratory supplies, equipment maintenance prototype and materials expenses, amortization of developed technology and intangibles and allocated costs including facilities and information technology.

We plan to continue to invest in our research and development efforts, including hiring additional employees, to enhance existing products and develop new products. We also expect allocated facilities and information technology costs to increase in future periods as a result of higher costs associated with the transition to our global headquarters and research and development center in Pleasanton, California. As a result of these and other initiatives, we expect research and development expense will increase in absolute dollars in future periods and vary from period to period as a percentage of revenue.

In-process research and development. In-process research and development consists of costs incurred to acquire intellectual property for research and development. We expect these costs to be recognized only in periods during which we complete an acquisition of assets comprised in whole or part of intellectual property for research and development. While we periodically evaluate acquisitions of this nature from time to time, we have no definitive agreements currently in place to acquire additional intellectual property for research and development.

Selling, general and administrative. Selling, general and administrative expense primarily consists of costs related to the selling and marketing of our products, including sales incentives and advertising expenses and costs associated with our finance, accounting, legal (excluding accrued contingent liabilities), human resources and administrative personnel. Related costs associated with these functions, such as attorney and accounting fees, recruiting services, administrative services, insurance, public relations and communication activities, marketing programs and trade show appearances, travel, customer service costs and allocated costs including facilities and information technology, are also included in selling, general and administrative expenses.

We expect to incur additional selling, general and administrative expenses due to continued investment in our sales, marketing and customer service efforts to support the anticipated growth of our business. We also expect increased infrastructure costs, as well as increased costs for accounting, human resources, legal, insurance, investor relations and other costs associated with being a public company. We expect to continue our hiring, in the United States as well as internationally, in all these areas in line with the continued growth of our business. We also expect allocated facilities costs to increase in future periods as a result of higher costs associated with the transition to our global headquarters and research and development center in Pleasanton, California. We also expect allocated information technology costs to increase following the expected implementation of a new enterprise resource planning system in 2020. As a result of these and other initiatives, we expect selling, general and administrative expenses to vary from period to period as a percentage of revenue, increase in absolute dollars in future periods and decrease as a percentage of revenue. We expect our stock-based compensation expense allocated to cost of revenue, research and development expenses and selling, general and administrative expenses to increase in absolute dollars.

Accrued contingent liabilities

Accrued contingent liabilities is comprised of changes in our litigation reserve, primarily relating to our litigationwith Bio-Rad discussed below under "Part II, Item 1 –Legal Proceedings. The litigation reserve currently consists of accruals we make for our estimated losses in these pending legal proceedings. We record a liability when it is probable that a loss has been incurred and the amount is reasonably estimable, the determination of which requires significant judgment. Changes in the reserve are made as we change our estimates or make payments in damages or settlement. In the fourth quarter of 2018, we took a $30.6 million charge to reflect our best estimate of loss in resolving our ongoing disputes. In the three months ended September 30, 2019, we recorded no charge related to additional pre- and post- judgment interest. In the nine months ended September 30, 2019, we recorded a $1.4 million charge related to additional pre- and post- judgment interest. Beginning in the fourth quarter of 2018, we began recording an accrual for estimated royalties as cost of revenue. For the three and nine months ended September 30, 2019, we accrued royalties of $7.2 million and $23.1 million, respectively. As of September 30, 2019, we have accrued a total of $62.5 million related to this matter. Should we ultimately obtain a more favorable outcome in this litigation any reversal of the accrual related to the litigation would be reflected as a change to this item in the period in which it occurs. Any reversal for amounts recorded as estimated royalty accruals would be credited to our cost of revenue in such period.

Interest income

Interest income consists of interest earned on our cash and cash equivalents which are invested in bank deposit and in money market funds.

Interest expense

Interest expense consists of interest on our outstanding debt.

Other income (expense), net

Other income (expense), net primarily consists of realized and unrealized gains and losses related to foreign exchange rate remeasurements recorded from consolidating our foreign subsidiaries each period-end.

Provision for income taxes

Our provision for income taxes consists primarily of foreign taxes and state minimum taxes in the United States. As we expand the scale and scope of our international business activities, any changes in the United States and foreign taxation of such activities may increase our overall provision for income taxes in the future.

Results of Operations

(in thousands)	Three months ended September 30, 2019	Three months ended September 30, 2018	Nine months ended September 30, 2019	Nine months ended September 30, 2018
Revenue	$ 61,207	$ 36,607	$ 170,604	$ 95,759
Cost of revenue	15,480	5,241	44,451	13,761
Gross profit	45,727	31,366	126,153	81,998
Operating expenses:				
Research and development	22,209	11,085	55,208	34,457
In-process research and development	—	16,104	—	22,310
Selling, general and administrative	32,614	19,110	92,078	61,030
Accrued contingent liabilities	—	—	1,360	—
Total operating expenses	54,823	46,299	148,646	117,797
Loss from operations	(9,096)	(14,933)	(22,493)	(35,799)
Other income (expense):				
Interest income	481	294	986	755
Interest expense	(708)	(659)	(2,087)	(1,721)
Other income (expense), net	(272)	(31)	(413)	(151)
Total other income (expense)	(499)	(396)	(1,514)	(1,117)
Loss before provision for income taxes	$(9,595)	$(15,329)	$(24,007)	$ (36,916)
Provision for income taxes	8	16	110	45
Net loss	$ (9,603)	$(15,345)	$ (24,117)	$ (36,961)

The following table sets forth our consolidated results of operations data as a percentage of revenue for the periods presented.

	Three months ended September 30, 2019	Three months ended September 30, 2018	Nine months ended September 30, 2019	Nine months ended September 30, 2018
Revenue	100.0%	100.0%	100.0%	100.0%
Cost of revenue	25.3%	14.3%	26.1%	14.4%
Gross profit	74.7%	85.7%	73.9%	85.6%
Operating expenses:				
Research and development	36.3%	30.3%	32.4%	36.0%
In-process research and development	—	44.0%	—	23.3%
Selling, general and administrative	53.3%	52.2%	53.9%	63.7%
Accrued contingent liabilities	—	—	0.8%	—
Total operating expenses	89.6%	126.5%	87.1%	123.0%
Loss from operations	(14.9)%	(40.8)%	(13.2)%	(37.4)%
Other income (expense):				
Interest income	0.8%	0.8%	0.5%	0.8%
Interest expense	(1.2)%	(1.8)%	(1.2)%	(1.8)%
Other income (expense), net	(0.4)%	(0.1)%	(0.2)%	(0.2)%
Total other income (expense)	(0.8)%	(1.1)%	(0.9)%	(1.2)%
Loss before provision for income taxes	(15.7)%	(41.9)%	(14.1)%	(38.6)%
Provision for income taxes	0%	0%	0.1%	0%
Net loss	(15.7)%	(41.9)%	(14.2)%	(38.6)%

Comparison of the Three Months Ended September 30, 2019 and 2018

Revenue

(dollars in thousands)	Three months ended September 30, 2019	2018	Change $	Change %
Revenue	$ 61,207	$ 36,607	$ 24,600	67%

Revenue increased $24.6 million, or 67%, for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018. The increase was driven primarily by an increase in consumables revenue. Consumables revenue increased $22.9 million, or 86%, to $49.7 million for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018. The growth in consumables revenue was substantially driven by the growth in the instrument installed base. We experienced continued increases in revenue from our Single Cell Gene Expression and Single Cell Immune Profiling consumables as well as from sales of our Single Cell ATAC consumables which were introduced in the fourth quarter of 2018.

Instrument revenue increased $1.2 million, or 13%, to $10.4 million for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018 due to higher volume of instruments sold, partially offset by lower average selling prices. Lower average selling prices were the result of our 2019 first quarter list price reduction for our fully-enabled Chromium Controller and various discount incentives to drive product adoption.

Cost of revenue, gross profit and gross margin

(dollars in thousands)	Three months ended September 30, 2019	2018	Change $	Change %
Cost of revenue	$ 15,480	$ 5,241	$ 10,239	195%
Gross profit	$ 45,727	$ 31,366	$ 14,361	46%
Gross margin	75%	86%		

Cost of revenue increased $10.2 million, or 195%, in the three months ended September 30, 2019 as compared to the three months ended September 30, 2018. In addition to higher cost of sales in line with revenue growth, the increase was primarily due to additional accrued royalties of $7.2 million related to the judgment in the Bio-Rad litigation and higher inventory reserves, partially offset by lower warranty costs.

Gross profit increased $14.4 million, or 46%, for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018, primarily due to increased revenue partially offset by the additional accrued royalties. Gross margin percentage decreased by 11% for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018, driven almost exclusively by higher accrued royalties related to the judgment in the Bio-Rad litigation in the three months ended September 30, 2019.

Operating expenses

(dollars in thousands)	Three months ended September 30, 2019	2018	Change $	Change %
Research and development	$ 22,209	$ 11,085	$ 11,124	100%
In-process research and development	—	16,104	(16,104)	(100)%
Selling, general and administrative	32,614	19,110	13,504	71%
Total operating expenses	$ 54,823	$ 46,299	$ 8,524	18%

Research and development expense increased $11.1 million, or 100%, for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018. The increase was primarily driven by an increase in personnel expenses of $6.2 million and laboratory materials, supplies and equipment expenses of $3.0 million used to support our research and development efforts. In addition, we incurred $2.0 million of higher allocated costs for facilities and information technology to support the expansion of our operations.

In-process research and development expense for the three months ended September 30, 2018 relates to intellectual property we purchased in connection with our acquisition of Epinomics Inc. There were no similar purchases in the three months ended September 30, 2019.

Selling, general and administrative expenses increased $13.5 million, or 71%, for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018. The increase in expenses was primarily driven by an increase in personnel expenses of $7.5 million and $2.1 of increased facilities and information technology-related expenses to support our future sales growth and the overall expansion of our operations. In addition, the three months ended September 30, 2019 includes $1.3 million of higher outside legal expenses compared to the three months ended September 30, 2018.

Other income (expense), net

(dollars in thousands)	Three months ended September 30, 2019	2018	Change $	%
Interest income	$ 481	$ 294	$ 187	64%
Interest expense	(708)	(659)	(49)	7%
Other income (expense)	(272)	(31)	(241)	N/M
Total other income (expense), net	$ (499)	$ (396)	$(103)	26%

N/M: result not meaningful.

Interest income increased by $0.2 million to $0.5 million for the three months ended September 30, 2019 from $0.3 million for the three months ended September 30, 2018. The increase was primarily due to interest income earned from the investment of the net proceeds from the IPO completed in September 2019.

Interest expense increased nominally for the three months ended September 30, 2019 from the three months ended September 30, 2018. The slight increase was driven primarily by higher interest rates on our outstanding term loan borrowings and the interest paid on the revolving credit facility.

The change in other income (expense) for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018 was driven by realized and unrealized losses from foreign currency rate measurement fluctuations.

Comparison of the Nine Months Ended September 30, 2019 and 2018

Revenue

(dollars in thousands)	Nine months ended September 30, 2019	2018	Change $	%
Revenue	$170,604	$95,759	$74,845	78%

Revenue increased $74.8 million, or 78%, for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018. The increase was driven primarily by an increase in consumables revenue. Consumables revenue increased $72.8 million, or 105%, to $142.1 million for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018. The growth in consumables revenue was substantially driven by the growth in the instrument installed base. We experienced continued increases in revenue from our Single Cell Gene Expression and Single Cell Immune Profiling consumables as well as from sales of our Single Cell ATAC consumables which was introduced in the fourth quarter of 2018.

Instrument revenue increased $0.5 million, or 2%, to $25.5 million for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018 due to higher volumes of instruments sold, partially offset by lower average selling prices. Lower average selling prices were the result of our 2019 first quarter list price reduction for our fully-enabled Chromium Controller and various discount incentives to drive product adoption.

Cost of revenue, gross profit and gross margin

	Nine months ended September 30,		Change	
(dollars in thousands)	2019	2018	$	%
Cost of revenue	$ 44,451	$13,761	$30,690	223%
Gross profit	$126,153	$81,998	$44,155	54%
Gross margin	74%	86%		

Cost of revenue increased $30.7 million, or 223%, in the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018. In addition to higher cost of sales in line with revenue growth, the increase was primarily due to additional accrued royalties of $23.1 million related to the judgment in the Bio-Rad litigation.

Gross profit increased $44.2 million, or 54%, for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018, primarily due to increased revenue partially offset by the additional accrued royalties. Gross margin percentage decreased by 12% for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018, driven almost exclusively by higher accrued royalties in the nine months ended September 30, 2019.

Operating expenses

	Nine months ended September 30,		Change	
(dollars in thousands)	2019	2018	$	%
Research and development	$ 55,208	$ 34,457	$ 20,751	60%
In-process research and development	—	22,310	$(22,310)	(100)%
Selling, general and administrative	92,078	61,030	$ 31,048	51%
Accrued contingent liabilities	1,360	—	$ 1,360	100%
Total operating expenses	$148,646	$117,797	$ 30,849	26%

Research and development expense increased $20.8 million, or 60%, for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018. The increase was primarily driven by an increase in personnel expenses of $12.9 million and laboratory materials, supplies and equipment expenses of $4.7 million used to support our research and development efforts. In addition, we incurred increased allocated costs of $2.9 million for facilities and information technology to support the expansion of our operations.

In-process research and development expense for the nine months ended September 30, 2018 relates to intellectual property we purchased in connection with our acquisition of Epinomics Inc. There were no similar purchases in the nine months ended September 30, 2019.

Selling, general and administrative expenses increased $31.0 million, or 51%, for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018. The increase in expenses was primarily driven by an increase in personnel expenses of $21.4 million to support our future sales growth and the overall expansion of our operations and increased allocated costs of $6.1 million for facilities and information technology.

Accrued contingent liabilities for the nine months ended September 30, 2019 consisted of $1.4 million of expenses forpre- and post-judgment interest relating to the litigation with Bio-Rad, for which we established an accrual in November 2018.

Other income (expense), net

(dollars in thousands)	Nine months ended September 30, 2019	2018	Change $	Change %
Interest income	$ 986	$ 755	$ 231	31%
Interest expense	(2,087)	(1,721)	$(366)	21%
Other income (expense)	(413)	(151)	$(262)	174%
Total other income (expense), net	$(1,514)	$(1,117)	$(397)	36%

Interest income increased by $0.2 million to $1.0 million for the nine months ended September 30, 2019 from $0.8 million for the nine months ended September 30, 2018. The increase was driven primarily by higher cash and cash equivalent balances in interest bearing accounts, including the amounts received from the IPO.

Interest expense increased by $0.4 million to $2.1 million for the nine months ended September 30, 2019 from $1.7 million for the nine months ended September 30, 2018. The increase was driven primarily by higher interest rates on our outstanding term loan borrowings, including the increase in borrowings in February 2018, and interest paid on the draw from our revolving line of credit.

The change in other income (expense) for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018 was driven by realized and unrealized losses from foreign currency rate measurement fluctuations. Foreign currency losses increased compared to the nine months ended September 30, 2018 as a result of the overall strengthening of the U.S. dollar when compared to the foreign currencies in which we operate.

Liquidity and Capital Resources

As of September 30, 2019, we had approximately $427.4 million in cash and cash equivalents which were primarily held in U.S. bank deposit accounts and money market funds, $26.2 million in accounts receivable and an accumulated deficit of $255.2 million. Approximately $5.0 million of cash, which serves as collateral for an outstanding letter of credit, and $45.0 million of cash, which serves as collateral for a bond in connection with the Bio-Rad litigation, were classified as noncurrent restricted cash as of September 30, 2019. While we generated positive cash flows from operations of $27.9 million for the nine months ended September 30, 2019, we have generated negative cash flows from operations since inception through the nine months ended September 30, 2019 and we have generated losses from operations since inception as reflected in our accumulated deficit of $255.2 million. We expect to continue to incur operating losses for the foreseeable future due to the investments we intend to make and as a result we may require additional capital resources to execute strategic initiatives to grow our business.

In August 2019, the U.S. District Court for the District of Delaware entered final judgment in the amount of approximately $35 million and subsequently ordered that we may post a bond in the amount of $52 million in lieu of payment of the final judgment. On September 13, 2019, we posted a $52 million bond in lieu of payment of the final judgment pending our ongoing appeal. In connection with the bond, we deposited $45 million as collateral in a segregated cash account, where it will be held until the conclusion of the appeal. On October 10, 2019, the Court denied our motion to decrease the bond amount and stayed any execution or enforcement of the judgment until the completion of appeal, and for thirty days thereafter.

Pursuant to the judgment, we will place into an escrow each quarter of an amount equal to 15% of net sales of our GEM microfluidic chips and associated consumables subsequent to the effective date of the injunction, which was August 28, 2019. The amounts will be held until conclusion of the appeal and classified as noncurrent restricted cash.

We currently anticipate making aggregate capital expenditures of between approximately $45.0 million and $55.0 million during the next 18 months, which includes the construction costs of our global expansion and for equipment to be used for manufacturing and research and development. Our future capital requirements will depend on many factors including our revenue growth rate, research and development efforts, the timing and extent of additional capital expenditures to invest in existing and new facilities, the expansion of sales and marketing and international activities, the timing of capital expenditures relating to our planned implementation of a new enterprise resource planning system and the introduction of new products. We have and may in the future enter into arrangements to acquire or invest in businesses, services and technologies, including intellectual property rights, and any such acquisitions or investments could significantly increase our capital needs.

We believe that our existing cash and cash equivalents, cash generated from sales of our products and either, or a combination of, the deferral of anticipated capital expenditures or partially borrowing under our existing credit agreements will be sufficient to meet our anticipated cash needs for the next 12 months. However, our liquidity assumptions may prove to be incorrect, and we could exhaust our available financial resources sooner than we currently expect.

Sources of liquidity

Since our inception, we have financed our operations and capital expenditures primarily through sales of convertible preferred stock and common stock, revenue from sales and issuances of debt. In September 2019, we completed our IPO for aggregate proceeds of $410.8 million, net of offering costs, underwriter discounts and commissions of $37.7 million.

Silicon Valley Bank Loan and Security Agreement

We are party to a Second Amended and Restated Loan and Security Agreement, dated February 9, 2018, with Silicon Valley Bank (as amended, restated or supplemented from time to time, the "Loan and Security Agreement"), under which (i) $30.0 million of term loan borrowings were outstanding, (ii) no borrowings were outstanding under the $25.0 million revolving line of credit and (iii) no borrowings were outstanding under the $20.0 million of additional term loan borrowings, which, subject to certain conditions, are available to be drawn before December 31, 2019, in each case as of September 30, 2019. We are obligated to issue warrants to purchase 133,000 shares of our Class A common stock, at an exercise price of $1.62 per share to the lender if we elect to borrow the additional term loan referred to in the preceding sentence. In August 2019, we borrowed $11.0 million under our existing revolving line of credit. As of September 30, 2019, the entire $11.0 million was repaid.

Borrowings under the term loan mature on December 1, 2022 and accrue interest at a floating rate equal to the greater of The Wall Street Journal prime rate plus 2.0% or 6.25% per annum. Monthly payments of interest are due on the term loan through December 31, 2019, after which equal monthly installments of principal and interest are due. The revolving line of credit terminates on December 1, 2022 and the amount available under the revolving line of credit is based on 80% of eligible receivables and is subject to a borrowing base calculation. Borrowings under the revolving line of credit accrue interest which is payable monthly at a floating rate equal to the greater of The Wall Street Journal prime rate plus 0.25% or 4.5% per annum.

The Loan and Security Agreement contains affirmative and negative covenants, including a covenant requiring us to maintain minimum revenue equal to at least 70% of projected revenue for the applicable periods through and including December 31, 2020 and covenants that restrict, among other things, our ability to dispose of assets, change our business, management, ownership or business locations, enter into mergers or acquisitions, incur additional indebtedness or encumber any of our assets. Because the minimum revenue requirements referred to above are based on the revenue forecasts we provide to the lender, our inability to accurately forecast our revenue for future periods could result in a failure to comply with this covenant, which would be an event of default under the Loan and Security Agreement. Various facts and circumstances could adversely impact our ability to meet these minimum revenue requirements in the near to intermediate term. If we were to suffer an adverse event during the remainder of 2019 that resulted in revenue shortfalls well in excess of 50% in each month of the fourth quarter of 2019, we may be unable to comply with this covenant. For example, were the ITC to reverse the judge's Initial Determination that our Next GEM microfluidic chips do not infringe any claims asserted against them and enter an exclusion order against our Next GEM microfluidic chips barring their importation into the United States, our revenue and resulting ability to comply with these minimum revenue requirements may be adversely affected. See "Part II, Item 1. Legal Proceedings–The ITC 1068 Action." If we default under the Loan and Security Agreement and if the default is not cured or waived, the lender could terminate its commitments to lend to us and cause any amounts outstanding to be payable immediately. Under certain circumstances, the lender could also exercise its rights with respect to the collateral securing such loans. Such a default could also result in cross-defaults under other debt instruments. Moreover, any such default would limit our ability to obtain additional financing, which may have an adverse effect on our cash flow and liquidity.

We were in compliance with all covenants under the Loan and Security Agreement as of September 30, 2019 and currently remain in compliance with such covenants. In September 2019, our Loan and Security Agreement was amended to facilitate the posting of a surety bond and to permit us to establish related escrow and cash collateral accounts, in each case in connection with the litigation with Bio-Rad referred to in the section titled "Risk factors–Risks related to litigation and our intellectual property".

Cash flow summary

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

	Nine Months Ended September 30,	
	2019	2018
	(in thousands)	
Net cash provided by (used in):		
Operating activities	$ 27,927	$(25,410)
Investing activities	(36,186)	(3,880)
Financing activities	415,697	69,489
Effect of exchange rates on cash, cash equivalents and restricted cash	(37)	9
Net increase in cash, cash equivalents and restricted cash	$407,401	$ 40,208

Operating activities

The net cash provided by operating activities of $27.9 million in the nine months ended September 30, 2019 was due primarily to a net loss of $24.1 million with adjustments for stock-based compensation expense of $8.3 million and depreciation and amortization of $4.2 million. The inflow from operating assets and liabilities was primarily due to an increase in accrued contingent liabilities of $24.5 million, an increase in noncurrent deferred rent of $12.8 million, an increase in accounts payable of $2.7 million, an increase in accrued expenses and other current liabilities of $2.6 million, and a decrease in accounts receivable of $1.9 million partially offset by an increase in inventory of $4.7 million, and an increase in prepaid expenses and other assets of $2.8 million.

The net cash used in operating activities of $25.4 million in the nine months ended September 30, 2018 was due primarily to a net loss of $37.0 million with adjustments for depreciation and amortization of $3.0 million and stock-based compensation expense of $1.6 million. The outflow from operating assets and liabilities was primarily due to an increase in accounts receivable of $5.8 million, an increase in inventory of $2.0 million, a decrease in accounts payable of $1.8 million, and an increase in prepaid expenses and other current assets and other assets of $1.0 million, offset by an increase in accrued expenses and other current liabilities of $16.2 million and an increase in deferred revenue of $1.3 million.

Investing activities

The net cash used in investing activities of $36.2 million in the nine months ended September 30, 2019 was due to purchases of property and equipment.

The net cash used in investing activities of $3.9 million in the nine months ended September 30, 2018 was due to purchases of property and equipment.

Financing activities

The net cash provided by financing activities of $415.7 million in the nine months ended September 30, 2019 was primarily from proceeds of $412.7 million from issuance of Class A common stock in our IPO, net of issuance costs and proceeds of $3.0 million from the issuance of common stock from the exercise of stock options.

The net cash provided by financing activities of $69.5 million in the nine months ended September 30, 2018 was primarily from proceeds from the issuance of convertible preferred stock, net of issuance costs, of $49.9 million, proceeds from additional borrowings of $19.5 million and proceeds of $0.9 million from the issuance of common stock from the exercise of stock options, partially offset by payments of debt obligations of $0.7 million.

Concentrations of credit risk

As of December 31, 2018 and September 30, 2019, no single customer represented 10% or more of our accounts receivable balance. There was no single customer that individually exceeded 10% of our revenue during the three months ended September 30, 2018 and 2019 or for the nine months ended September 30, 2018 and 2019.

Contractual Obligations and Commitments

There have been no material changes to our contractual obligations as of September 30, 2019, as compared to those disclosed in the Prospectus as of June 30, 2019.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet financing arrangements or any relationships with unconsolidated entities or financial partnerships, including entities sometimes referred to as structured finance or special purpose entities, that were established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Critical Accounting Policies

Our management's discussion and analysis of our financial condition and results of operations is based on our condensed consolidated financial statements, which have been prepared in accordance with United States generally accepted accounting principles ("GAAP"). The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues and expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

There have been no significant changes in our critical accounting policies and estimates as compared to the critical accounting policies and estimates disclosed in the section titled "Management's Discussion and Analysis of Financial Condition and Operations" included in the Prospectus filed with the SEC on September 12, 2019. For additional information, please refer to Note 2 to our unaudited condensed consolidated financial statements in this Quarterly Report on Form 10-Q.

Recent Accounting Pronouncements

See Note 2, "Summary of Significant Accounting Policies" in our Notes to Unaudited Condensed Consolidated Financial Statements included in Part 1, Item 1 of this Quarterly Report on Form 10-Q for a discussion of recent accounting pronouncements.

Emerging Growth Company Status

We are an emerging growth company, as defined in the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in foreign currency exchange rates.

Interest Rate Risk

We have exposure to interest rate risk that relates primarily to our cash and cash equivalents held in bank deposit and money market funds and our borrowings that bear variable interest rates under our credit facility. We maintain our portfolio of cash equivalents in money market funds. All of our cash equivalents are carried at fair market value. Our credit facility provides for (a) a secured term loan facility with an initial aggregate principal amount of up to $30.0 million with the option to draw an additional $20.0 million and (b) a secured revolving loan facility in an aggregate principal amount of up to $25.0 million . Our borrowings under our credit facility are subject to interest rates based on the Wall Street Journal Prime Rate. If this rate increases significantly, our costs to borrow these funds will also increase.

In February 2018, we drew $30.0 million under the Initial Term Loan with a maturity date of December 2022, of which $30.0 million remains outstanding as of September 30, 2019. As of September 30, 2019, no amounts are borrowed under our revolving line of credit.

The primary objective of our investment activities is to preserve principal while at the same time improving yields without significantly increasing risk. To achieve this objective, we maintain our portfolio of cash equivalents in asset types including bank deposits and money market funds. As a result of the increase in cash and cash equivalents resulting from the proceeds of our IPO, a 100 basis point change in interest rates would not significantly change our interest income for the nine months ended September 30, 2019. A hypothetical 10.0% change in interest rates would not significantly increase our interest expense as it relates to our borrowings that bear variable interest rates.

Foreign Currency Exchange Risk

Our reporting currency is the U.S. dollar and the functional currency of each of our subsidiaries is either its local currency or the U.S dollar depending on the circumstances. Historically, most of our revenue has been denominated in U.S. dollars, although we have sold our products and services in local currency outside of the United States, principally the Euro. For the nine months ended September 30, 2019, approximately 14% of our sales were denominated in currencies other than U.S. dollars. Our expenses are generally denominated in the currencies in which our operations are located, which is primarily in the United States. As our operations in countries outside of the United States grow, our results of operations and cash flows will be subject to fluctuations due to changes in foreign currency exchange rates, which could harm our business in the future. For example, if the value of U.S. dollar increases relative to foreign currencies, in the absence of a corresponding change in local currency prices, our revenue could be adversely affected as we convert revenue from local currencies to U.S. dollars. In addition, because we conduct business in currencies other than U.S. dollars, but report our results of operations in U.S. dollars, we also face remeasurement exposure to fluctuations in currency exchanges rates, which could hinder our ability to predict our future results and earning and could materially impact our results of operations. We do not currently maintain a program to hedge exposures to non-U.S. dollar currencies. We believe that an immediate 10.0% increase or decrease in the relative value of the U.S. dollar to other currencies would not have a material effect on our operating results.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) as of the end of the period covered by this report. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including the Chief Executive Officer and the Chief Financial Officer, to allow timely decisions regarding required disclosures. Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objective and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective at a reasonable assurance level as of September 30, 2019.

Changes in Internal Control over Financial Reporting

There was not any change in our internal control over financial reporting (as such term is defined inRules 13a-15(f) under the Exchange Act) during the quarter ended September 30, 2019 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

10x Genomics, Inc.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

We are regularly subject to claims, lawsuits, arbitration proceedings, administrative actions and other legal and regulatory proceedings involving commercial disputes, competition, intellectual property disputes and other matters, and we may become subject to additional types of claims, lawsuits, arbitration proceedings, administrative actions, government investigations and legal and regulatory proceedings in the future and as our business grows, including proceedings related to product liability or our acquisitions, securities issuances or our business practices, including public disclosures about our business. Our success depends in part on our non-infringement of the patents or proprietary rights of third parties. Third parties have asserted and may in the future assert that we are employing their proprietary technology without authorization. We have been involved in multiple patent litigation matters in the past several years and we expect that given the litigious history of our industry and the high profile of operating as a public company, other third parties, in addition to the parties identified herein, may claim that our products infringe their intellectual property rights. There are inherent uncertainties in these legal matters, some of which are beyond management's control, making the ultimate outcomes difficult to predict. We are currently involved in the following litigation matters:

The 2015 Delaware Action

In February 2015, Raindance Technologies, Inc. ("Raindance") and the University of Chicago filed suit against us in the U.S. District Court for the District of Delaware, alleging that substantially all of our products that use our GEM microfluidic chips are infringing seven U.S. patents owned by or exclusively licensed to Raindance (the "Delaware Action"). In May 2017, Bio-Rad Laboratories, Inc. ("Bio-Rad") was substituted as the plaintiff following its acquisition of Raindance. A jury trial was held in November 2018. The jury found that all of our accused products infringed one or more of U.S. Patent Nos. 8,304,193, 8,329,407 and 8,889,083. The jury also concluded that our infringement was willful and awarded Bio-Rad approximately $24 million in damages. Post-trial, Bio-Rad moved for a permanent injunction, treble damages for willful infringement, attorneys' fees, supplemental damages for the period from the second quarter of 2018 through the end of the trial as well as pre- and post-judgment interest.

The Court denied Bio-Rad's request for attorneys' fees and enhanced damages for willful infringement. The Court awarded supplemental damages for the period from the second quarter of 2018 through the end of trial as well as pre- and post-judgment interest. The Court entered final judgment against us in the amount of approximately $35 million in August 2019. There could be additional future damages from the final judgment until the patents in suit expire in 2023.

In the fourth quarter of 2018, we began recording an accrual for estimated royalties as cost of revenue. This accrual is based on an estimated royalty rate of 15% of worldwide sales of our Chromium instruments operating our GEM microfluidic chips and associated consumables. As of September 30, 2019, we had accrued a total of $62.5 million relating to this matter which includes the $35 million judgment and our estimated 15% royalty for sales through that date.

The Court also granted Bio-Rad a permanent injunction against our GEM microfluidic chips and associated consumables that were found to infringe the Bio-Rad patents, which have historically constituted substantially all of our product sales. However, under the injunction, we are permitted to continue to sell our GEM microfluidic chips and associated consumables for use with our historical installed base of instruments provided that we pay a royalty of 15% into escrow on our net revenue related to such sales. We appealed the injunction to the Federal Circuit. The Federal Circuit granted an interim order staying the injunction pending resolution of our motion with respect to our Single Cell CNV and Linked-Read solutions subject to the 15% royalty payment described above. On September 24, 2019, the Federal Circuit extended the stay with respect to the Single Cell CNV and Linked-Read solutions for the pendency of the appeal, but otherwise denied our request to stay the injunction. We also appealed the judgment to the Federal Circuit.

We have dedicated significant resources to designing and manufacturing our Next GEM microfluidic chips which use fundamentally different physics from our GEM microfluidic chips. Neither the jury verdict nor the injunction relate to our Next GEM microfluidic chips based on our new proprietary design and associated consumables which we launched in May 2019 for three of our single cell solutions – Single Cell Gene Expression, Single Cell Immune Profiling and Single Cell ATAC. Since August 28, 2019, all Chromium instruments that we sell and have sold operate exclusively with our Next GEM solutions and we currently expect that our Chromium products utilizing our Next GEM microfluidic chips will constitute substantially all of our Chromium consumables sales by the end of 2020.

The ITC 1068 Action

On July 31, 2017, Bio-Rad and Lawrence Livermore National Security, LLC filed a complaint against us in the U.S. International Trade Commission ("ITC") pursuant to Section 337 of the Tariff Act of 1930, alleging that substantially all of our products infringe U.S. Patents Nos. 9,089,844, 9,126,160, 9,500,664, 9,636,682 and 9,649,635 (the "ITC 1068 Action"). Bio-Rad is seeking an exclusion order preventing us from importing the accused microfluidic chips, including (1) our GEM microfluidic chip, (2) our gel bead manufacturing microfluidic chip and (3) our Next GEM microfluidic chip, into the United States and a cease and desist order

preventing us from selling such imported chips. An evidentiary hearing for the ITC 1068 Action was held in May of 2018 and the presiding judge issued an Initial Determination in September 2018, finding that our GEM microfluidic chips infringe the '664, '682 and '635 patents but not the '160 patent. The judge further found that our gel bead manufacturing microfluidic chip and Next GEM microfluidic chip do not infringe any claim asserted against them.

The judge recommended entry of an exclusion order against our GEM microfluidic chips. If the ITC were to adopt the judge's recommendation regarding the exclusion order, we would be prevented from importing such chips, which are used in substantially all of our products, into the United States. The judge also recommended a cease and desist order that would prevent us from selling such imported chips. The ITC is not reviewing the judge's findings that our GEM microfluidic chips directly infringe the '664, '682 and '635 patents. The ITC is currently reviewing the judge's findings that (1) we indirectly infringe the '682 and '635 patents, (2) our gel bead manufacturing microfluidic chip does not infringe certain claims in the '664 patent and (3) our Next GEM microfluidic chip does not infringe certain claims in the '160 and '664 patents. A Final Determination is expected to be issued in December 2019. The Final Determination is subject to a 60-day presidential review period before taking effect. If the Initial Determination were to be upheld, then we would be unable to import our GEM microfluidic chips and sell such imported chips. The judge recommended a bond of 100% of the entered value of accused products imported during the Presidential review period.

In order to allow our customers to continue their important research, we have dedicated significant resources to developing the capabilities to manufacture our microfluidic chips in the United States prior to the entry of an exclusion order or cease and desist order which could take effect in February 2020. Prior to the second quarter of 2019, all of our microfluidic chips were manufactured outside of the United States. Our United States manufacturing facilities achieved volume production of certain of our GEM microfluidic chips accounting for the majority of our United States consumable revenue beginning in the third quarter of 2019.

The Northern District of California Action

On July 31, 2017, Bio-Rad and Lawrence Livermore National Security, LLC also filed suit against us in the U.S. District Court for the Northern District of California, alleging that substantially all of our products infringe U.S. Patents Nos. 9,216,392, 9,347,059 and the five patents asserted in the ITC 1068 Action. The complaint seeks injunctive relief, unspecified monetary damages, costs and attorneys' fees. This litigation has been stayed pending resolution of the ITC 1068 Action.

The Germany Action

On February 13, 2018, Bio-Rad filed suit against us in Germany in the Munich Region Court alleging that our Chromium instruments, GEM microfluidic chips and certain accessories infringe German Utility Model No. DE 20 2011 110 979. Bio-Rad seeks unspecified damages and an injunction prohibiting sales of these products in Germany and requiring us to recall these products sold in Germany subsequent to February 11, 2018. An initial hearing was held on November 27, 2018, and a subsequent hearing was held on May 15, 2019. The court is expected to issue a ruling on the merits on November 20, 2019.

The 2018 Delaware Action

On October 25, 2018, Bio-Rad filed suit against us in the U.S. District Court for the District of Delaware alleging that substantially all of our products, including our GEM products and Next GEM products, infringe U.S. Patent Nos. 9,562,837 and 9,896,722. Bio-Rad seeks injunctive relief, unspecified monetary damages, costs and attorneys' fees. Discovery is in progress. On October 25, 2019, we filed petitions in the U.S. Patent and Trademark Office requesting *inter partes* review of the asserted patents.

The 2019 Delaware Action

On September 11, 2019, Bio-Rad filed suit against us in the U.S. District Court for the District of Delaware alleging that our Next GEM products infringe certain claims of U.S. Patent No. 8,871,444. On November 5, 2019, Bio-Rad amended the complaint to additionally allege that our Next GEM products infringe certain claims of U.S. Patent Nos. 9,919,277 and 10,190,115. We believe that the asserted patents are invalid and not infringed, and we intend to defend ourselves vigorously.

The Becton, Dickinson Action

On November 15, 2018, Becton, Dickinson and Company ("BD") and Cellular Research, Inc. filed suit against us in the U.S. District Court for the District of Delaware, alleging that we infringe U.S. Patent Nos. 8,835,358, 9,845,502, 9,315,857, 9,816,137, 9,708,659, 9,290,808, 9,290,809, 9,567,645, 9,567,646, 9,598,736 and 9,637,799. In September 2019, we filed counterclaims alleging that BD and Cellular Research, Inc. infringed a number of our patents. This case was dismissed with prejudice on October 21, 2019 following the entrance by the parties into a settlement and patent cross license agreement. We consider this matter closed. See Note 6, "Commitments and Contingencies", and Note 10, "Subsequent Events", in our Notes to Unaudited Condensed Consolidated Financial Statements included in Part 1, Item 1 of this Quarterly Report on Form 10-Q for additional information.

The ITC 1100 Action

On January 11, 2018, we filed a complaint against Bio-Rad at the ITC pursuant to Section 337 of the Tariff Act of 1930 alleging that Bio-Rad infringes our U.S. Patent Nos. 9,644,204, 9,689,024, 9,695,468 and 9,856,530 (the "ITC 1100 Action"). The judge issued an Initial Determination on July 12, 2019 finding that Bio-Rad's ddSEQ product for single cell analysis infringes the '024, '468 and '530 patents. The judge also found all of our asserted patents to be valid and rejected Bio-Rad's claim of ownership in all of the asserted patents. The ITC is currently reviewing all of the judge's findings related to Bio-Rad's violation of the '024, '468 and '530 patents, Bio-Rad's noninfringement of the '204 patent and Bio-Rad's inventorship and ownership defenses. The Target Date for the Final Determination is scheduled for December 19, 2019, when we expect the ITC to issue an exclusion order preventing Bio-Rad from importing into the United States infringing microfluidic devices, components thereof and products containing same, including the ddSEQ single cell analysis products. We also expect the ITC to issue a cease and desist order preventing Bio-Rad from selling such imported products in the United States.

For further discussion of the risks relating to intellectual property and our pending litigation, see the section titled "*Risk factors—Risks related to litigation and our intellectual property*" under Item 1A below.

Item 1A. Risk Factors.

Investing in our Class A common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this Quarterly Report on Form 10-Q, including our financial statements and the related notes and the section titled "Management's discussion and analysis of financial condition and results of operations" in this Quarterly Report on Form 10-Q, before deciding whether to invest in our Class A common stock. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and growth prospects. In such an event, the market price of our Class A common stock could decline and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations and the market price of our Class A common stock.

Risks related to our business and industry

We have incurred significant losses since inception, we expect to incur 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 2012 and expect to incur losses in the future. We incurred net losses of $24.1 million and $37.0 million for the nine months ended September 30, 2019 and 2018, respectively. As of September 30, 2019, we had an accumulated deficit of $255.2 million. We expect that our losses will continue in the near term as we continue to invest significant additional funds toward ongoing research and development and toward the timely commercialization of both new products and improved versions of existing products. We also expect that our operating expenses will increase as a result of being a public company and will continue to increase as we grow our business. To date, we have financed our operations principally from the sale of convertible preferred stock, the sale of Class A common stock in our IPO, revenue from sales of our products and the incurrence of indebtedness. There can be no assurance that our revenue and gross profit will increase sufficiently such that our net losses decline, or we attain profitability, in the future. Further, our limited operating history and rapid revenue growth over the last several years make it difficult to effectively plan for and model future growth and operating expenses. Our ability to achieve or sustain profitability is based on numerous factors, many of which are beyond our control, including the impact of market acceptance of our products, future product development, our market penetration and margins and current and future litigation. We may never be able to generate sufficient revenue to achieve or sustain profitability and our recent and historical growth should not be considered indicative of our future performance. Our failure to achieve or maintain profitability could negatively impact the value of our Class A common stock.

In particular, we are subject to significant risks of losses related to current litigation matters. See "*—Risks related to litigation and our intellectual property*".

Our markets are highly competitive. If we fail to compete effectively, our business and operating results will suffer.

We face significant competition. We currently compete with both established and early-stage companies that design, manufacture and market instruments, consumables and software for, among other applications, genomics, single cell analysis, spatial analysis and immunology. We believe our competitors include Becton, Dickinson and Company, Bio-Rad and Nanostring Technologies, Inc., each of which has products that compete to varying degrees with some but not all of our product solutions, as well as a number of other emerging and established companies.

Some of our current competitors are large publicly-traded companies, or are divisions of large publicly-traded companies, and may enjoy a number of competitive advantages over us, including:

- greater name and brand recognition;
- greater financial and human resources;
- broader product lines;
- larger sales forces and more established distributor networks;
- substantial intellectual property portfolios;
- larger and more established customer bases and relationships; and
- better established, larger scale and lower cost manufacturing capabilities.

We also face competition from researchers developing their own solutions. The area in which we compete involves rapid innovation and some of our customers have in the past, and more may in the future, elect to create their own platform or assays rather than rely on a third-party supplier such as ourselves. This is particularly true for the largest research centers and labs who are continually testing and trying new technologies, whether from a third-party vendor or developed internally. We also compete for the resources our customers allocate for purchasing a wide range of products used to analyze biological systems, some of which are additive to or complementary with our own but not directly competitive.

We cannot assure investors that our products will compete favorably or that we will be successful in the face of increasing competition from products and technologies introduced by our existing competitors, companies entering our markets 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 produce competitive products with greater capabilities or at lower costs than ours or that are able to run comparable experiments at a lower total experiment cost. Any failure to compete effectively could materially and adversely affect our business, financial condition and operating results.

Our business depends significantly on the success of our Next GEM microfluidic chip.

Since our inception through the first nine months of 2019, substantially all of our Chromium instruments utilized our GEM microfluidic chips and associated consumables. In November 2018, a jury concluded that our Chromium instruments operating these chips and associated consumables infringe certain of Bio-Rad's patents. We have dedicated significant resources to designing and manufacturing our new Next GEM microfluidic chip, which uses a microfluidic architecture with fundamentally different physics from our GEM microfluidic chip. We introduced our Next GEM microfluidic chips for our Single Cell Gene Expression, Single Cell Immune Profiling and Single Cell ATAC solutions in the second quarter of 2019. We plan to gradually phase out our GEM microfluidic chips and anticipate that our Chromium products utilizing our Next GEM microfluidic chips will become an increasing percentage of our sales and will constitute substantially all of our Chromium consumables sales by the end of 2020. In addition, we have not yet developed Next GEM microfluidic chips for our Single Cell CNV and Linked-Read solutions. Although the Federal Circuit has stayed the injunction with respect to our Single Cell and Linked-Read solutions during the pendency of the appeal, we have not yet released a new version of our instrument that would allow our customers to use these solutions using our GEM microfluidic chip during the pendency of the appeal. Furthermore, it is possible that the injunction could be reinstated with respect to our Single Cell and Linked-Read solutions using our GEM microfluidic chips after the appeal if the Federal Circuit does not rule in our favor. Until we develop a Next GEM microfluidic chip for our Single Cell CNV and Linked-Read solutions, our sales and growth of these solutions will be constrained. Until we are able to completely transition to our Next GEM microfluidic chip design, our margins will be negatively impacted by any royalty obligations that result from ongoing litigation matters.

Although our Next GEM microfluidic chips were designed to replace our GEM microfluidic chips, we cannot assure you that we will be able to make our Next GEM microfluidic chip work with all of our solutions, that our Next GEM microfluidic chip will allow our customers to retain the level of performance or quality they have come to expect using our GEM microfluidic chip, that our Next GEM microfluidic chip will replace the sales of our GEM microfluidic chip or that we will be able to manufacture our Next GEM microfluidic chip in sufficient volumes and in sufficient quality in a timely fashion. While we believe that our Chromium solutions, when used with our Next GEM microfluidic chip, do not infringe the asserted Bio-Rad patents, we cannot assure you that our Next GEM microfluidic chip would not be found to infringe the asserted Bio-Rad patents or other patents, which could prevent us from making, selling and importing our Next GEM microfluidic chips or substantially all of our products. Since August 28, 2019, all Chromium instruments that we sell and have sold operate exclusively with our Next GEM solutions. We believe that these solutions are very important to our customers' research but the delay caused by the injunction may slow customer adoption of our products or cause customers to investigate the availability of competing products or technologies.

We expect to incur increased research and development expenses in the near term and increased inventory and other expenses related to the introduction of, and transition to, our Next GEM microfluidic chip. Our failure to effectively manage product transitions or accurately forecast customer demand with respect to both instruments and consumables may lead to an increased risk of insufficient, excess or obsolete inventory and resulting charges. We expect that as we transition to our Next GEM microfluidic chips we may need to write down the value of our GEM microfluidic chips and associated consumables we currently hold in inventory. As we transition to our Next GEM microfluidic chips, we cannot guarantee that our customers will quickly switch to using our Next GEM microfluidic chips in their research. Customers may delay transitioning to our Next GEM microfluidic chips for a variety of reasons, including if they have experiments underway for which they do not want to introduce additional variables. More significantly, customers may decline to purchase our products altogether if they do not believe that our Next GEM microfluidic chips can produce results that are reliable, consistent and comparable to our GEM microfluidic chips.

For additional information relating to this litigation, see the section titled *"Risk factors—Risks related to litigation and our intellectual property—We are involved in significant litigation which has consumed significant resources and management time and adverse resolution of these lawsuits could require us to pay significant damages, and prevent us from selling our products, which would severely adversely impact our business, financial condition or results of operations".*

We are significantly dependent upon revenue generated from the sale of our Chromium solutions, and in particular our Single Cell Gene Expression solutions.

We currently generate substantially all of our revenue from the sale of our Chromium instruments, which we refer to as "instruments", and our proprietary microfluidic chips, slides, reagents and other consumables for both our Visium and Chromium solutions, which we refer to as "consumables". In particular, we are dependent upon revenue generated from sales of our Single Cell Gene Expression consumables. There can be no assurance that we will be able to design future products, particularly non-Chromium product lines, that will meet the expectations of our customers or that our future products will become commercially viable. As technologies change in the future for research equipment in general and in genomics solutions specifically, we will be expected to upgrade or adapt our products in order to keep up with the latest technology. To date we have limited experience simultaneously designing, testing, manufacturing and selling non-Chromium products and there can be no assurance we will be able to do so. Our sales expectations are based in part on the assumption that our Chromium Connect instrument will increase workflows for our future customers and their

associated purchases of our consumables. If sales of our Chromium Connect instruments fail to materialize so will the related consumable sales and associated revenue. Our sales expectations are also based in part on the continued success of our Single Cell Gene Expression solutions. If our Single Cell Immune Profiling consumables, which were introduced in 2017, and Single Cell ATAC consumables, which were introduced in 2018, or our upcoming Visium solution, fail to achieve sufficient market acceptance or sales of our Single Cell Gene Expression consumables decrease, our consumables revenue could be materially and adversely impacted.

Our business currently depends significantly on research and development spending by academic institutions, a reduction in which could limit demand for our products and adversely affect our business and operating results.

In the nine months ended September 30, 2019, approximately 70% of our direct sales revenue came from sales to academic institutions. Much of their funding was, in turn, provided by various state, federal and international government agencies. In the near term, we expect that a large portion of our revenue will continue to be derived from sales of Chromium products, including our instruments and consumables, to academic institutions. As a result, in the near term, the demand for our products will depend 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;
- citation of new products or services in published research;
- changes in the regulatory environment;
- differences in budgetary cycles;
- competitor product offerings or pricing;
- market-driven pressures to consolidate operations and reduce costs; and
- market acceptance of relatively new technologies, such as ours.

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 18 years, and reached a new high in 2018, but the NIH also experiences occasional year-over-year decreases in appropriations, including as recently as 2013. In addition, funding for life sciences research has increased more slowly during the past several years compared to previous years and has actually declined in some countries. There is no guarantee that NIH appropriations will not decrease in the future, and a decrease may be more likely under the current administration, whose annual budget proposals have repeatedly decreased NIH appropriations. 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, operating results and financial condition.

Our failure to effectively manage product transitions or accurately forecast customer demand could result in excess or obsolete inventory and resulting charges.

Because the market for our products is characterized by rapid technological advances, we frequently introduce new products with improvedease-of-use, improved performance or additional features and functionality. We pre-announce products and services, in some cases before such products and services have been fully developed or tested, and risk failing to meet expectations when such products and services become available. The risks associated with the introduction of new products include the difficulties of predicting customer demand and effectively managing inventory levels to ensure adequate supply of the new product and avoiding excess supply of the legacy product.

We may strategically enter intonon-cancelable commitments with vendors to purchase materials for our products in advance of demand to take advantage of favorable pricing, address concerns about the availability of future supplies or build safety stock to help ensure customer shipments are not delayed should we experience higher than anticipated demand for materials with long lead times.

Our future success is dependent upon our ability to increase penetration in our existing markets.

Our customer base includes academic, government, biopharmaceutical, biotechnology and other institutions. In the nine months ended September 30, 2019, approximately 70% of our direct sales revenue came from sales to academic institutions. Our success will depend upon our ability to increase our market penetration among these customers and to expand our market by developing and marketing new products and new applications for existing products. We recently announced our intention to introduce our Visium product line for spatial analysis and our future success will partially depend on our ability to commercialize this product line. As we continue to scale our business, we may find that certain of our products, certain customers or certain markets, including the biopharmaceutical market, may require a dedicated sales force or sales personnel with different experience than those we currently employ. Identifying, recruiting and training additional qualified personnel would require significant time, expense and attention.

We cannot assure investors that we will be able to further penetrate our existing market or that the market will be able to sustain our current and future product offerings. Any failure to increase penetration in our existing markets would adversely affect our ability to improve our operating results.

We may not be able to develop new products, enhance the capabilities of our existing products to keep pace with rapidly changing technology and customer requirements or successfully manage the transition to new product offerings, any of which could have a material adverse effect on our business and operating results.

Our success depends on our ability to develop new products and applications for our technology in existing and new markets, while improving the performance and cost-effectiveness of our existing products, in each case in ways that address current and anticipated customer requirements. Such success is dependent upon several factors, including functionality, competitive pricing and integration with existing and emerging technologies. New technologies, techniques or products could emerge that might offer better combinations of price and performance or better address customer requirements as compared to our current or future products. Existing markets for our products, including the genomics, single cell analysis, spatial analysis and other relevant markets, are characterized by rapid technological change and innovation. Competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards or customer requirements. Due to the significant lead time involved in bringing a new product to market, we are required to make a number of assumptions and estimates regarding the commercial feasibility of a new product, including assumptions and estimates regarding the biological analytes that researchers will want to measure, the appropriate method of measuring such analytes, how researchers intend to use the resulting data and the scope and type of data that will be most useful to researchers. As a result, it is possible that we may introduce a new product that uses technologies or methods of analysis that have been displaced by the time of launch, addresses a market that no longer exists or is smaller than previously thought, targets biological analytes or produces data that provides less utility to researchers than previously thought or otherwise is not competitive at the time of launch. We anticipate that we will face increased competition in the future as existing companies and competitors develop new or improved products and as new companies enter the market with new technologies. Our ability to mitigate downward pressure on our selling prices will be dependent upon our ability to maintain or increase the value we offer to researchers. The expenses or losses associated with unsuccessful product development or launch activities, or a lack of market acceptance of our new products, could adversely affect our business, financial condition or results of operations.

Because our solutions are used with other products, such as sequencers, to conduct an experiment, we also expect to face competition from these complementary products, either directly or indirectly, as researchers and labs look to reduce the total cost of any given experiment. For example, if a sequencer manufacturer was successful in vertically integrating their product to provide functionality equivalent to our instruments, they would likely be able to deliver a solution that is capable of running comparable experiments with a total experiment cost that is significantly less than the cost of running such experiments using our products together with third-party sequencers. Conversely, if genome sequencing falls out of favor as a preferred approach for genomic research, whether through the development of alternative solutions or real or perceived problems with sequencing itself, the utility of our products could be significantly impacted. It is critical to our success that we anticipate changes such as these in technology and customer requirements and successfully introduce new, enhanced and competitive technologies to meet our customers' and prospective customers' needs on a timely and cost-effective basis. If we do not successfully innovate and introduce new technology into our product lines, our business and operating results will be adversely impacted.

Our ability to attract new customers and increase revenue from existing customers depends in large part on our ability to enhance and improve our existing solutions and to introduce compelling new solutions. The success of any enhancement to our solutions depends on several factors, including timely completion and delivery, competitive pricing, adequate quality testing, integration with existing technologies and overall market acceptance. Any new solution that we develop may not be introduced in a timely or cost-effective manner, may contain errors, vulnerabilities or bugs, or may not achieve the market acceptance necessary to generate significant revenue. If we are unable to successfully develop new solutions, enhance our existing solutions to meet customer requirements, or otherwise gain market acceptance, our business, results of operations and financial condition would be harmed.

Our ability to attract new customers and increase revenue from existing customers also depends on our ability to deliver any enhanced or new solutions to our customers in a format where they can be easily and consistently deployed by most or all users without significant customer service. If our customers believe that deploying our enhanced or new solutions would be overly time-consuming, confusing or technically challenging, then our ability to grow our business would be substantially harmed. We need to create and deliver a repeatable, user-friendly, prescriptive approach to deployment that allows users of all kinds to effectively and easily deploy our solutions, and if we fail to do so, our business and results of operations would be harmed.

The typical development cycle of new life sciences products can be lengthy and complicated and may require new scientific discoveries or advancements and complex technology and engineering. Such developments may involve external suppliers and service providers, making the management of development projects complex and subject to risks and uncertainties regarding timing, timely delivery of required components or services and satisfactory technical performance of such components or assembled products. If we do not achieve the required technical specifications or successfully manage new product development processes, or if development work is not performed according to schedule, then such new technologies or products may be adversely impacted and our business and operating results may be harmed.

If our existing and new products fail to achieve and sustain sufficient scientific acceptance, we will not generate expected revenue and our prospects may be harmed.

The life sciences scientific community is comprised of a small number of early adopters and key opinion leaders who significantly influence the rest of the community. 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 is a good barometer for the general acceptance of our products as best practices. Ensuring that early adopters and key opinion leaders 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 key opinion leaders is vital to growing our market. The number of times our products were mentioned in peer-reviewed publications has increased significantly in recent years. During this time our revenue has also increased significantly. We cannot assure investors that our products will continue to be mentioned in peer-reviewed articles with any frequency or that any new products that we introduce in the future will be mentioned in peer-reviewed articles. If too few researchers describe the use of our products, too many researchers shift to a competing product and publish research outlining their use of that product or too many researchers negatively describe the use of our products in publications, it may drive existing and potential customers away from our products, which could harm our operating results.

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

We have experienced rapid growth in recent periods. This growth and our anticipated growth will place significant strains on our management, operational and manufacturing systems and processes, financial systems and internal controls and other aspects of our business. For example, we consummated two acquisitions in 2018 and intend to continue to make investments that meet management's criteria to expand or add key technologies that we believe will facilitate the commercialization of new products in the future. In addition, we intend to launch additional new products and new versions of existing products in the next six to twelve months. Further development and commercialization of our current and future products are key elements of our growth strategy. Developing and launching new products and innovating and improving our existing products have required us to hire and retain additional scientific, sales and marketing, software, manufacturing, distribution and quality assurance personnel. As a result, we have experienced rapid headcount growth from 110 employees as of December 31, 2015 to 557 employees as of September 30, 2019. As we have grown, our employees have become more geographically dispersed. We currently serve thousands of researchers in many countries and plan to continue to expand to new international jurisdictions as part of our growth strategy which will lead to increased dispersion of our employees. Moreover, we expect that we will need to hire additional accounting, finance and other personnel in connection with our efforts to comply with the requirements of being a public company. As a public company, our management and other personnel must devote a substantial amount of time towards maintaining compliance with these requirements. We may face challenges integrating, developing and motivating our rapidly growing and increasingly dispersed employee base. In addition, certain members of our management have not previously worked together for an extended period of time, do not have experience managing a public company or do not have experience managing a global business, which may affect how they manage our growth. 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. As our organization continues to grow, and we are required to implement more complex organizational management structures, we 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. If we do not successfully manage our anticipated growth, our business, results of operations and growth prospects will be harmed.

Our limited operating history and rapid revenue growth make it difficult to evaluate our future prospects and the risks and challenges we may encounter.

We launched our first product in mid-2015 and have experienced significant revenue growth in recent periods. In addition, we operate in highly competitive markets characterized by rapid technological advances and our business has, and we expect it to continue, to evolve over time to remain competitive. Our limited operating history, evolving business and rapid growth make it difficult to evaluate our future prospects and the risks and challenges we may encounter and may increase the risk that we will not continue to grow at or near historical rates.

If we fail to address the risks 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 growing companies with limited operating histories in rapidly changing industries. If our assumptions regarding these risks and uncertainties, which we use to plan and operate our business, are incorrect or change, or if we do not address these risks successfully, our results of operations could differ materially from our expectations and our business, financial condition and results of operations could be adversely affected.

Our operating results have in the past fluctuated significantly and may continue to 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.

Our quarterly and annual operating results may fluctuate significantly, 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:

- the level of demand for our products, which may vary significantly, and our ability to increase penetration in our existing markets and expand into new markets;
- customers accelerating, canceling, reducing or delaying orders as a result of developments related to our litigation or to our transition to Next GEM microfluidic chips;
- the outcomes of and related rulings in the litigation and administrative proceedings in which we are currently or may in the future become involved;
- our ability to successfully manufacture and transition our existing customers to our Next GEM microfluidic chips;
- the timing and cost of, and level of investment in, research and development and commercialization activities relating to our products, which may change from time to time;
- the volume and mix of our instrument and consumable sales or changes in the manufacturing or sales costs related to our instruments and consumables;
- the success of our recently announced products, such as our Chromium Connect and Visium platform, and the introduction of other new products or product enhancements by us or others in our industry;
- the timing and amount of expenditures that we may incur to acquire, develop or commercialize 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, budget cycles or seasonal spending patterns of our customers;
- future accounting pronouncements or changes in our accounting policies;
- the outcome of any future litigation or governmental investigations involving us, our industry or both;
- difficulties encountered by our commercial carriers in delivering our instruments or consumables, whether as a result of external factors such as weather or internal issues such as labor disputes;
- general market conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors;
- higher than anticipated warranty costs; 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 our revenue or 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, the price of our Class A common stock could decline substantially. Such a stock price decline could occur even when we have met or exceeded any previously publicly stated guidance we may provide.

The sizes of the markets for our solutions may be smaller than estimated and new market opportunities may not develop as quickly as we expect, or at all, limiting our ability to successfully sell our solutions.

The market for genomics products is new and evolving, making it difficult to predict with any accuracy the sizes of the markets for our current and future solutions. Our estimates of the annual total addressable market for our current and future solutions are based on a number of internal and third-party estimates and assumptions. In particular, our estimates are based on our expectations that: (a) researchers in the market for certain life sciences research tools and technologies will view our solutions as competitive alternatives to, or better options than, such existing tools and technologies; (b) researchers who already own such existing tools and technologies will recognize the ability of our solutions to complement, enhance and enable new applications of their current tools and technologies and find the value proposition offered by our solutions convincing enough to purchase our solutions in addition to the tools and technologies they already own; and (c) the trends we have seen among our customers with respect to placements of our instruments are representative of the broader market. Underlying each of these expectations are a number of estimates and assumptions, including the assumption that government or other sources of funding will continue to be available to life sciences researchers at times and in amounts necessary to allow them to purchaser our solutions.

In addition, our growth strategy involves launching new solutions and expanding sales of existing solutions into new markets in which we have limited or no experience, such as the biopharmaceutical market. Sales of new or existing solutions into new market opportunities may take several years to develop and mature and we cannot be certain that these market opportunities will develop as we expect. For example, new life sciences technology is often not adopted by the relevant market until a sufficient amount of research conducted using such technology has been published in peer-reviewed publications. Because there can be a considerable delay between the launch of a new life sciences product and publication of research using such product, new life sciences products do not generally contribute a meaningful amount of revenue in the year they are introduced. In certain markets, such as the biopharmaceutical market, new life sciences technology, even if sufficiently covered in peer-reviewed publications, may not be adopted until the consistency and accuracy of such technology, method or device has been proven. As a result, the sizes of the annual total addressable market for new markets and new products are even more difficult to predict.

While we believe our assumptions and the data underlying our estimates of the total annual addressable market for our solutions 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 solutions may be incorrect.

The future growth of the market for our current and future solutions depends on many factors beyond our control, including recognition and acceptance of our solutions by the scientific community as best practice and the growth, prevalence and costs of competing products and solutions. Such recognition and acceptance may not occur in the near term, or at all. If the markets for our current and future solutions are smaller than estimated or do not develop as we expect, our growth may be limited and our business, financial condition and operational results may be adversely affected.

Our management uses certain key business metrics to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions and such metrics may not accurately reflect all of the aspects of our business needed to make such evaluations and decisions, in particular as our business continues to grow.

In addition to our consolidated financial results, our management regularly reviews a number of operating and financial metrics, including our instrument installed base and consumable pull-through per instrument, to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions. We define the instrument installed base as the cumulative number of instruments sold since inception and define consumable pull-through per instrument as the total consumables revenue in the relevant period divided by the average instrument installed base during that period. We believe that these metrics are representative of our current business; however, these metrics may not accurately reflect all aspects of our business and we anticipate that these metrics may change or may be substituted for additional or different metrics as our business grows and as we introduce new products. For example, we expect that our expansion into new markets and adoption by new customers who may not have the same financial resources to devote to consumable purchases as our existing customer base could adversely impact our pull-through figures. These metrics also do not accurately reflect information relating to customers who purchase consumables but do not own an instrument, whom we refer to as “halo users”. Halo users and the future introduction of consumables that may not use instruments, such as our recently announced Visium solution, or instruments that are expected to use a greater amount of consumables, such as our Chromium Connect instrument, could reduce the utility of our consumable pull-through per instrument metric and make it difficult to compare such figures over time. Moreover, we expect some of our halo users to purchase instruments of their own which would decrease the consumables sold per instrument and therefore decrease our annual consumable pull-through per instrument. Though we expect the introduction of enhanced features and additional solutions on our Chromium instrument to increase consumable pull-through per instrument and to offset this decline, there are no assurances we will be successful in doing so. If our management fails to review other relevant information or change or substitute the key business metrics they review as our business grows and we introduce new products, their ability to accurately formulate financial projections and make strategic decisions may be compromised and our business, financial results and future growth prospects may be adversely impacted.

We are dependent on single source and sole source suppliers for some of the components and materials used in our products and the loss of any of these suppliers could harm our business.

We do not have long-term contracts with our suppliers for the significant majority of the services, materials and components we use for the manufacture and delivery of our products. In certain cases, we also rely on single suppliers for all of our requirements for some of our materials or components. In most cases we do not have long term contracts with these suppliers, and even in the cases where we do the contracts include significant qualifications that would make it extremely difficult for us to force the supplier to provide us with their services, materials or components should they choose not to do so. We are therefore subject to the risk that these third-party suppliers will not be able or willing to continue to provide us with materials and 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 materials and components include disruption at or affecting our suppliers' facilities, such as work stoppages or natural disasters, adverse weather or other conditions that affect their supply, the financial condition of our suppliers, deterioration in our relationships with these suppliers or the decision by such suppliers to introduce products that compete directly with our solutions. In addition, we cannot be sure that we will be able to obtain these materials and components on satisfactory terms. Any increase in material and component costs could reduce our sales and harm our gross margins. In addition, any loss of a material supplier may permanently cause a change in one or more of our products that may not be accepted by our customers or cause us to eliminate that product altogether.

For example, we depend on a limited number of suppliers for enzymes and amplification mixes used in our consumables. In some cases, these manufacturers are the sole source of certain types of enzymes and reagents. We do not have long-term contracts with any of these sole source suppliers. Lead times for some of these components can be several months or more. In the event that demand increases, a manufacturing 'lot' does not meet our specifications or we fail to forecast and place purchase orders sufficiently in advance, this could result in a material shortage. Some of the components and formulations are proprietary to our vendors, thereby making second sourcing and development of a replacement difficult. Furthermore, such vendors may have intellectual property rights that could prevent us from sourcing such reagents from other vendors. Some vendors could choose to use their enzymes, amplification mixes or other components to create products that directly compete with our consumables and end our current supplier-customer relationship. If enzymes and reagents become unavailable from our current suppliers and we are unable to find acceptable substitutes for these suppliers, we may be required to produce them internally or change our product designs.

We have not qualified secondary sources for all materials or 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 materials or 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 materials that are scarce or components for which there are a limited number of suppliers.

If our facilities or our third-party manufacturers' facilities become unavailable or inoperable, our research and development programs could be adversely impacted and manufacturing of our instruments and consumables could be interrupted.

The manufacturing process for our Chromium Controller takes place at our third-party manufacturer's facilities in California. The majority of our consumables are manufactured at our facilities in Pleasanton, California using proprietary equipment. Certain raw materials, such as oligonucleotides and enzymes, are custom manufactured by outside partners. We periodically review the manufacturing capacity of our consumables and we expect to manufacture an increasing amount of consumables in-house. Our Pleasanton facilities also house the majority of our research and development and quality assurance teams. Our planned Chromium Connect will be manufactured by our partner at their facility. The facilities and the equipment we and our third-party manufacturers use to manufacture our instruments and consumables and that we use in our research and development programs would be costly to replace and could require substantial lead times to repair or replace.

Our facilities in Pleasanton are vulnerable to natural disasters and catastrophic events. For example, our Pleasanton 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. If any disaster or catastrophic event were to occur, our ability to operate our business would be seriously, or potentially completely, impaired. If our facilities or any of our third-party manufacturers' facilities become unavailable for any reason, we cannot provide assurances that we will be able to secure alternative manufacturing facilities with the necessary capabilities and equipment on acceptable terms, if at all. We may encounter particular difficulties in replacing our Pleasanton facilities given the specialized equipment housed within it. The inability to manufacture our instruments and/or consumables, combined with our limited inventory of manufactured instruments and consumables, may result in the loss of customers or harm our reputation, and we may be unable to reestablish relationships with those customers in the future. Because certain of our consumables and the raw materials we use to manufacture consumables at our Pleasanton facilities 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 consumables and raw materials and we may not be able to replace them without disruption to our customers or at all.

In the nine months ended September 30, 2019, approximately 70% of our direct sales revenue came from sales to academic institutions, whose research often requires long uninterrupted studies performed on a consistent basis over time; thus interruptions in our ability to supply consumables could be particularly damaging to these studies and our reputation. In addition, the budgetary planning and approval process for academic research programs can be lengthy and begin well in advance of the planned purchase of our instrument and/or consumables. If our products become unavailable during the planning process, researchers may use alternative products.

If our research and development programs were disrupted by a disaster or catastrophe, the launch of new products and the timing of improvements to existing 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 manufacturers' 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.

Our instruments, consumables and related components are specialized, complex and difficult to manufacture. We could experience production problems that impact our ability to manufacture and ship our instruments, consumables and related components, which would adversely affect our business, financial condition and results of operations.

The manufacturing processes we and our third-party manufacturers use to produce our instruments, consumables and related components are specialized and highly complex and require high-quality components. We may have quality variations, supply issues, backorders or production difficulties of needed components and may require components that are difficult to obtain or manufacture at the necessary quantities and necessary quality, in a timely manner or in accordance with regulatory requirements.

Such issues, issues with our manufacturing processes or the manufacturing processes of our third-party manufacturers, shipping issues, inaccurate demand forecasts or other production issues could result in our inability to supply our products to our customers, backorders, insufficient inventory, excess inventory, shipping delays, product deficiencies or other operational failures. If we cannot supply our products to our customers in a timely manner, our customers may delay or cancel their orders. Furthermore, even if we have inventory, if we do not have adequate inventory of products in the geographic regions in which they are ordered, we may not be able to deliver products to our customers in a timely manner and customers may delay or cancel their orders. Many other factors could cause production or shipping delays or interruptions, including difficulties in transporting materials, raw material shortages, raw material failures, equipment malfunctions, facility contamination, labor problems, natural disasters, disruption in utility services, terrorist activities or circumstances beyond our control. Additionally, we and our third-party manufacturers may encounter problems in hiring and retaining the experienced specialized personnel needed to develop and operate our manufacturing processes or the manufacturing processes of our third-party manufacturers, which could result in backorders, delays in our production or difficulties in maintaining compliance with applicable regulatory requirements.

These issues, or any other problems with the production or timely manufacture and shipment of our instruments, consumables and related components, could materially harm our business, financial condition and results of operations.

We may be unable to consistently manufacture our instruments and consumables to the necessary specifications or in quantities necessary to meet demand at an acceptable cost or at an acceptable performance level.

Our products are integrated solutions with many different components that work together. As such, a quality defect in a single component can compromise the performance of the entire solution. Certain of our consumables are manufactured at our Pleasanton, California facilities using complex processes, sophisticated equipment and strict adherence to specifications and quality systems procedures. In many cases, the consumables we manufacture are bundled with products or components that we source from third parties and assemble, package and perform quality assurance testing at our Pleasanton facilities. Our Chromium Controllers are manufactured by our third-party manufacturers at their facilities. In order to successfully generate revenue from our products, we need to supply our customers with products that meet their expectations for quality and functionality in accordance with established specifications. In order to ensure we are able to meet these expectations, our Pleasanton, California manufacturing facilities, as well as the facilities of our third-party manufacturers, have obtained International Organization for Standardization ("ISO") quality management certifications and employ other quality control measures. While customer complaints regarding defects in our products and consumables have historically been low, our customers have experienced quality control and manufacturing defects in the past. For example, a manufacturing defect in certain of our Chromium Controllers resulted in an unacceptable level of LCD screen failures and we launched a free replacement program in 2018 to allow customers to replace affected LCD screens as a result. As we continue to grow and introduce new products, and as our products incorporate increasingly sophisticated technology, it will be increasingly difficult to ensure our products are produced in the necessary quantities without sacrificing quality. There is no assurance that we or our third-party manufacturers will be able to continue to manufacture our products so that they consistently achieve the product specifications and quality that our customers expect. Certain of our consumables are subjected to a 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 warrantee replacements, which would increase our costs, and depending upon current inventory levels and the availability and lead time for additional inventory, could lead to availability issues. Any future design issues, unforeseen manufacturing problems, such as contamination of our or their facilities, 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, financial condition and operating results and could

result in us or our third-party manufacturers losing ISO quality management certifications. If we or our third-party manufacturers fail to maintain ISO quality management certifications, our customers might choose not to purchase products from us. Furthermore, we or our third-party manufacturers may not be able to increase manufacturing to meet anticipated demand or may experience downtime.

In addition, as we increase manufacturing capacity, we will also need to make corresponding improvements to other operational functions, such as our customer service and billing systems, compliance programs and our internal quality assurance programs. We will also need additional equipment, manufacturing and warehouse space and trained personnel to process higher volumes of products. We cannot assure you that any increases in scale, related improvements and quality assurance will be successfully implemented or that equipment, manufacturing and warehouse space and appropriate personnel will be available. 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. Our ability to increase our manufacturing capacity at our Pleasanton, California location is complicated by the use of our proprietary equipment that is not readily available from third-party manufacturers.

The risk of manufacturing defects or quality control issues is generally higher for new products, whether produced by us or a third-party manufacturer, products that are transitioned from one manufacturer to another, particularly if manufacturing is transitioned or initiated with a manufacturer we have not worked with in the past, and products that are transferred from one manufacturing facility to another. Our current product roadmap calls for the introduction of new instruments, such as our Chromium Connect, which integrates our Chromium Controller with complex robotics manufactured by our partner. We also started to transition manufacturing of our Chromium Controller to a new third-party manufacturer with greater capacity.

As a result, both of our instruments will be manufactured by companies with which we have no prior manufacturing experience and the risk of manufacturing defects or quality control issues could increase as a result. Similarly, we also expect to expand our manufacturing facilities in Pleasanton, California during 2019. This expansion will result in the relocation of certain manufacturing processes and the risk of manufacturing defects or quality control issues in the consumables we manufacture there could increase as a result. We cannot assure investors that we and our third-party manufacturers will be able to launch new products on time, transition manufacturing of existing products to new manufacturers, transition our manufacturing capabilities to a new location or transition manufacturing of any additional consumables in-house without manufacturing defects.

An inability to manufacture products and components that consistently meet specifications, in necessary quantities and at commercially acceptable costs will have a negative impact and may have a material adverse effect on our business, financial condition and results of operations.

Undetected errors or defects in our solutions could harm our reputation and decrease market acceptance of our solutions.

Our instruments and consumables, as well as the software that accompanies them, may contain undetected errors or defects when first introduced or as new versions are released. Disruptions or other performance problems with our products or software may adversely impact our customers' research or business, harm our reputation and result in reduced revenue or increased costs associated with product repairs or replacements. If that occurs, we may also incur significant costs, the attention of our key personnel could be diverted or other significant customer relations problems may arise. We may also be subject to warranty claims or breach of contract for damages related to errors or defects in our solutions.

Certain disruptions in supply of, and changes in the competitive environment for, raw materials integral to the manufacturing of our products may adversely affect our profitability.

We use a broad range of materials and supplies, including metals, chemicals and other electronic components, in our products. A significant disruption in the supply of these materials could decrease production and shipping levels, materially increase our operating costs and materially adversely affect our profit margins. Shortages of materials or interruptions in transportation systems, labor strikes, work stoppages, war, acts of terrorism or other interruptions to or difficulties in the employment of labor or transportation in the markets in which we purchase materials, components and supplies for the production of our products, in each case may adversely affect our ability to maintain production of our products and sustain profitability. Unforeseen end-of-life for certain components, such as enzymes, could cause backorders as we modify our product specifications to accommodate replacement components. If we were to experience a significant or prolonged shortage of critical components from any of our suppliers and could not procure the components from other sources, we would be unable to manufacture our products and to ship such products to our customers in a timely fashion, which would adversely affect our sales, margins and customer relations.

We depend on certain technologies that are licensed to us. We do not control these technologies and any loss of our rights to them could prevent us from selling our products.

We rely on licenses in order to be able to use various proprietary technologies that are used in a substantial majority of our consumables. We do not own the patents that are the subject matter of these licenses. Our rights to use these patented technologies in our business are subject to the continuation of and compliance with the terms of those licenses.

We may need to license other technologies to commercialize future products. We may also need to negotiate licenses to patents and patent applications after launching new products. Our business may suffer if the technologies, patents or patent applications are unavailable for license or if we are unable to enter into necessary licenses on acceptable terms.

If we fail to offer high quality customer service, our business and reputation could suffer.

We differentiate ourselves from our competition through our commitment to an exceptional customer experience. Accordingly, high quality customer service is important for the growth of our business and any failure to maintain such standards of customer service, or a related market perception, could affect our ability to sell products to existing and prospective customers. Additionally, we believe our customer service team has a positive influence on recurring consumables revenue. Providing an exceptional customer experience requires significant time and resources from our customer service team. Therefore, failure to scale our customer service organization adequately may adversely impact our business results and financial condition.

Customers utilize our service teams and online content for help with a variety of topics, including how to use our products efficiently, how to integrate our products into existing workflows, how to determine which of our other products may be needed for a given experiment and how to resolve technical, analysis and operational issues if and when they arise. While we have developed significant resources for remote training, including an extensive library of online videos, we may need to rely more on these resources for future customer training, or we may experience increased expenses to enhance our online and remote solutions. If our customers do not adopt these resources, we may be required to increase the staffing of our customer service team, which would increase our costs. Also, as our business scales, we may need to engage third-party customer service providers, which could increase our costs and negatively impact the quality of the customer experience if such third parties are unable to provide service levels equivalent to ours.

The number of our customers has grown significantly and such growth, as well as any future growth, will put additional pressure on our customer service organization. We may be unable to hire qualified staff quickly enough or to the extent necessary to accommodate increases in demand.

In addition, as we continue to grow our operations and reach a global customer base, we need to be able to provide efficient customer service that meets our customers' needs globally at scale. In geographies where we sell through distributors, we rely on those distributors to provide customer service. If these third-party distributors do not provide a high quality customer experience, our business operations and reputation may suffer.

We depend on our key personnel and other highly qualified personnel, and if we are unable to recruit, train and retain our personnel, we may not achieve our goals.

Our future success depends on our ability to recruit, train, retain and motivate key personnel, including our senior management, research and development, manufacturing and sales, customer service and marketing personnel. In particular, Dr. Saxonov, our Chief Executive Officer and one of our co-founders, and Dr. Hindson, our Chief Scientific Officer, President and one of our co-founders, are critical to our vision, strategic direction, culture and products. Competition for qualified personnel is intense, particularly in the San Francisco Bay Area. As we grow, we may continue to make changes to our management team, which could make it difficult to execute on our business plans and strategies. New hires also 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.

Our continued growth depends, in part, on attracting, retaining and motivating highly-trained sales personnel with the necessary scientific background and ability to understand our systems at a technical level to effectively identify and sell to potential new customers. In addition, the continued development of complementary software tools, such as our analysis tools and visualization software, requires us to compete for highly trained software engineers in the San Francisco Bay Area and for highly trained customer service personnel globally. We also compete for computational biologists and qualified scientific personnel with other life sciences companies, academic institutions and research institutions. Many 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 in the San Francisco Bay Area, we expect to continue to rely on 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. The current United States administration has made restricting immigration and reforming the work visa process a key focus of its initiatives and these efforts may adversely affect our ability to find qualified personnel.

We do not maintain key man life insurance or fixed term employment contracts with any of our employees. As a result, our employees could leave our company with little or no prior notice and would be free to work for a competitor. Because of the complex and technical nature of our products and the dynamic market in which we compete, any failure to attract, train, retain and motivate qualified personnel could materially harm our operating results and growth prospects.

Acquisitions could disrupt our business, cause dilution to our stockholders and otherwise harm our business.

We have and may continue to acquire other businesses and legal entities to add specialized employees, products or technologies as well as pursue technology licenses or investments in complementary businesses. In 2018, we acquired Epinomics, Inc. ("Epinomics"), an epigenetics company based in California, and Spatial Transcriptomics Holdings AB ("Spatial Transcriptomics"), a spatial analysis company based in Stockholm, Sweden. We believe we are successfully integrating the technologies acquired from those companies

into our business, but the long-term success of these acquisitions is not guaranteed. These transactions and any future transactions could be material to our financial condition and operating results and expose us to many risks, including:

- disruption in our relationships with customers, distributors, manufacturers or suppliers as a result of such a transaction;
- unanticipated liabilities related to acquired companies, including liabilities related to acquired intellectual property or litigation relating thereto;
- difficulties integrating acquired personnel, technologies and operations into our existing business;
- diversion of management time and focus from operating our business;
- failure to realize anticipated benefits or synergies from such a transaction;
- increases in our expenses and reductions in our cash available for operations and other uses;
- possible write-offs or impairment charges relating to acquired businesses; and
- potential higher taxes if our tax position relating to the acquisitions were challenged.

Foreign acquisitions, such as our acquisition of Spatial Transcriptomics, involve unique risks in addition to those mentioned above, including those related to integration of operations across different cultures and languages, currency risks and the particular economic, political and regulatory risks associated with specific countries.

Even if we identify a strategic transaction that we wish to pursue, we may be prohibited from consummating such transaction due to the terms of our existing or any future indebtedness. For example, our Second Amended and Restated Loan and Security Agreement, dated February 9, 2018, with Silicon Valley Bank (as amended, restated or supplemented from time to time, the "Loan and Security Agreement") includes a covenant that limits our ability to consummate acquisitions and the exceptions to this covenant are limited. If we were to pursue an acquisition that is not permitted by the Loan and Security Agreement, we would be required to seek a waiver from the lender under the Loan and Security Agreement and we cannot assure investors that the lender would grant such a waiver.

Future acquisitions or dispositions 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. We cannot predict the number, timing or size of future acquisitions, or the effect that any such transactions might have on our operating results.

Seasonality may cause fluctuations in our revenue and results of operations.

We operate on a December 31st year end and believe that there are significant seasonal factors which may cause sales of our products, and particularly our Chromium Controller, to vary on a quarterly or yearly basis and increase the magnitude of quarterly or annual fluctuations in our operating results. We believe that this seasonality results from a number of factors, including the procurement and budgeting cycles of many of our customers, especially government- or grant-funded customers, whose cycles often coincide with government fiscal year ends. For example, the United States government's fiscal year end occurs in our third quarter and may result in increased sales of our products during such quarter if government-funded customers have unused funds that may be forfeited, or future budgets that may be reduced, if such funds remain unspent at such fiscal year end. Furthermore, the academic budgetary cycle similarly requires grantees to 'use or lose' their grant funding, which seems to be tied disproportionately to the end of the calendar year, driving sales higher during the fourth quarter. Similarly, our biopharmaceutical customers typically have calendar year fiscal years which also result in a disproportionate amount of their purchasing activity occurring during our fourth quarter. These factors have contributed, and may contribute in the future, to substantial fluctuations in our quarterly operating results. Because of these fluctuations, it is possible that in some quarters our operating results will fall below the expectations of securities analysts or investors. If that happens, the market price of our Class A common stock would likely decrease. These fluctuations, among other factors, also mean that our operating results in any particular period may not be relied upon as an indication of future performance. Seasonal or cyclical variations in our sales have in the past, and may in the future, become more or less pronounced over time, and have in the past materially affected, and may in the future materially affect, our business, financial condition, results of operations and prospects.

Our reliance on distributors for sales of our products in certain geographies outside of the United States could limit or prevent us from selling our products and impact our revenue.

We sell our products through third-party distributors in Asia, certain regions of Europe, South America, the Middle East and Africa. We intend to continue to grow our business internationally and to do so we must attract additional distributors and retain existing distributors to maximize the commercial opportunity for our products. There is no guarantee that we will be successful in attracting or retaining desirable sales and distribution partners or that we will be able to enter into such arrangements on favorable terms. Most of our distribution relationships are non-exclusive and permit such distributors to distribute competing products. As such, our distributors may not commit the necessary resources to market our products to the level of our expectations or may choose to favor marketing the products of our competitors. If current or future distributors do not perform adequately or we are unable to enter into effective arrangements with distributors in particular geographic areas, we may not realize long-term international revenue growth.

We rely exclusively on commercial carriers to transport our products, including perishable consumables, to our customers in a timely and cost-efficient manner and if these delivery services are disrupted, our business will be harmed.

Our business depends on our ability to quickly and reliably deliver our products and in particular, our consumables, to our customers. Certain of our consumables are perishable and must be kept below certain temperatures. As such, we ship certain of our refrigerated consumables on dry ice and only ship such consumables on certain days of the week to reach customers on a timely basis. Disruptions in the delivery of our products, whether due to labor disruptions, bad weather, natural disasters, terrorist acts or threats or for other reasons could result in our customers receiving consumables that are not fit for usage, and if used, could result in inaccurate results or ruined experiments. While we work with customers to replace any consumables that are impacted by delivery disruptions, our reputation and our business may be adversely impacted even if we replace perished consumables free of charge. In addition, if we are unable to continue to obtain expedited delivery services on commercially reasonable terms, our operating results may be adversely affected.

In addition, should our commercial carriers encounter difficulties in delivering our instruments or consumables to customers, particularly at the end of any financial quarter, it could adversely impact our ability to recognize revenue for those products in that period and accordingly adversely affect our financial results for that period.

Ethical, legal, privacy and social concerns or governmental restrictions surrounding the use of the genomic and multi-omic information and gene editing could reduce demand for our products.

While we do not make gene sequencing or gene editing products, our products are used to better understand genomic information that could further gene editing endeavors. For example, our single cell gene expression solutions allow users to examine cells that have been genetically perturbed using clustered regularly interspaced short palindromic repeats ("CRISPR") gene editing technology. Recent advances in genome editing or gene therapy, using CRISPR systems such as CRISPR Cas9 technology have been subject to negative publicity and increased regulatory scrutiny, in part due to the underlying ethical, legal, privacy and social concerns regarding the use or potential misuse of such technology. Governmental authorities could, for safety, social or other purposes, call for limits on or regulation of technologies and products used in the genome editing or gene therapy fields. Such concerns or governmental restrictions could limit the use of our products. Because the science and technology of genome editing or gene therapy is incredibly complex, any regulations or restrictions placed on such technology or aimed at curtailing its usage could, intentionally or inadvertently, limit or restrict the usage of our products. Any such restrictions or any reduction in usage of our products as a result of concerns regarding the usage of genome editing technology could have a material adverse effect on our business, financial condition and results of operations.

We are subject to certain manufacturing restrictions related to licensed technologies that were developed with the financial assistance of United States government grants.

We are subject to certain United States government regulations because we have licensed technologies that were developed with United States government grants. Such licensed technologies are used, for example, in a substantial majority of our consumables. In accordance with these regulations, these licenses provide that products embodying the technologies are subject to domestic manufacturing requirements. If this domestic manufacturing requirement is not met, the government agency that funded the relevant grant is entitled to exercise specified rights ("march-in rights") which if exercised would allow the government agency to require the licensors or us to grant a non-exclusive, partially exclusive or exclusive license in any field of use to a third-party designated by such agency. The exercise of march-in rights or the termination of our license of the relevant technologies could materially adversely affect our business, operations and financial condition. As of September 30, 2019, all of our products embodying licensed technology subject to march-in rights were manufactured in the United States. While we do not expect to move manufacturing of these products to facilities located outside of the United States, we cannot assure investors that such products will always be manufactured in the United States or that the applicable government agency would grant a waiver of such requirement. These restrictions may limit our ability to manufacture our products in geographies where it may be more economically favorable to do so which could limit our ability to respond to competitive developments or otherwise adversely affect our results of operations.

Our products could become subject to government regulation and the regulatory approval and maintenance process for such products may be expensive, time-consuming and uncertain both in timing and in outcome.

Our products are not subject to the clearance or approval of the U.S. Food and Drug Administration (the "FDA"), as they are not intended to be used for the diagnosis, treatment or prevention of disease. However, as we continue to expand our product line and the applications and uses of our existing products into new fields, certain of our current or 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. Such regulatory approval processes or clearances may be expensive, time-consuming and uncertain, and our failure to obtain or comply with such approvals and clearances could have an adverse effect on our business, financial condition and operating results. In addition, 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, fraud and abuse, false claims, privacy and security and physician sunshine laws and regulations.

Diagnostic products are regulated as medical devices by the FDA and comparable international agencies and may require either clearance from the FDA following the 510(k) pre-market notification process or pre-market approval from the FDA, in each case prior to marketing. Obtaining the requisite regulatory approvals can be expensive and may involve considerable delay. None of our products are currently regulated as medical devices, however, if our products labeled as "For Research Use Only. Not for use in diagnostic procedures" ("RUO") are used, or could be used, for the diagnosis of disease, the regulatory requirements related to marketing, selling and supporting such products could change or be uncertain, even if such use by our customers is without our consent.

If the FDA or other regulatory authorities assert that any of our products are subject to regulatory clearance or approval, our business, financial condition or results of operations could be adversely affected.

Enhanced trade tariffs, import restrictions, export restrictions, Chinese regulations or other trade barriers may materially harm our business.

We are continuing to expand our international operations as part of our growth strategy and have experienced an increasing concentration of sales in certain regions outside the United States, especially in the Asia-Pacific region. For the year ended December 31, 2018 and the nine months ended September 30, 2019, sales outside of North America constituted approximately 42% and 43%, respectively, of our sales revenue and our largest markets outside of North America were China and Germany. There is currently significant uncertainty about the future relationship between the United States and various other countries, most significantly China, with respect to trade policies, treaties, government regulations and tariffs. The current United States presidential administration has called for substantial changes to United States foreign trade policy with respect to China and other countries, including the possibility of imposing greater restrictions on international trade and significant increases in tariffs on goods imported into the United States. In September 2018, the United States Trade Representative (the "USTR") enacted a tariff on the import of other Chinese products with a combined import value of approximately $200 billion. The tariff became effective on September 24, 2018, with an initial rate of 10% and increased to 25% effective on May 10, 2019.

Additionally, our business may be adversely impacted by retaliatory trade measures taken by China or other countries. Such measures could include restrictions on our ability to sell or import our instruments and/or consumables into certain countries or have the effect of increasing the prices of our instruments and/or consumables. For example, China has promised to impose retaliatory tariffs in response to the USTR tariffs referred to above and any such retaliatory tariffs could adversely impact our ability to sell instruments and consumables in China. While at this time neither the United States nor China has specifically imposed additional tariffs on healthcare related products, the nature of this dispute is evolving and additional products such as ours could become subject to tariffs, which could adversely affect the marketability of our products and our results of operations. Further, the continued threats of tariffs, trade restrictions and trade barriers could have a generally disruptive impact on the global economy and, therefore, negatively impact our sales. Given the relatively fluid regulatory environment in China and the United States and uncertainty how the United States or foreign governments will act with respect to tariffs, international trade agreements and policies, there could be additional tax or other regulatory changes in the future. Any such changes could directly and adversely impact our financial results and results of operations.

Additionally, in November 2018, the United States Commerce Department's Bureau of Industry and Security released an advance notice of proposed rulemaking to control the export of emerging technologies. This notice included "[b]iotechnology, including nanobiology; synthetic biology; genomic and genetic engineering; or neurotech" as possible areas of increased export controls. Therefore, it is possible that our ability to export our products may be restricted in the future.

The imposition of new, or changes in existing, tariffs, trade restrictions, trade barriers, export controls or retaliatory trade measures taken by other countries could adversely impact our business, financial condition and results of operations.

Doing business internationally creates operational and financial risks for our business.

We currently serve thousands of researchers in more than 40 countries and plan to continue to expand to new international jurisdictions as part of our growth strategy. For the nine months ended September 30, 2019, approximately 43% of our revenue was generated from sales to customers located outside of North America. We believe that a significant portion of our future revenue will come from international sources. We sell directly in North America and certain regions of Europe and have a significant portion of our sales and customer service personnel in the United States. We sell our products through third-party distributors in Asia, certain regions of Europe, South America, the Middle East and Africa. As a result, we or our distribution partners may be subject to additional regulations. Conducting operations on an international scale requires close coordination of activities across multiple jurisdictions and time zones. If we fail to coordinate and manage these activities effectively, our business, financial condition or results of operations could be materially and adversely affected and failure to comply with laws and regulations applicable to business operations in foreign jurisdictions may also subject us to significant liabilities and other penalties. International operations entail a variety of other risks, including, without limitation:

- challenges in staffing and managing foreign operations;

- potentially longer sales cycles and more time required to engage and educate customers on the benefits of our products outside of the United States;
- the potential need for localized software, documentation and post-sales support;
- reduced protection for intellectual property rights in some countries and practical difficulties of enforcing intellectual property and contract rights abroad;
- complexities associated with managing a third-party contract manufacturer located outside of the United States;
- United States and foreign government trade restrictions, including those which may impose restrictions on the importation, exportation, re-exportation, sale, shipment or other transfer of programming, technology, components and/or services to foreign persons;
- changes in diplomatic and trade relationships, including new tariffs, trade protection measures, import or export licensing requirements, trade embargoes and other trade barriers;
- tariffs imposed by the United States on goods from other countries and tariffs imposed by other countries on United States goods, or increases in existing tariffs;
- deterioration of political relations between the United States and Canada, China, the United Kingdom and the European Union, which could have a material adverse effect on our sales and operations in these countries;
- changes in social, political and economic conditions or in laws, regulations and policies governing foreign trade, manufacturing, development and investment both domestically as well as in the other countries and jurisdictions into which we sell our products, including as a result of the referendum held in the United Kingdom approving the separation of the United Kingdom from the European Union;
- difficulties in obtaining export licenses or in overcoming other trade barriers and restrictions resulting in delivery delays or our inability to sell our products in certain countries;
- increased financial accounting and reporting burdens and complexities; and
- significant taxes or other burdens of complying with a variety of foreign laws, including laws relating to privacy and data protection such as the General Data Protection Regulation (the "GDPR") which took effect in the European Union in 2018.

In conducting our international operations, we are subject to United States laws relating to our international activities, such as the Foreign Corrupt Practices Act of 1977, as well as foreign laws relating to our activities in other countries, such as the United Kingdom Bribery Act of 2010. Additionally, we are subject to laws that prohibit the conduct of business with persons that are subject to "sanctions", including but not limited to persons listed on the United States Department of Commerce's List of Denied Persons and the United States Department of Treasury's Specially Designated Nationals and Blocked Persons List. Failure to comply with these laws and other applicable laws may subject us to claims or financial and/or other penalties in the United States and/or foreign countries that could materially and adversely impact our operations or financial condition. These risks have become increasingly prevalent as we have expanded our sales into countries that are generally recognized as having a higher risk of corruption.

Historically, most of our revenue has been denominated in U.S. dollars, although we have sold our products and services in local currency outside of the United States, principally the euro. For the nine months ended September 30, 2019, approximately 14% of our sales were denominated in currencies other than U.S. dollars. Our expenses are generally denominated in the currencies in which our operations are located, which is primarily in the United States. As our operations in countries outside of the United States grow, our results of operations and cash flows will become increasingly subject to fluctuations due to changes in foreign currency exchange rates, which could harm our business in the future. For example, if the value of the U.S. dollar increases relative to foreign currencies, in the absence of a corresponding change in local currency prices, our revenue could be adversely affected as we convert revenue from local currencies to U.S. dollars. In addition, because we conduct business in currencies other than U.S. dollars, but report our results of operations in U.S. dollars, we also face remeasurement exposure to fluctuations in currency exchange rates, which could hinder our ability to predict our future results and earnings and could materially impact our results of operations. We do not currently maintain a program to hedge exposures to non-U.S. dollar currencies.

Violations of complex foreign and United States laws and regulations could result in fines and penalties, criminal sanctions against us, our officers or our employees, prohibitions on the conduct of our business and on our ability to offer our products and services in one or more countries, and could also materially affect our brand, our international growth efforts, our ability to attract and retain employees, our business and our operating results. Even if we implement policies or procedures designed to ensure compliance with these laws and regulations, there can be no assurance that our distribution partners, our employees, contractors or agents will not violate our policies and subject us to potential claims or penalties.

Significant U.K. or European developments stemming from the U.K.'s decision to withdraw from the European Union could have a material adverse effect on us.

In June 2016, the United Kingdom held a referendum and voted in favor of leaving the European Union, and in March 2017, the government of the United Kingdom formally initiated the withdrawal process. Negotiations for the United Kingdom's exit from the European Union ("Brexit") have created political and economic uncertainty, particularly in the United Kingdom and the European Union, and this uncertainty may last for years. Our business in the United Kingdom, the European Union and worldwide could be affected during this period of uncertainty, and perhaps longer, by the impact of the United Kingdom's referendum. There are many ways in which this business could be affected, only some of which we are able to currently identify.

The decision of the United Kingdom to withdraw from the European Union has caused and, along with events that could occur in the future as a consequence of the United Kingdom's withdrawal, may continue to cause significant volatility in global financial markets, including in global currency and debt markets. This volatility could cause a slowdown in economic activity in the United Kingdom, Europe or globally, which could adversely affect our operating results and growth prospects. In addition, our business could be negatively affected by new trade agreements or data transfer agreements between the United Kingdom and other countries, including the United States, and by the possible imposition of trade or other regulatory and immigration barriers in the United Kingdom. In addition, access to European Union research funding by research scientists based in the United Kingdom may be reduced or cut off altogether. It also is unclear whether Brexit may limit the ability or willingness of the United Kingdom's Medical Research Council to continue funding genomic or single cell research by local research centers and labs. For the nine months ended September 30, 2019, the United Kingdom comprised approximately $8.4 million of our worldwide product revenue. The impact of the United Kingdom's withdrawal from the European Union could negatively impact our revenue as a result of currency fluctuations, a slowdown in research funding or restricted budgets. In addition, the growth of sales in the United Kingdom may be slowed or those sales may even decline as a result of this withdrawal. Additionally, distribution costs for products sold in the United Kingdom may be increased due to trade agreements and incremental importation expenses. These possible negative impacts, and others resulting from the United Kingdom's actual or threatened withdrawal from the European Union, may increase our cost of doing business in Europe, disrupt our European operations and adversely affect our operating results and growth prospects.

The illegal distribution and sale by third parties of counterfeit or unfit versions of our products or stolen products could have a negative impact on our reputation and business.

Third parties might illegally distribute and sell counterfeit or unfit versions of our products, which do not meet our rigorous manufacturing, distribution and quality standards. As we expand our business internationally, we expect to encounter counterfeit versions of our products, particularly our consumables. A researcher who receives and uses counterfeit consumables could obtain erroneous results, experience failed experiments or potentially damage his or her instrument. Our reputation and business could suffer harm as a result of counterfeit products sold under our brand name. In addition, inventory that is stolen from warehouses, plants or while in-transit, and that is subsequently improperly stored and sold through unauthorized channels, could adversely impact our customers' experiments, our reputation and our business.

We currently plan to implement a new company-wide enterprise resource planning system in 2020 and such implementation could adversely affect our business and results of operations or the effectiveness of internal control over financial reporting.

We currently plan to implement a new company-wide enterprise resource planning ("ERP") system in 2020 to handle the business and financial processes within our operations, manufacturing and corporate functions. ERP implementations are complex and time-consuming projects that involve substantial expenditures on system software, the need to hire consultants and additional personnel for the implementation and implementation activities that can continue for several years. ERP implementations also require transformation of business and financial processes in order to reap the benefits of the ERP system. Our business and results of operations could be adversely affected if we experience operating problems and/or cost overruns during the ERP implementation process, or if the ERP system and the associated process changes do not give rise to the benefits that we expect. If we do not effectively implement and transition to the new ERP system as planned or if the system does not operate as intended, our business, results of operations and internal controls over financial reporting could be adversely affected.

Our solutions contain third-party open source software components and failure to comply with the terms of the underlying open source software licenses could restrict our ability to sell our products.

Our solutions contain software tools licensed by third parties under open source software licenses. Use and distribution of open source software may entail greater risks than use of third-party commercial software, as open source software licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the code. Some open source software licenses contain requirements that the licensee make its source code publicly available if the licensee creates modifications or derivative works using the open source software, depending on the type of open source software the licensee uses and how the licensee uses it. If we combine our proprietary software with open source software in a certain manner, we could, under certain open source software licenses, be required to release the source code of our proprietary software to the public for free. This would allow our competitors to create similar products with less development effort and time and ultimately could result in a loss of product sales and revenue. In addition, some companies that use third-party open source software have faced claims challenging their use of such open source software and their compliance with the terms of the applicable open source license. We may be subject to suits by third parties

claiming ownership of what we believe to be open source software, or claiming non-compliance with the applicable open source licensing terms. Use of open source software may also present additional security risks because the public availability of such software may make it easier for hackers and other third parties to compromise or attempt to compromise our technology platform and systems.

Although we review our use of open source software to avoid subjecting our solutions to conditions we do not intend, the terms of many open source software licenses have not been interpreted by United States courts, and there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to commercialize our solutions. Moreover, we cannot assure investors that our processes for monitoring and controlling our use of open source software in our solutions will be effective. If we are held to have breached the terms of an open source software license, we could be required to seek licenses from third parties to continue offering our solutions on terms that are not economically feasible, to re-engineer our solutions, to discontinue the sale of our solutions ifre-engineering could not be accomplished on a timely basis, or to make generally available, in source code form, our proprietary code, any of which could adversely affect our business, operating results and financial condition.

We collect, process, store, share, disclose and use personal information and other data, which subjects us to governmental regulations and other legal obligations related to privacy and security, and our actual or perceived failure to comply with such obligations could harm our business.

We collect, process, store, transmit, disclose and use information from our employees, customers and others, including personal information and other data, some of which may be sensitive in nature. There are numerous federal, state and foreign laws and regulations regarding data protection, privacy and security. We strive to comply with applicable laws, our posted policies and legal contractual obligations relating to privacy and data protection. However, the scope of these laws is changing, is subject to differing interpretations, may be costly to comply with and may be inconsistent among countries and jurisdictions or conflict with other rules. Our business, including our ability to operate and expand internationally, could be adversely affected if legislation or regulations are adopted, interpreted or implemented in a manner that is inconsistent with our current business practices and that require changes to these practices.

The global data protection landscape is rapidly evolving and new laws and regulations are likely to be enacted and violations of existing and new laws and regulations may subject companies to significant penalties and fines, government investigations and/or enforcement actions, private litigation and other claims. For example, the European Union's recent adoption of the GDPR introduced stringent requirements for processing personal data. The GDPR is likely to increase compliance burdens on us, including by mandating potentially burdensome documentation requirements and granting certain rights to individuals to control how we collect, use, disclose, retain and leverage information about them or how we obtain consent from them. The processing of sensitive personal data, such as physical health condition, may impose heightened compliance burdens under the GDPR and is a topic of active interest among foreign regulators. In addition, the GDPR provides for breach reporting requirements, more robust regulatory enforcement and greater penalties for noncompliance than previous data protection laws, including fines of up to €20 million or 4% of a noncompliant company's global annual revenue for the preceding financial year, whichever is greater. As we continue to expand into other foreign countries and jurisdictions, we may be subject to additional laws and regulations that may affect how we conduct business.

In the United States, California recently enacted the California Consumer Privacy Act (the "CCPA"), which may limit or impose requirements on how we may collect and use personal information and is expected to come into effect in January 2020. The impact of this law on us and others in our industry is and will remain unclear until proposed bills amending the CCPA have wound their way through the legislative process and until regulations are issued by the California Attorney General. Similar privacy and data protection laws have also been proposed in other states and at the federal level.

Any failure or perceived failure by us or our vendors or partners to comply with these laws and regulations, our privacy policies, our privacy-related obligations to employees, customers or other third parties or privacy or security-related legal obligations, or any actual or perceived compromise of security that results in the unauthorized access to or disclosure, alteration, theft, loss, transfer or use of personal or other information, including personally identifiable information or other sensitive data, may result in governmental enforcement actions, fines and penalties, litigation or public statements critical of us by consumer advocacy groups or others and could cause our customers, partners or others to lose trust in us, which could have an adverse effect on our business.

If we experience a significant 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 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. In addition to traditional computer "hackers", malicious code (such as viruses and worms), employee theft or misuse, denial-of-service attacks and sophisticated nation-state and nation-state supported actors now engage in attacks (including advanced persistent threat intrusions). Despite significant efforts to create security barriers to such threats, it is virtually impossible for us to entirely mitigate these risks. If our security measures are compromised as a result of

third-party action, employee or customer error, malfeasance, stolen or fraudulently obtained log-in credentials or otherwise, our reputation could be damaged, our business may be harmed 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, it could negatively impact our ability to serve our customers, which could adversely impact our business. If operations at our facilities were disrupted, it may cause a material disruption in our business if we are not capable of restoring functionality on an acceptable timeframe. In addition, our information technology systems (and those of our vendors and partners) are potentially vulnerable to data security breaches, whether by internal bad actors (e.g., employees) or external bad actors (attacks of which are becoming increasingly sophisticated, including social engineering and phishing scams), which could lead to the exposure of personal data, sensitive data and confidential information to unauthorized persons. Such data security breaches 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.

We have not always been able in the past and may be unable in the future to anticipate or prevent techniques used to obtain unauthorized access or to compromise our systems because the techniques used change frequently and are generally not detected until after an incident has occurred. Concerns regarding data privacy and security may cause some of our customers to stop using our solutions and fail to renew their subscriptions. This discontinuance in use or failure to renew could substantially harm our business, operating results and growth prospects.

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. 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.

The cost of investigating, mitigating and responding to potential data security breaches and complying with applicable breach notification obligations to individuals, regulators, partners and others can be significant. 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. Further, defending a suit, regardless of its merit, could be costly, divert management attention and harm our reputation.

We rely on on-premise, co-located and third-party data centers and platforms to host our website and other online services, as well as for research and development purposes and any interruptions of service or failures may impair and harm our business.

Our proprietary software is a crucial component of our solutions, as our software allows our end users to visualize genomic and multi-omic information provided by our instruments and reagents. All of our software is currently downloadable free of charge from our website for installation and use by end users on their computer systems. Our website is hosted with various third-party service providers located in the United States. We rely on on-premises, co-located and third-party infrastructure in the San Francisco Bay Area and other regions in the United States to perform computationally demanding analysis tasks for our research and development programs and for other business purposes.

In the event of any technical problems that may arise in connection with ouron-premise, co-located or third-party data centers, we could experience interruptions in our ability to provide products and services to our customers or in our internal functions, including research and development, which rely on such services. Interruptions or failures may be caused by a variety of factors, including infrastructure changes, human or software errors, viruses, security attacks, fraud, spikes in customer usage and denial of service issues. Interruptions or failures in our operations or services may reduce our revenue, result in the loss of customers, adversely affect our ability to attract new customers or harm our reputation. Significant interruptions to our research and development programs could cause us to delay the introduction of new products or improvements to existing products, which could adversely impact our business, our results of operations and the competitiveness of our products.

Our current solutions are capable of generating large datasets, the analysis of which can be time consuming without access to a high-performance computing system. The visualization of such data can also be computationally intensive. As we iterate and improve our products and as the related technologies advance, our continued growth may require an ability to provide our customers with direct access to a high-performance computing system and/or alternative means of obtaining our software. As a result, we expect our reliance on internal and third-party data centers to increase in the future.

Further, as we rely on third-party and public-cloud infrastructure, we will depend in part on third-party security measures to protect against unauthorized access, cyberattacks and the mishandling of customer data. In addition, failures to meet customers' expectations with respect to security and confidentiality of their data and information could damage our reputation and affect our ability to retain customers, attract new customers and grow our business. In addition, a cybersecurity event could result in significant increases in costs, including costs for remediating the effects of such an event, lost revenue due to a decrease in customer trust and network downtime; increases in insurance coverage due to cybersecurity incidents; and damages to our reputation because of any such incident.

Our indebtedness may impair our financial and operating flexibility.

The Loan and Security Agreement provides for up to $50.0 million of term loans and an up to $25.0 million revolving asset-backed credit facility. As of September 30, 2019, $30.0 million of term loan borrowings were outstanding. As of September 30, 2019, revolving loan borrowings of up to $25.0 million were available to be drawn and $20.0 million of additional term loan borrowings were available to be drawn before January 1, 2020, subject to certain conditions. In August 2019, we borrowed $11.0 million under our revolving line of credit, all of which we repaid prior to September 30, 2019. The Loan and Security Agreement contains affirmative and negative covenants, including a covenant requiring us to maintain minimum revenue over specified periods of time and covenants that restrict, among other things, our ability to dispose of assets, change our business, management, ownership or business locations, enter into mergers or acquisitions, incur additional indebtedness or encumber any of our assets. Borrowings under the Loan and Security Agreement are secured by substantially all of our assets, excluding our intellectual property but including the proceeds from the sale of any of our intellectual property. These restrictions could limit our operational flexibility and the need to make principal and interest payments on our debt will reduce our ability to fund other aspects of our business, such as our research and development programs. Our ability to make principal and interest payments on our indebtedness will depend on our ability to generate cash. If we default under the Loan and Security Agreement and if the default is not cured or waived, the lender could terminate its commitments to lend to us and cause any amounts outstanding to be payable immediately. Under certain circumstances, the lender could also exercise its rights with respect to the collateral securing such loans. Such a default could also result in cross-defaults under other debt instruments. Moreover, any such default would limit our ability to obtain additional financing, which may have an adverse effect on our cash flow and liquidity.

We may incur additional indebtedness in the future. The debt instruments governing such indebtedness could contain provisions that are as, or more, restrictive than our existing debt instruments. If we incur additional debt, a greater portion of our cash flows may be needed to satisfy our debt service obligations. While we do not anticipate that we will need to raise additional financing in the future to fund our operations, in the event that additional financing is required, we may not be able to raise it on terms acceptable to us or at all. As a result, we would be more vulnerable to general adverse economic, industry and capital markets conditions in addition to the risks associated with indebtedness described above.

Our ability to use net operating losses to offset future taxable income may be subject to certain limitations.

As of December 31, 2018, we had federal net operating loss carryforwards ("NOLs") of $116.1 million and federal tax credit carryforwards of $8.3 million. Our federal NOLs generated after January 1, 2018, which total $5.5 million, are carried forward indefinitely, while all of our other federal NOLs and tax credit carryforwards expire beginning in 2032. As of December 31, 2018, we had state NOLs of $93.5 million, which expire beginning in 2032. In addition, we had state tax credit carryforwards of $7.9 million, which carry forward indefinitely. Our ability to utilize such carryforwards for income tax savings is subject to certain conditions and may be subject to certain limitations in the future due to ownership changes as described below. As such, there can be no assurance that we will be able to utilize such carryforwards. We have experienced a history of losses and a lack of future taxable income would adversely affect our ability to utilize these NOLs and research and development credit carryforwards.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the "Code"), if a corporation undergoes an "ownership change", the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change attributes, such as research tax credits, to offset its post-change income may be limited. In general, an "ownership change" will occur if there is a cumulative change in our ownership by "5% shareholders" that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws. We completed a study in early 2019 to determine whether an ownership change had occurred under Section 382 or 383 of the Code as of December 31, 2018 and we determined at that time that an ownership change occurred in 2013. As a result, our net operating losses generated through November 1, 2013 may be subject to limitation under Section 382 of the Code. The amount of pre-change loss carryforwards which may be subject to this limitation is $4.8 million. Our ability to use net operating loss carry forwards, research and development credit carryforwards and other tax attributes to reduce future taxable income and liabilities may be subject to limitations based on the ownership change in 2013, possible changes since the completion of the study including as a result of our initial public offering. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards or other pre-change tax attributes to offset United States federal and state taxable income may be subject to limitations, which could potentially result in increased future tax liability to us.

We are subject to risks related to taxation in multiple jurisdictions.

We are subject to income taxes in both the United States and foreign jurisdictions. Significant judgments based on interpretations of existing tax laws or regulations are required in determining our provision for income taxes. Our effective income tax rate could be adversely affected by various factors, including, but not limited to, changes in the mix of earnings in tax jurisdictions with different statutory tax rates, changes in the valuation of deferred tax assets and liabilities, changes in existing tax policies, laws, regulations or rates, changes in the level of non-deductible expenses (including share-based compensation), changes in the location of our operations, changes in our future levels of research and development spending, mergers and acquisitions or the result of examinations by various tax authorities. Although we believe our tax estimates are reasonable, if the United States Internal Revenue Service or other taxing authority disagrees with the positions taken on our tax returns, we could have additional tax liability, including interest and penalties.

If material, payment of such additional amounts upon final adjudication of any disputes could have a material impact on our results of operations and financial position.

Changes in tax laws or regulations that are applied adversely to us or our customers may have a material adverse effect on our business, cash flow, financial condition or results of operations.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, which could affect the tax treatment of our domestic and foreign earnings. Any new taxes could adversely affect our domestic and international business operations and our business and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. For example, the Tax Cuts and Jobs Act of 2017 significantly revised the Code. The recently enacted federal income tax law, among other things, contains significant changes to corporate taxation, including a reduction of the federal statutory rates from a top marginal rate of 35% to a flat rate of 21%, limitation of the tax deduction for interest expense to 30% of adjusted earnings (except for certain small businesses), limitation of the deduction for net operating losses to 80% of current year taxable income, elimination of net operating loss carrybacks, one time taxation of offshore earnings at reduced rates regardless of whether they are repatriated, elimination of U.S. tax on foreign earnings (subject to certain important exceptions), immediate deductions for certain new investments instead of deductions for depreciation expense over time and modifying or repealing many business deductions and credits. Notwithstanding the reduction in the corporate income tax rate, the overall impact of the new federal tax law is uncertain and our business and financial condition could be adversely affected. It is also unknown if and to what extent various states will conform to the newly enacted federal tax law. The impact of this tax reform on us and on holders of our Class A common stock is likewise uncertain and could be adverse.

If we fail to maintain an effective system of disclosure controls and internal control over financial reporting, our ability to produce timely and accurate financial statements or comply with applicable regulations could be impaired.

As a public company, we are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the Sarbanes-Oxley Act of 2002, as amended ("SOX"), and the rules and regulations of the applicable listing standards of the Nasdaq Global Select Market ("Nasdaq"). We expect that the requirements of these rules and regulations will continue to increase our legal, accounting and financial compliance costs, make some activities more difficult, time-consuming and costly, and place significant strain on our personnel, systems and resources.

SOX requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are continuing to develop and refine our disclosure controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we will file with the Securities and Exchange Commission ("SEC") is accurately recorded, processed, summarized and reported within the time periods specified in SEC rules and forms and that information required to be disclosed in reports under the Exchange Act is accumulated and communicated to our principal executive and financial officers. We are also continuing to improve our internal control over financial reporting. In order to maintain and improve the effectiveness of our disclosure controls and procedures and internal control over financial reporting, we have expended, and anticipate that we will continue to expend, significant resources including accounting-related costs and significant management oversight.

Our current controls and any new controls that we develop may become inadequate because of changes in conditions in our business. Further, weaknesses in our disclosure controls and internal control over financial reporting may be discovered in the future. Any failure to develop or maintain effective controls or any difficulties encountered in their implementation or improvement could harm our results of operations or cause us to fail to meet our reporting obligations and may result in a restatement of our financial statements for prior periods. Any failure to implement and maintain effective internal control over financial reporting also could adversely affect the results of periodic management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting that we will eventually be required to include in our periodic reports that will be filed with the SEC. Ineffective disclosure controls and procedures and internal control over financial reporting could also cause investors to lose confidence in our reported financial and other information, which would likely have a negative effect on the trading price of our Class A common stock. In addition, if we are unable to continue to meet these requirements, we may not be able to remain listed on Nasdaq. We are not currently required to comply with the SEC rules that implement Section 404 of SOX and are therefore not required to make a formal assessment of the effectiveness of our internal control over financial reporting for that purpose. As a public company, we will be required to provide an annual management report on the effectiveness of our internal control over financial reporting commencing with our second annual report on Form 10-K, which we expect will be filed in 2021.

We cannot provide any assurance that significant deficiencies or material weaknesses in our internal controls over financial reporting will not be identified in the future. If we fail to remediate any significant deficiencies or material weaknesses that may be identified in the future or encounter problems or delays in the implementation of internal controls over financial reporting, we may be unable to conclude that our internal controls over financial reporting are effective. We are currently implementing an internal audit function and any failure to correctly do so could lead to significant deficiencies or material weaknesses in our financial reporting. Any failure to develop or maintain effective controls or any difficulties encountered in our implementation of our internal controls over financial reporting could result in material misstatements that are not prevented or detected on a timely basis, which could potentially subject us to sanctions or investigations by the SEC or other regulatory authorities. Ineffective internal controls could cause investors to lose confidence in us and the reliability of our financial statements and cause a decline in the price of our Class A common stock.

Our independent registered public accounting firm is not required to formally attest to the effectiveness of our internal control over financial reporting until our first annual report filed with the SEC where we are an "accelerated filer" or a "large accelerated filer". At such time, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our internal control over financial reporting is documented, designed or operating. Any failure to maintain effective disclosure controls and internal control over financial reporting could materially and adversely affect our business, results of operations and financial condition and could cause a decline in the trading price of our Class A common stock.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our operating results 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 Class A common stock.

The preparation of financial statements in conformity with generally accepted accounting principles in the United States ("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 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. If our assumptions underlying our estimates and judgements relating to our critical accounting policies change or if actual circumstances differ from our assumptions, estimates or judgements, 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 Class A common stock.

Risks related to litigation and our intellectual property

We are involved in significant litigation which has consumed significant resources and management time and adverse resolution of these lawsuits could require us to pay significant damages, and prevent us from selling our products, which would severely adversely impact our business, financial condition or results of operations.

Our success depends in part on our non-infringement of the patents or proprietary rights of third parties. Third parties have asserted and may in the future assert that our products infringe patents that they have obtained and may in the future obtain. We could incur substantial costs and divert the attention of our management and technical personnel in defending ourselves against any of these claims. Any adverse ruling or perception of an adverse ruling in defending ourselves against these claims could have an adverse impact on our business, financial condition or results of operations. Furthermore, parties making claims against us have obtained and may in the future be able to obtain injunctive or other relief, which effectively could block our ability to further develop, commercialize, market or sell products or services and have resulted and could in the future result in the award of substantial damages against us. In the event of a successful infringement claim against us, we may be required to pay damages and obtain one or more licenses from third parties or be prohibited from selling certain products or services. In addition, we may be unable to obtain these licenses at a reasonable cost, if at all. We could therefore incur substantial costs related to royalty payments for licenses obtained from third parties, which could negatively affect our gross margins and earnings per share. In addition, we could encounter delays in product introductions while we attempt to develop alternative methods or products. Defense of any lawsuit or failure to obtain any of these licenses on favorable terms could prevent us from commercializing products and the prohibition of sale of any of our products or services could adversely affect our ability to grow or achieve or maintain profitability. Regardless of merit or eventual outcome, lawsuits brought against us may result in decreased demand for our products, injury to our reputation and increased insurance costs.

We have been involved in multiple patent litigation matters in the past several years and we expect that given the litigious history of our industry and the high profile of operating as a public company, other third parties, in addition to the parties identified herein, may claim that our products infringe their intellectual property rights. Our success depends in part on our ability to defend ourselves against such claims and maintain the validity of our patents and other proprietary rights.

In particular, we are currently involved in the following litigation matters related to substantially all of our products, the loss of any of which could have a material adverse effect on our business, operations, financial results and reputation. Beginning in 2015, Bio-Rad has filed six separate patent infringement cases against substantially all of our products, including instruments and consumables. These litigations are generally distinct and involve different Bio-Rad patents, however, the patents asserted by Bio-Rad in the U.S. International Trade Commission ("ITC") are also asserted in the district court case filed in the Northern District of California.

The details of these litigation matters are described below:

The 2015 Delaware Action

In February 2015, Raindance Technologies, Inc. ("Raindance") and the University of Chicago filed suit against us in the U.S. District Court for the District of Delaware, alleging that substantially all of our products that use our GEM microfluidic chips are infringing seven U.S. patents owned by or exclusively licensed to Raindance (the "Delaware Action"). In May 2017, Bio-Rad was substituted as the plaintiff following its acquisition of Raindance. A jury trial was held in November 2018. The jury found that all of our accused products infringed one or more of U.S. Patent Nos. 8,304,193, 8,329,407 and 8,889,083. The jury also concluded that our infringement was willful and awarded Bio-Rad approximately $24 million in damages. Post-trial, Bio-Rad moved for a permanent injunction, treble damages for willful infringement, attorneys' fees, supplemental damages for the period from the second quarter of 2018 through the end of the trial as well as pre- and post-judgment interest.

The Court denied Bio-Rad's request for attorneys' fees and enhanced damages for willful infringement. The Court awarded supplemental damages for the period from the second quarter of 2018 through the end of trial as well as pre- and post-judgment interest. The Court entered final judgment against us in the amount of approximately $35 million in August 2019. In the fourth quarter of 2018, we began recording an accrual for estimated royalties as cost of revenue. This accrual is based on an estimated royalty rate of 15% of worldwide sales of our Chromium instruments operating our GEM microfluidic chips and associated consumables. As of September 30, 2019, we had accrued a total of $62.5 million relating to this matter which includes the $35 million judgment and our estimated 15% royalty for sales through that date.

The Court also granted Bio-Rad a permanent injunction against our GEM microfluidic chips and associated consumables that were found to infringe the Bio-Rad patents, which have historically constituted substantially all of our product sales. However, under the injunction, we are permitted to continue to sell our GEM microfluidic chips and associated consumables for use with our historical installed base of instruments provided that we pay a royalty of 15% into escrow on our net revenue related to such sales. We appealed the injunction to the Federal Circuit. The Federal Circuit granted an interim order staying the injunction pending resolution of our motion with respect to our Single Cell CNV and Linked-Read solutions subject to the 15% royalty payment described above. On September 24, 2019, the Federal Circuit extended the stay with respect to the Single Cell CNV and Linked-Read solutions for the pendency of the appeal, but otherwise denied our request to stay the injunction. We also appealed the judgment to the Federal Circuit.

We have dedicated significant resources to designing and manufacturing our Next GEM microfluidic chips which use fundamentally different physics from our GEM microfluidic chips. Neither the jury verdict nor the injunction relate to our Next GEM microfluidic chips based on our new proprietary design and associated consumables which we launched in May 2019 for three of our single cell solutions – Single Cell Gene Expression, Single Cell Immune Profiling and Single Cell ATAC. Since August 28, 2019, all Chromium instruments that we sell and have sold operate exclusively with our Next GEM solutions and we currently expect that our Chromium products utilizing our Next GEM microfluidic chips will constitute substantially all of our Chromium consumables sales by the end of 2020.

Although our Next GEM microfluidic chips were designed to replace our GEM microfluidic chips, we cannot assure you that we will be able to make our Next GEM microfluidic chip work with all of our solutions, that our Next GEM microfluidic chip will allow our customers to maintain the level of performance or quality of our GEM microfluidic chip, that our Next GEM microfluidic chip will replace the sales of the GEM microfluidic chip or that we will be able to manufacture the Next GEM microfluidic chips in sufficient volumes in a timely fashion. Our Next GEM microfluidic chips may be subject to future claims of infringement by Bio-Rad or others and are currently the subject of the litigation described in this risk factor. While we believe that our Chromium solutions, when used with our Next GEM microfluidic chip, would not infringe the asserted Bio-Rad patents, we cannot assure you that our Next GEM microfluidic chip would not become subject to additional patent infringement litigation, which could prevent us from making, selling and importing our Next GEM microfluidic chips. In addition, it is possible that Bio-Rad could, in the future, claim that our continued sale of products violates orders issued by the court and request that the court impose sanctions or other penalties on us for such violations.

In addition, we have not yet developed Next GEM microfluidic chips for our Single Cell CNV and Linked-Read solutions. Although the Federal Circuit has stayed the injunction with respect to our Single Cell and Linked-Read solutions during the pendency of the appeal, we have not yet released a new version of our instrument that would allow our customers to use these solutions using our GEM microfluidic chip during the pendency of the appeal. Furthermore, it is possible that the injunction could be reinstated with respect to our Single Cell and Linked-Read solutions using our GEM microfluidic chips after the appeal if the Federal Circuit does not rule in our favor. Until we develop a Next GEM microfluidic chip for our Single Cell CNV and Linked-Read solutions, our sales and growth of these solutions will be constrained. Though these solutions have not significantly contributed to our revenue to date, our Single Cell CNV solution, for example, has proved crucial in understanding how cancers evolve and providing researchers with valuable insights into cancer treatments. Developing a Next GEM microfluidic chip for these solutions may require significant uses of our resources and there may be a substantial delay before such products are available to sell to our customers.

As of September 30, 2019, we had accrued a total of $62.5 million relating to this matter. Depending upon the ultimate outcome of the litigation with Bio-Rad, we may be required to pay damages, interest and other amounts at a time specified by the court in excess of these reserves should our accruals prove insufficient to cover the actual damages awarded in the case. While we will continue to evaluate and review our estimate of amounts payable from time to time for any indications that could require us to change our assumptions relating to the amounts already recorded, we cannot assure investors that our estimates and related reserves will be sufficient.

Also in 2015, we filed multiple petitions for *inter partes* review ("IPR") at the Patent Trial and Appeal Board ("PTAB") of the U.S. Patent and Trademark Office ("USPTO") against Raindance and the University of Chicago relating to the patents asserted in the Delaware Action, including U.S. Patent Nos. 7,129,091, 8,658,430, 8,304,193, 8,273,573, 8,329,407, 8,889,083 and 8,822,148. Among these proceedings, all the claims in the '430 patent were determined by the PTAB to be invalid, all the claims in the '573 patent were canceled, and our invalidity challenges to the remaining Bio-Rad patents were unsuccessful. Accordingly, we may be precluded from challenging the '091, '193, '407 and '148 patents at the PTAB in the future as a result of these decisions. Further, because all the claims in the '083 patent survived the IPR challenge, we will be precluded from making certain invalidity challenges to this patent at the PTAB, or in a district court or ITC litigation in the future.

The ITC 1068 Action

On July 31, 2017, Bio-Rad and Lawrence Livermore National Security, LLC filed a complaint against us in the ITC pursuant to Section 337 of the Tariff Act of 1930, alleging that substantially all of our products infringe U.S. Patents Nos. 9,089,844, 9,126,160, 9,500,664, 9,636,682 and 9,649,635 (the "ITC 1068 Action"). Bio-Rad is seeking an exclusion order preventing us from importing the accused microfluidic chips, including (1) our GEM microfluidic chip, (2) our gel bead manufacturing microfluidic chip and (3) our Next GEM microfluidic chip, into the United States and a cease and desist order preventing us from selling such imported chips. An evidentiary hearing for the ITC 1068 Action was held in May of 2018 and the presiding judge issued an Initial Determination in September 2018, finding that our GEM microfluidic chips infringe the '664, '682 and '635 patents but not the '160 patent. The judge further found that our gel bead manufacturing microfluidic chip and Next GEM microfluidic chip do not infringe any claim asserted against them.

The judge recommended entry of an exclusion order against our GEM microfluidic chips. If the ITC were to adopt the judge's recommendation regarding the exclusion order, we would be prevented from importing such chips, which are used in substantially all of our products, into the United States. The judge also recommended a cease and desist order that would prevent us from selling such imported chips. The ITC is not reviewing the judge's findings that our GEM microfluidic chips directly infringe the '664, '682 and '635 patents. The ITC is currently reviewing the judge's findings that (1) we indirectly infringe the '682 and '635 patents, (2) our gel bead manufacturing microfluidic chip does not infringe certain claims in the '664 patent and (3) our Next GEM microfluidic chip does not infringe certain claims in the '160 and '664 patents. A Final Determination is expected to be issued in December 2019. The Final Determination is subject to a 60-day presidential review period before taking effect. If the Initial Determination were to be upheld, then we would be unable to import our GEM microfluidic chips and sell such imported chips. The judge recommended a bond of 100% of the entered value of accused products imported during the Presidential review period.

In order to allow our customers to continue their important research, we have dedicated significant resources to developing the capabilities to manufacture our microfluidic chips in the United States prior to the entry of an exclusion order or cease and desist order which could take effect in February 2020. Prior to the second quarter of 2019, all of our microfluidic chips were manufactured outside of the United States. Our United States manufacturing facilities achieved volume production of certain of our GEM microfluidic chips accounting for the majority of our United States consumable revenue beginning in the third quarter of 2019. We cannot assure investors that our U.S. manufacturing facilities can produce our microfluidic chips to the same level of functionality, quality or quantity as our current foreign manufacturer. Moreover, Bio-Rad has also filed suit against us in the U.S. District Court for the Northern District of California, which is discussed separately below. If Bio-Rad succeeds in obtaining an injunction in the district court case, we could be prohibited from selling our GEM microfluidic chips, regardless of where they are manufactured. If we are prohibited from selling our GEM microfluidic chips, our business, operations, financial results and reputation would be significantly adversely impacted.

Further, although the Next GEM microfluidic chips were designed to replace our GEM microfluidic chips, we cannot assure investors that the ITC will not reverse the finding of the Initial Determination in its Final Determination currently expected to be issued in December 2019 that our Next GEM microfluidic chips or other products do not infringe the patents asserted against them in the ITC 1068 Action. We have not yet manufactured our Next GEM microfluidic chips in the United States. If the ITC reverses the non-infringement finding about our Next GEM microfluidic chips and prohibits us from importing such chips or selling previously imported chips, our business, operations, financial results and reputation would be significantly adversely impacted.

In addition, if Bio-Rad obtains an exclusion order and/or cease and desist order in the ITC 1068 Action, it is possible thatBio-Rad could, in the future, file enforcement proceedings claiming that we have violated such orders and requesting that the ITC impose sanctions or other penalties on us for such violations. Our Next GEM microfluidic chips could also become subject to other patent infringement litigations. If we are prohibited from selling our Next GEM microfluidic chips, our business, operations, financial results and reputation would be significantly adversely impacted.

The Northern District of California Action

On July 31, 2017, Bio-Rad and Lawrence Livermore National Security, LLC also filed suit against us in the U.S. District Court for the Northern District of California, alleging that substantially all of our products infringe U.S. Patents Nos. 9,216,392, 9,347,059 and the five patents asserted in the ITC 1068 Action. The complaint seeks injunctive relief, unspecified monetary damages, costs and attorneys' fees. This litigation has been stayed pending resolution of the ITC 1068 Action. If we are found to infringe these patents or if we are prohibited from selling our products, our business, operations, financial results and reputation could be significantly adversely impacted.

In 2017 and 2018, we filed multiple petitions for IPR at the PTAB againstBio-Rad regarding U.S. Patent Nos. 9,126,160, 9,216,392, 9,649,635, 9,089,844, 9,636,682 and 9,500,664, all of which were also asserted in the ITC 1068 Action or the Northern District of California Case. The PTAB denied institution of all the IPRs, which may preclude us from challenging these patents at the PTAB in the future.

The Germany Action

On February 13, 2018, Bio-Rad filed suit against us in Germany in the Munich Region Court alleging that our Chromium instruments, GEM microfluidic chips and certain accessories infringe German Utility Model No. DE 20 2011 110 979. Bio-Rad seeks unspecified damages and an injunction prohibiting sales of these products in Germany and requiring us to recall these products sold in Germany subsequent to February 11, 2018. An initial hearing was held on November 27, 2018, and a subsequent hearing was held on May 15, 2019. The court is expected to issue a ruling on the merits on November 20, 2019. If we are prohibited from selling our products in Germany, or if our products are recalled in Germany, our business, operations, financial results and reputation could be adversely impacted.

The 2018 Delaware Action

On October 25, 2018, Bio-Rad filed suit against us in the U.S. District Court for the District of Delaware, alleging that substantially all of our products, including our GEM products and Next GEM products, infringe U.S. Patent Nos. 9,562,837 and 9,896,722. Bio-Rad seeks injunctive relief, unspecified monetary damages, costs and attorneys' fees. Discovery is in progress. If we are found to infringe these patents or if we are prohibited from selling our products, our business, operations, financial results and reputation could be significantly adversely impacted.

The 2019 Delaware Action

On September 11, 2019, Bio-Rad filed suit against us in the U.S. District Court for the District of Delaware alleging that our Next GEM products infringe certain claims of U.S. Patent No. 8,871,444. On November 5, 2019, Bio-Rad amended the complaint to additionally allege that our Next GEM products infringe certain claims of U.S. Patent Nos. 9,919,277 and 10,190,115. We believe that the asserted patents are invalid and not infringed, and we intend to defend ourselves vigorously.

We are involved in lawsuits to protect, enforce or defend our patents and other intellectual property rights, which are expensive, time consuming and could ultimately be unsuccessful.

On January 11, 2018, we filed a complaint against Bio-Rad at the ITC pursuant to Section 337 of the Tariff Act of 1930 alleging that Bio-Rad infringes our U.S. Patent Nos. 9,644,204, 9,689,024, 9,695,468 and 9,856,530 (the "ITC 1100 Action"). Our complaint in the ITC 1100 Action seeks an exclusion order preventing Bio-Rad from importing certain microfluidic chips and other products into the United States and a cease and desist order preventing Bio-Rad from selling such importing chips and other products. An evidentiary hearing for the ITC 1100 Action was held in March of 2019.

The judge issued an Initial Determination on July 12, 2019 finding that Bio-Rad's ddSEQ product for single cell analysis infringes the '024, '468 and '530 patents. The judge also found all of our asserted patents to be valid and rejected Bio-Rad's claim of ownership in all of the asserted patents. The ITC is currently reviewing all of the judge's findings related to Bio-Rad's violation of the '024, '468 and '530 patents, Bio-Rad's noninfringement of the '204 patent and Bio-Rad's inventorship and ownership defenses. The Target Date for the Final Determination is scheduled for December 19, 2019.

Also in January 2018, we filed a related but separate suit against Bio-Rad in the U.S. District Court for the Northern District of California, alleging that Bio-Rad infringes the '204, '024, '468 and '530 patents. The '204, '024, '468 and '530 patents generally relate to gel bead reagents that are used in our Chromium products, which historically have constituted substantially all of our current sales. This litigation has been stayed pending resolution of the ITC 1100 Action.

In January 2019, Bio-Rad also filed petitions for IPR of the '024, '468 and '530 patents at the PTAB seeking to invalidate these patents. In July and August of 2019, the PTAB denied institution of all of these Bio-Rad IPR petitions.

In addition to the litigation and legal proceedings discussed above, we are currently and may in the future be a party to other litigation or legal proceedings to determine the scope and validity of our intellectual property, which, if resolved adversely to us, could invalidate or render unenforceable our intellectual property or generally preclude us from restraining, enjoining or otherwise seeking to exclude competitors from commercializing products using technology developed or used by us. For example, our patents and any patents which we in-license may be challenged, narrowed, invalidated or circumvented. If patents we own or license are invalidated or otherwise limited, other companies may be better able to develop products that compete with ours, which would adversely affect our competitive position, business prospects, results of operations and financial condition.

The following are examples of litigation and other adversarial proceedings or disputes that we could become a party to involving our patents or patents licensed to us:

- we have initiated, and in the future may initiate, litigation or other proceedings against third parties to enforce our patent rights;
- third parties have initiated, and in the future may initiate, litigation or other proceedings seeking to invalidate patents owned by or licensed to us or to obtain a declaratory judgment that their product or technology does not infringe our patents or patents licensed to us or that such patents are invalid or unenforceable;

- third parties have initiated, and in the future may initiate, oppositions, IPRs, post grant reviews or reexamination proceedings challenging the validity or scope of our patent rights, requiring us and/or licensors to participate in such proceedings to defend the validity and scope of our patents;
- there are, and in the future may be, more challenges or disputes regarding inventorship or ownership of patents currently identified as being owned by or licensed to us; or
- at our initiation or at the initiation of a third-party, the USPTO may initiate an interference between patents or patent applications owned by or licensed to us and those of our competitors, requiring us and/or licensors to participate in an interference proceeding to determine the priority of invention, which could jeopardize our patent rights.

Furthermore, many of our employees were previously employed at universities or other life sciences companies, including our competitors or potential competitors. We or our employees may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Although no such claims are currently pending, litigation may be necessary to defend against such claims if they arise in the future. If we fail to successfully defend such claims, in addition to paying monetary damages, we may be subject to injunctive relief and lose valuable intellectual property rights. A loss of key research personnel work product could hamper or prevent our ability to commercialize certain potential products, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

If we are unable to protect our intellectual property effectively, our business would be harmed.

We rely on patent protection as well as trademark, copyright, trade secret and other intellectual property rights protection and contractual restrictions to protect our proprietary technologies, all of which provide limited protection and may not adequately protect our rights or permit us to gain or keep any competitive advantage. As of September 30, 2019, worldwide we owned or exclusively licensed over 185 issued or allowed patents and 465 pending patent applications. We also license additional patents on a non-exclusive and/or territory restricted basis. We continue to file new patent applications to attempt to obtain further legal protection of the full range of our technologies. If we fail to protect our intellectual property, third parties may be able to compete more effectively against us and we may incur substantial litigation costs in our attempts to recover or restrict the use of our intellectual property.

Our success depends in part on obtaining patent protection for our products and processes, preserving trade secrets, patents, copyrights and trademarks, operating without infringing the proprietary rights of third parties and acquiring licenses for technology or products. We may exercise our business judgment and choose to relinquish rights in trade secrets by filing applications that disclose and describe our inventions and certain trade secrets when we seek patent protection for certain of our products and technology. We cannot assure investors that any of our currently pending or future patent applications will result in issued patents and we cannot predict how long it will take for such patents to be issued. Further, in some cases, we have only filed provisional patent applications on certain aspects of our products and technologies and each of these provisional patent applications is not eligible to become an issued patent until, among other things, we file a non-provisional patent application within 12 months of the filing date of the applicable provisional patent application. Such provisional patents may not become issued patents for a variety of reasons, including our failure to file a non-provisional patent application within the permitted timeframe or a decision that doing so no longer makes business or financial sense. Publications of discoveries in scientific literature often lag behind the actual discoveries and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing or in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our owned or licensed patents or pending patent applications, or that we were the first to file for patent protection of such inventions. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain, despite the importance of seeking patent protection in our industry.

Further, we cannot assure investors that other parties will not challenge any patents issued to us or that courts or regulatory agencies will hold our patents to be valid or enforceable. We cannot guarantee investors that we will be successful in defending challenges made against our patents and patent applications, even if we spend significant resources defending such challenges. Any successful third-party challenge to our patents could result in the unenforceability or invalidity of such patents and could deprive us of the ability to prevent others from using the technologies claimed in such issued patents.

Changes in either the patent laws or in interpretations of patent laws in the United States or other countries may diminish the value of our intellectual property. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents.

In addition to pursuing patents on our technology, we take steps to protect our intellectual property and proprietary technology by entering into confidentiality agreements and intellectual property assignment agreements with our employees, consultants, corporate partners and, when needed, our advisors. 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. 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 illegally obtained and was using our trade secrets, it would be expensive and time consuming and the outcome would be unpredictable.

We also seek trademark registration to protect key trademarks such as our 10X and CHROMIUM marks, however, we have not yet registered all of our trademarks in all of our current and potential markets. If we apply to register these trademarks, our applications may not be allowed for registration and our registered trademarks may not be maintained or enforced. In addition, opposition or cancellation proceedings may be filed against our trademark applications and registrations and our trademarks may not survive such proceedings. If we do not secure registrations for our trademarks, we may encounter more difficulty in enforcing them against third parties than we otherwise would.

With respect to all categories of intellectual property protection, our competitors could purchase our products and attempt to replicate some or all of the competitive advantages we derive from our development efforts, willfully infringe our intellectual property rights, design around our protected technology or develop their own competitive technologies that fall outside of our intellectual property rights. In addition, competitors may develop their own versions of our products in countries where we did not apply for patents, where our patents have not issued or where our intellectual property rights are not recognized and compete with us in those countries and markets.

The laws of some countries do not protect intellectual property rights to the same extent as the laws of the United States and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology, which could make it difficult for us to stop the infringement of our patents. The legal systems in certain countries may also favor state-sponsored or companies headquartered in particular jurisdictions over our first-in-time patents and other intellectual property protection. We are aware of incidents where such entities have stolen the intellectual property of domestic companies in order to create competing products and we believe we may face such circumstances ourselves in the future. In the Office of the United States Trade Representative ("USTR") annual "Special 301" Report released in 2019, the adequacy and effectiveness of intellectual property protection in a number of foreign countries were analyzed. A number of countries in which both we and our distributors operate are identified in the report as being on the Priority Watch List. In China, for instance, the USTR noted a range of IP-related concerns, including a need to "strengthen IP protection and enforcement, including as to trade secret theft, online piracy and counterfeiting, the high volume manufacture and export of counterfeit goods, and impediments to pharmaceutical innovation". The absence of harmonized intellectual property protection laws and effective enforcement makes it difficult to ensure consistent respect for patent, trade secret, and other intellectual property rights on a worldwide basis. As a result, it is possible that we will not be able to enforce our rights against third parties that misappropriate our proprietary technology in those countries.

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

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. Specifically, these decisions stand for the proposition that patent claims that recite laws of nature (for example, the relationships between gene expression levels and the likelihood of risk of recurrence of cancer) 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. Furthermore, in view of these decisions, in December 2014 the USPTO, published revised guidelines for patent examiners to apply when examining process claims for patent eligibility. This guidance was updated by the USPTO in July 2015 and additional illustrative examples provided in May 2016. The USPTO provided additional guidance on examination procedures pertaining to subject matter eligibility in April 2018 and June 2018. The guidance indicates that claims directed to a law of nature, a natural phenomenon or an abstract idea that do not meet the eligibility requirements should be rejected as non-statutory, patent ineligible subject matter; however, method of treatment claims that practically apply natural relationships should be considered patent eligible. We cannot assure you 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. 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 and validity of patents within the life sciences and any such changes could have a negative impact on our business.

Risks related to ownership of our Class A common stock

The market price of our Class A common stock may be volatile, which could result in substantial losses for investors.

The trading price of our Class A common stock has been and may continue to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. In addition to the factors discussed in this "Risk Factors" section and elsewhere in this report, these factors include:

- the timing of our launch of future products and degree to which the launch and commercialization thereof meets the expectations of securities analysts and investors;
- the outcomes of and related rulings in the litigation and administrative proceedings in which we are currently or may in the future become involved;
- the timing and rate of market acceptance of our Next GEM microfluidic chips, the successful transition of our customers to our Next GEM microfluidic chips and our ability to make our Next GEM microfluidic chip work with all of our solutions;
- 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;

- the success of existing or new competitive businesses or technologies;
- announcements about new research programs or products of our competitors;
- developments or disputes concerning patent applications, issued 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 sector generally, or the genomics sector specifically;
- investor perceptions of us or our industry;
- the level of expenses related to any of our research and development programs or products;
- actual or anticipated changes in our estimates as to our financial results or development timelines, variations in our financial results or those of companies that are perceived to be similar to us or changes in estimates or recommendations by securities analysts, if any, that cover our Class A 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 announcement or expectation of additional financing efforts;
- stock-based compensation expense under applicable accounting standards;
- sales of our Class A common stock or Class B common stock by us, our insiders or other stockholders;
- the expiration of market standoff or lock-up agreements;
- general economic, industry and market conditions;
- natural disasters or major catastrophic events; and
- the other factors described in this "*Risk factors*" section.

In recent years, stock markets in general, and the market for life sciences technology companies in particular (including companies in the genomics, biotechnology, diagnostics and related sectors), have experienced significant price and volume fluctuations that have often been unrelated or disproportionate to changes in the operating performance of the companies whose stock is experiencing those price and volume fluctuations. Broad market and industry factors may seriously affect the market price of our Class A common stock, regardless of our actual operating performance. In the past, when the market price of a stock has been volatile, securities class action litigation has often been brought against that company. Because of the potential volatility of our stock price, we may become the target of securities litigation in the future. Securities litigation could result in substantial costs and divert management's attention and resources from our business.

Sales of a substantial number of shares of our Class A common stock by our existing stockholders could cause the price of our Class A common stock to decline.

Sales of a substantial number of shares of our Class A common stock in the public market could occur at any time following the expiration of the market standoff and lock-up agreements executed in connection with our IPO, the early release of these agreements or the perception in the market that the holders of a large number of shares of Class A common stock intend to sell shares and any of these events could reduce the market price of our Class A common stock.

Moreover, holders of shares of our Class B common stock have rights, subject to conditions, to require us to file registration statements with the SEC covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We have also registered all shares of Class A common stock that we may issue under our equity compensation and employee stock purchase plans. These shares can be freely sold in the public market upon issuance and, if applicable, vesting, subject to volume limitations applicable to affiliates under Rule 144 and Rule 701 and the lock-up agreements described in preceding paragraph. Sales of Class A common stock in the public market as restrictions end or pursuant to registration rights may make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate. These sales also could cause the trading price of our Class A common stock to fall and make it more difficult for you to sell shares of our Class A common stock.

Raising additional capital may cause dilution to our existing stockholders or restrict our operations.

We anticipate that we will seek additional capital through a combination of public and private equity offerings, debt financings, strategic partnerships and alliances and licensing arrangements in the future to fund our operations. We, and indirectly, our stockholders, will bear the cost of issuing and servicing such securities. Because our decision to issue debt or equity securities in any

future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of any future offerings. Our decision to issue debt or equity securities will also depend on contractual, legal and other restrictions that may limit our ability to raise additional capital. For example, the terms of our Loan and Security Agreement prohibit, subject to certain exceptions, our ability to incur additional indebtedness. Further, our election to borrow up to an additional $20.0 million of term loans under the Loan and Security Agreement would obligate us to issue warrants to purchase 133,000 shares of our Class A common stock at an exercise price of $1.62 per share to the lender thereof, which will result in further dilution of your ownership interest. To the extent that we raise additional capital through the sale of equity or debt securities, your ownership interest will be diluted and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. The incurrence of indebtedness would result in increased fixed payment obligations and could involve restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. Certain of the foregoing transactions may require us to obtain stockholder approval, which we may not be able to obtain.

The multi-class structure of our common stock has the effect of concentrating voting control with those stockholders who held our capital stock prior to the completion of our IPO and may depress the trading price of our Class A common stock.

Our Class A common stock has one vote per share and our Class B common stock has ten votes per share, except as otherwise required by law. Because of the ten-to-one voting ratio between our Class B common stock and Class A common stock, the holders of our Class B common stock collectively control a majority of the combined voting power of our common stock and therefore are able to control all matters submitted to our stockholders for approval. This concentrated control is expected to limit or preclude your ability to influence corporate matters for the foreseeable future, including the election of directors, amendments of our organizational documents and any merger, consolidation, sale of all or substantially all of our assets or other major corporate transaction requiring stockholder approval. In addition, this may prevent or discourage unsolicited acquisition proposals or offers for our capital stock that you may feel are in your best interest as one of our stockholders.

Future transfers by holders of Class B common stock will generally result in those shares converting to Class A common stock, subject to limited exceptions, such as certain transfers effected for estate planning purposes where sole dispositive power and exclusive voting control with respect to the shares of Class B common stock is retained by the transferring holder and transfers between our co-founders. In addition, each outstanding share of Class B common stock held by a stockholder who is a natural person, or held by the permitted entities of such stockholder (as described in our amended and restated certificate of incorporation), will convert automatically into one share of Class A common stock upon the death of such natural person. In the event of the death or permanent and total disability of a co-founder, shares of Class B common stock held by suchco-founder or his permitted entities will convert to Class A common stock, provided that the conversion will be deferred for nine months, or up to 18 months if approved by a majority of our independent directors, following his death or permanent and total disability. Transfers between our co-founders are permitted transfers and will not result in conversion of the shares of Class B common stock that are transferred. The conversion of Class B common stock to Class A common stock will have the effect, over time, of increasing the relative voting power of those individual holders of Class B common stock who retain their shares in the long term.

In addition, in July 2017, FTSE Russell and Standard & Poor's announced that they would cease to allow most newly public companies utilizing dual or multi-class capital structures to be included in their indices. Affected indices include the Russell 2000 and the S&P 500, S&P MidCap 400, and S&P SmallCap 600, which together make up the S&P Composite 1500. Under the announced policies, our multi-class capital structure makes us ineligible for inclusion in any of these indices, and as a result, mutual funds, exchange-traded funds and other investment vehicles that attempt to passively track these indices will not be investing in our stock. These policies are new and it is as of yet unclear what effect, if any, they have had and will have on the valuations of publicly traded companies excluded from the indices, but it is possible that they may depress these valuations compared to those of other similar companies that are included.

We are an "emerging growth company" and the reduced disclosure requirements applicable to emerging growth companies may make our Class A common stock less attractive to investors.

We are an "emerging growth company", as defined in the JOBS Act. For so long as we remain an emerging growth company, we are permitted by SEC rules and plan to rely on exemptions from certain disclosure requirements that are applicable to other SEC-registered public companies that are not emerging growth companies. These exemptions include not being required to comply with the auditor attestation requirements of Section 404 of the SOX, 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, reduced disclosure obligations regarding executive compensation and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As a result, the information we provide stockholders will be different than the information that is available with respect to other public companies. We cannot predict whether investors will find our Class A common stock less attractive if we rely on these exemptions. If some investors find our Class A common stock less attractive as a result, there may be a less active trading market for our Class A common stock and our stock price may be more volatile.

In addition, 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. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We have incurred and will continue to incur increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives and corporate governance practices, including maintaining an effective system of internal controls over financial reporting.

As a public company, and particularly after we are no longer an emerging growth company, we have incurred and will continue to incur significant legal, accounting and other expenses that we did not incur as a private company. The Dodd-Frank Wall Street Reform and Consumer Protection Act, SOX, the listing requirements of Nasdaq and other applicable federal and Delaware rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. We expect that we will need to hire additional accounting, finance and other personnel in connection with our being a public company and our management and other personnel will need to devote a substantial amount of time towards maintaining compliance with these requirements. These requirements will increase our legal and financial compliance costs and will make some activities more time-consuming and costly.

The rules and regulations applicable to us as a public company and recent trends in the insurance market have made it more expensive for us to obtain director and officer liability insurance. We have currently obtained only director and officer liability coverage (commonly referred to as “Side A” coverage). This means that while our directors and officers have direct insurance coverage for acts which the company is not legally required or permitted to indemnify them, the company itself does not have coverage for amounts incurred in defending, among other things, stockholder derivative or securities class action lawsuits or in the event of certain investigative actions, for amounts it must pay as a result of such suits or amounts it must pay to indemnify our directors or officers. We are in essence self-insuring for these costs. Any costs incurred in connection with such litigation could have a material adverse effect on our business, financial condition and results of operations.

In September 2018, California enacted a law that requires publicly held companies headquartered in California to have at least one female director by the end of 2019 and at least three by the end of 2021, depending on the size of the board. The law would impose financial penalties for failure to comply. We are currently in compliance with the requirements of the law but we may incur costs associated with complying with the law in future years, including costs associated with expanding our board of directors or identifying qualified candidates for appointment to our board of directors, or financial penalties or harm to our brand and reputation if we fail to comply. We cannot predict or estimate the amount of additional costs we may incur or the timing of such costs.

Pursuant to SOX Section 404, we will be required to furnish a report by our management on our internal control over financial reporting beginning with our second annual filing of an Annual Report on Form 10-K with the SEC after we become a public company. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with SOX 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, potentially engage outside consultants, 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. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by SOX Section 404. If we identify one or more material weaknesses, it could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements.

As a public company, we are required to file with the SEC annual and quarterly information and other reports that are specified in Section 13 of the Exchange Act. We are also required to ensure that we have the ability to prepare financial statements that are fully compliant with all SEC reporting requirements on a timely basis. We are also subject to other reporting and corporate governance requirements, including the requirements of Nasdaq and certain provisions of SOX and the regulations promulgated thereunder, which impose significant compliance obligations upon us. As a public company, we have to and will continue to, among other things:

- prepare and distribute periodic public reports and other stockholder communications in compliance with our obligations under the federal securities laws and applicable Nasdaq rules;
- create or expand the roles and duties of our board of directors and committees of the board;
- institute more comprehensive financial reporting and disclosure compliance functions;
- supplement our internal accounting, auditing and reporting function, including hiring additional staff with expertise in accounting and financial reporting for a public company;

- enhance and formalize closing procedures at the end of our accounting periods;
- enhance our internal audit and tax functions;
- enhance our investor relations function;
- establish new internal policies, including those relating to disclosure controls and procedures; and
- involve and retain to a greater degree outside counsel and accountants in the activities listed above.

We may not be successful in implementing these requirements and the significant commitment of resources required for implementing them could adversely affect our business, financial condition and results of operations. In addition, if we fail to implement the requirements with respect to our internal accounting and audit functions, our ability to report our results of operations on a timely and accurate basis could be impaired and we could suffer adverse regulatory consequences or violate the Nasdaq rules. There could also be a negative reaction in the financial markets due to a loss of investor confidence in us and the reliability of our financial statements.

The requirements of being a public company require a significant commitment of resources and management oversight that has increased and may continue to increase our costs and might place a strain on our systems and resources. As a result, our management's attention might be diverted from other business concerns. If we fail to maintain an effective internal control environment or to comply with the numerous legal and regulatory requirements imposed on public companies, we could make material errors in, and be required to restate, our financial statements. Any such restatement could result in a loss of public confidence in the reliability of our financial statements and sanctions imposed on us by the SEC. In addition, the rules and regulations imposed on public companies are often subject to varying interpretations and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Delaware law and provisions in our amended and restated certificate of incorporation and amended and restated bylaws might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the trading price of our Class A 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 restated certificate of incorporation and restated bylaws contain provisions that may make the acquisition of our company more difficult, including the following:

- any transaction that would result in a change in control of our company requires the approval of a majority of our outstanding Class B common stock voting as a separate class;
- our multi-class common stock structure provides our holders of Class B common stock with the ability to significantly influence the outcome of matters requiring stockholder approval, even if they own significantly less than a majority of the shares of our outstanding Class A common stock and Class B common stock;
- our board of directors is classified into three classes of directors with staggered three-year terms and directors are only able to be removed from office for cause by the affirmative vote of holders of at least two-thirds of the voting power of our then outstanding capital stock;
- certain amendments to our amended and restated certificate of incorporation require the approval of stockholders holdingtwo-thirds of the voting power of our then outstanding capital stock;
- any stockholder-proposed amendment to our amended and restated bylaws requires the approval of stockholders holdingtwo-thirds of the voting power of our then outstanding capital stock;
- our stockholders are only able to take action at a meeting of stockholders and are not able to take action by written consent for any matter;
- our stockholders are able to act by written consent only if the action is first recommended or approved by the board of directors;
- vacancies on our board of directors are able to be filled only by our board of directors and not by stockholders;
- only our chairman of the board of directors, chief executive officer or a majority of the board of directors are authorized to call a special meeting of stockholders;
- certain litigation against us can only be brought in Delaware;
- our restated certificate of incorporation authorizes undesignated preferred stock, the terms of which may be established and shares of which may be issued, without the approval of the holders of our capital stock; and
- advance notice procedures apply for stockholders to nominate candidates for election as directors or to bring matters before an annual meeting of stockholders.

These anti-takeover defenses could discourage, delay or prevent a transaction involving a change in control of our company. These provisions could also discourage proxy contests and make it more difficult for stockholders to elect directors of their choosing and to cause us to take other corporate actions they desire, any of which, under certain circumstances, could limit the opportunity for our stockholders to receive a premium for their shares of our capital stock and could also affect the price that some investors are willing to pay for our Class A common stock.

Our amended and restated bylaws designate a state or federal court located within the State of Delaware as the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to choose the judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated bylaws provide that, unless we consent in writing to the selection of an alternative forum, (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, stockholders or employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, our certificate of incorporation or our amended and restated bylaws or (iv) any action asserting a claim governed by the internal affairs doctrine of the law of the State of Delaware shall, to the fullest extent permitted by law, be exclusively brought in the Court of Chancery of the State of Delaware or, if such court does not have subject matter jurisdiction thereof, the federal district court of the State of Delaware. Nothing in our amended and restated bylaws precludes stockholders that assert claims under the Securities Act of 1933, as amended (the "Securities Act"), or the Exchange Act, or any successors thereto, from bringing such claims in state or federal court, subject to applicable law.

Any person or entity purchasing or otherwise acquiring or holding any interest in any of our securities shall be deemed to have notice of and consented to the foregoing forum selection provisions. These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum of such stockholder's choosing for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees. If a court were to find either exclusive-forum provision in our amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could harm our results of operations.

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

Sales of Unregistered Securities

During the third quarter of 2019, we granted stock options to purchase an aggregate of 842,475 shares of Class A common stock to certain of our employees and service providers under our Amended and Restated 2012 Stock Plan (the "2012 Plan") at an exercise price per share of $30.00, for an aggregate exercise price of approximately $25.3 million.

During the third quarter of 2019, we issued and sold to certain of our employees and service providers an aggregate of 508,120 shares of Class A common stock not otherwise registered under the Securities Act upon the exercise of options under our 2012 Plan at exercise prices per share ranging from $0.21 to $11.48, for an aggregate exercise price of approximately $1.0 million, representing a weighted-average exercise price per share of approximately $1.99.

On September 19, 2019, we issued an aggregate of 161,373 shares of Class A common stock (the "September 19 Warrant Shares") to an accredited investor upon the cashless exercise of the investor's then outstanding warrants to purchase an aggregate of 164,099 shares of Class A common stock. The aggregate exercise price of the September 19 Warrant Shares was approximately $0.2 million, representing a weighted-average exercise price per share of approximately $1.03.

On September 20, 2019, we issued an aggregate of 99,651 shares of Class A common stock (the "September 20 Warrant Shares" and, together with the September 19 Warrant Shares, the "Warrant Shares") to two accredited investors upon the cashless exercises of the investors' then outstanding warrants to purchase an aggregate of 102,000 shares of Class A common stock. The aggregate exercise price of the September 20 Warrant Shares was approximately $0.1 million, representing a weighted-average exercise price per share of approximately $1.41.

The offers, sales and issuances of the securities described above were exempt from registration under the Securities Act under either (1) Rule 701 in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701 or (2) Section 4(a)(2) of the Securities Act as transactions by an issuer not involving any public offering. The recipients of such securities, other than the Warrant Shares, were our employees, consultants, directors or other service providers and they received the securities under our 2012 Plan. The recipients of the Warrant Shares are accredited investors. The recipients of securities in each of these transactions represented their intention to acquire the securities for investment only and not with view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions.

Use of Proceeds

On September 11, 2019, our Registration Statement on Form S-1 (File No. 333-233361) relating to the IPO of our Class A common stock was declared effective by the SEC. Pursuant to such Registration Statement, we sold an aggregate of 11,500,000 shares of our common stock, including 1,500,000 shares sold pursuant to the underwriters' full exercise of their option to purchase additional shares, at a price of $39.00 per share. Including the underwriters' option exercise, the aggregate gross proceeds from the offering were $448.5 million, before deducting underwriting discounts and commissions and estimated offering expenses. J.P. Morgan LLC, Goldman Sachs & Co. LLC and BofA Merrill Lynch acted as lead joint book-running managers for the offering. Cowen acted as lead manager for the offering. On September 16, 2019, we closed the sale of such shares, resulting in aggregate cash proceeds to us of approximately $410.8 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 expected use of the net proceeds from our IPO, as described in our final prospectus filed with the SEC on September 12, 2019 pursuant to Rule 424(b) under the Securities Act.

Item 3. Defaults Upon Senior Securities.

Not applicable.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

Exhibit Number	Exhibit Title	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
3.1	Amended and Restated Certificate of Incorporation of the Registrant.	8-K	001-39035	3.1	9/16/2019
3.2	Amended and Restated Bylaws of the Registrant.	8-K	001-39035	3.2	9/16/2019
4.1	Form of Stock Certificate for Class A common stock of the Registrant.	S-1	333-233361	4.2	8/19/2019
10.1	Second Amendment to Second Amended and Restated Loan and Security Agreement, dated September 9, 2019, by and between the Registrant and Silicon Valley Bank.	S-1/A	333-233361	10.3	9/10/2019
10.2+	Amended and Restated 2012 Stock Plan and forms of award agreements thereunder.	S-1/A	333-233361	10.10	9/3/2019
10.3+	2019 Omnibus Incentive Plan and forms of award agreements thereunder.	S-1/A	333-233361	10.11	9/3/2019
10.4+	2019 Employee Stock Purchase Plan and forms of agreements thereunder.				
10.5+	Non-Employee Director Compensation Policy.	S-1	333-233361	10.13	8/19/2019
10.6+	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers.	S-1/A	333-233361	10.17	9/3/2019
31.1	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
31.2	Certification of Principal Financial and Accounting Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
32.1*	Certification of Principal Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
32.2*	Certification of Principal Financial and Accounting Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
101.INS	XBRL Instance Document.				
101.SCH	XBRL Taxonomy Extension Schema Document.				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.				
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.				
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.				
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.				

+ Management contract or compensatory plan or arrangement.
* This certification is deemed not filed for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act.

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Signatures

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

10x Genomics, Inc.

Date: November 12, 2019

By: /s/ Serge Saxonov
Serge Saxonov
Chief Executive Officer and Director
(Principal Executive Officer)

Date: November 12, 2019

By: /s/ Justin McAnear
Justin McAnear
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 10.4

10x GENOMICS, INC.
2019 EMPLOYEE STOCK PURCHASE PLAN

1. Purpose. The purpose of the Plan is to provide employees of the Company and its Designated Companies with an opportunity to purchase Class A Common Stock through accumulated Contributions. The Company intends for the Plan to have two components: a Code Section 423 Component ("**423 Component**") and a non-Code Section 423 Component ("**Non-423 Component**"). The Company intends to have the 423 Component of the Plan qualify as an "employee stock purchase plan" under Section 423 of the Code. The provisions of the 423 Component, accordingly, will be construed so as to extend and limit Plan participation in a uniform and nondiscriminatory basis consistent with the requirements of Section 423 of the Code. In addition, the Plan authorizes the grant of an option to purchase shares of Class A Common Stock under the Non-423 Component that does not qualify as an "employee stock purchase plan" under Section 423 of the Code; such an option will be granted pursuant to rules, procedures or sub-plans adopted by the Administrator designed to achieve tax, securities laws or other objectives for Eligible Employees and the Company. Except as otherwise provided herein, the Non-423 Component will operate and be administered in the same manner as the 423 Component.

2. Definitions.

(a) "**423 Component**" is defined in Section 1 of the Plan.

(b) "**Administrator**" means the Committee or the Board.

(c) "**Affiliate**" means any entity, other than a Subsidiary, that is an "affiliate" within the meaning of Rule12b-2 promulgated under Section 12 of the Exchange Act.

(d) "**Applicable Laws**" means the requirements relating to the administration of equity-based awards and the related issuance of shares of Class A Common Stock under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Class A Common Stock is listed or quoted and the applicable securities and exchange control laws of any foreign country or jurisdiction where options are, or will be, granted under the Plan.

(e) "**Beneficial Owner**" means a beneficial owner as determined under Rule 13d-3 under the Exchange Act.

(f) "**Board**" means the Board of Directors of the Company.

(g) "**Change in Control**" means:

(i) the acquisition (whether by purchase, merger, consolidation, combination or other similar transaction) by any Person of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of more than 50% (on a fully diluted basis) of either (A) the then-outstanding shares of Common Stock, taking into account as outstanding for this purpose such Common Stock issuable upon the exercise of options or warrants, the conversion of convertible stock or debt, and the exercise of any similar right to acquire such Common Stock; or (B) the combined voting power of the then-outstanding voting securities of the Company entitled to vote generally in the election of directors; *provided,* that for purposes of the Plan, the following acquisitions shall not constitute a Change in Control: (A) any acquisition by the Company or any Affiliate; (B) any acquisition by any employee benefit plan sponsored or maintained by the Company or any Affiliate; or (C) in respect of any Class A Common Stock held by a particular Participant under the Plan, any acquisition by the Participant or any group of Persons including the Participant (or any entity controlled by the Participant or any group of Persons including the Participant);

(ii) during any period of twelve (12) months, individuals who, at the beginning of such period, constitute the Board (the '**Incumbent Directors**") cease for any reason to constitute at least a majority of the Board;*provided*, that any Person becoming a director subsequent to the effective date of the Plan, whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of the proxy statement of the Company in which such Person is named as a nominee for director, without written objection to such nomination) shall be an Incumbent Director; *provided,* that no individual initially elected or nominated as a director of the Company as a result of an actual or threatened election contest, as such terms are used in Rule 14a-12 of Regulation 14A promulgated under the Exchange Act, with respect to directors or as a result of any other actual or threatened solicitation of proxies or consents by or on behalf of any Person other than the Board shall be deemed to be an Incumbent Director; or

(iii) the sale, transfer or other disposition of all or substantially all of the assets of the Company and its Subsidiaries (taken as a whole) to any Person that is not an Affiliate of the Company.

(h) "**Class A Common Stock**" means the Class A Common Stock, par value $0.00001 per share, of the Company.

(i) "**Class B Common Stock**" means the Class B Common Stock, par value $0.00001 per share, of the Company.

(j) "**Code**" means the U.S. Internal Revenue Code of 1986, as amended. References to a specific Section of the Code or U.S. Treasury Regulation thereunder will include such Section or regulation, any valid regulation or other official applicable guidance promulgated under such Section, and any comparable provision of any future legislation or regulation amending, supplementing or superseding such Section or regulation.

(k) "**Committee**" means the Compensation Committee of the Board, and any successor committee thereto or such other committee of the Board as may be designated by the Board to administer the Plan in whole or in part, including any subcommittee of the Board as designated by the Board in accordance with Section 14 hereof.

(l) "**Common Stock**" means, collectively, the Class A Common Stock and Class B Common Stock.

(m) "**Company**" means 10x Genomics, Inc., a Delaware corporation, and any successor thereto.

(n) "**Compensation**" means an Eligible Employee's base salary or hourly wages. The Administrator, in its discretion, may, on a uniform and nondiscriminatory basis, establish a different definition of Compensation for a subsequent Offering Period.

(o) "**Contributions**" means the payroll deductions and other additional payments that the Company may permit to be made by a Participant to fund the exercise of options granted pursuant to the Plan.

(p) "**Designated Company**" means any Subsidiary or Affiliate that has been designated by the Administrator from time to time in its sole discretion as eligible to participate in the Plan. For purposes of the 423 Component, only the Company and its Subsidiaries may be Designated Companies; *provided*, that at any given time, a Subsidiary that is a Designated Company under the 423 Component shall not be a Designated Company under the Non-423 Component.

(q) "**Director**" means a member of the Board.

(r) "**EEA**" shall have the meaning set forth in Section 8(c) of the Plan.

(s) "**EEA Limit**" shall have the meaning set forth in Section 8(c) of the Plan.

(t) "**Eligible Employee**" means any individual who is a common law employee providing services to the Company or a Designated Company and is customarily employed for at least ninety (90) days by the Employer, or any lesser number of hours per week and/or number of days established by the Administrator (if required under Applicable Law) for purposes of any separate Offering or for an Eligible Employee participating in the Non-423 Component. For purposes of the Plan, the employment relationship will be treated as continuing intact while the individual is on sick leave or other leave of absence that the Employer approves or is legally protected under Applicable Laws. Where the period of leave exceeds three (3) months and the individual's right to reemployment is not guaranteed either by statute or by contract, the employment relationship will be deemed to have terminated three (3) months and one (1) day following the commencement of such leave. The Administrator, in its discretion, from time to time may, prior to an Enrollment Date for all options to be granted on such Enrollment Date in an Offering, determine (for each Offering under the 423 Component, on a uniform and nondiscriminatory basis or as otherwise permitted by Treasury Regulation Section 1.423-2) that the definition of Eligible Employee will or will not include an individual if he or she: (i) has not completed at least sixty (60) days of service since his or her last hire date or such lesser period of time as may be determined by the Administrator in its discretion), (ii) is a highly compensated employee within the meaning of Section 414(q) of the Code, or (iii) is a highly compensated employee within the meaning of Section 414(q) of the Code with compensation above a certain level or is an officer or subject to the disclosure requirements of Section 16(a) of the Exchange Act; *provided*, that the exclusion is applied with respect to each Offering under the 423 Component in an identical manner to all highly compensated employees of the Employer whose employees are participating in that Offering. Each exclusion shall be applied with respect to an Offering under a 423 Component in a manner complying with U.S. Treasury Regulation Section 1.423-2(e)(2)(ii). Such exclusions may be applied with respect to an Offering under the Non-423 Component without regard to the limitations of Treasury Regulation Section 1.423-2.

(u) "**Employer**" means the employer of the applicable Eligible Employee(s).

(v) "**Enrollment Date**" means the first Trading Day of each Offering Period or, solely in the case of the first Offering Period, the IPO Date.

(w) "**Enrollment Window**" is defined in Section 5(a) of the Plan.

(x) "**EU Prospectus Directive**" shall have the meaning set forth in Section 8(c) of the Plan.

(y) "**Exchange Act**" means the U.S. Securities Exchange Act of 1934, as amended, including the rules and regulations promulgated thereunder.

(z) "**Exercise Date**" means the last Trading Day of each Purchase Period.

(aa) "**Fair Market Value**" means, on a given date: (i) if the Class A Common Stock is listed on a national securities exchange, the closing sales price of the Class A Common Stock reported on the primary exchange on which the Class A Common Stock is listed and traded on such date, or, if there are no such sales on that date, then on the last preceding date on which such sales were reported; (ii) if the Class A Common Stock is not listed on any national securities exchange but is quoted in an inter-dealer quotation system on a last-sale basis, the average between the closing bid price and ask price reported on such date, or, if there is no such sale on that date, then on the last preceding date on which a sale was reported; or (iii) if the Class A Common Stock is not listed on a national securities exchange or quoted in an inter-dealer quotation system on a last-sale basis, the amount determined by the Board in good faith to be the fair market value of the Class A Common Stock; *provided*, that, with respect to any Class A Common Stock purchased under the Plan during the first Offering Period, the "Fair Market Value" on the Enrollment Date for such first Offering Period shall be equal to the per share price at which the Class A Common Stock is offered to the public in connection with the Company's initial public offering.

(bb) "**Fiscal Year**" means the fiscal year of the Company.

(cc) "**Group**" shall have the meaning given the term for purposes of Section 13(d)(3) of the Exchange Act.

(dd) "**IPO Date**" means the effective date of the registration statement filed by the Company with the Securities and Exchange Commission for the initial public offering of the Common Stock.

(ee) "**New Exercise Date**" means a new Exercise Date if the Administrator shortens any Offering Period then in progress.

(ff) "**Non-423 Component**" is defined in Section 1 of the Plan.

(gg) "**Offering**" means an offer under the Plan of an option that may be exercised during an Offering Period as further described in Section 4 of the Plan. For purposes of the Plan, the Administrator may designate separate Offerings under the Plan (the terms of which need not be identical) in which Eligible Employees of one or more Employers will participate, even if the dates of the applicable Offering Periods of each such Offering are identical and the provisions of the Plan will separately apply to each Offering. To the extent permitted by U.S. Treasury Regulation Section 1.423-2(a)(1), the terms of each Offering need not be identical; *provided*, that the terms of the Plan and an Offering together satisfy U.S. Treasury RegulationSection 1.423-2(a)(2) and (a)(3).

(hh) "**Offering Periods**" means the periods of approximately six (6) months or such other period or periods set by the Administrator during which an option may be granted pursuant to the Plan and may be exercised, as determined under Section 4 of the Plan. The duration and timing of Offering Periods may be changed pursuant to Sections 4 and 20 of the Plan.

(ii) "**Other Extraordinary Event**" is defined in Section 19(a) of the Plan.

(jj) "**Parent**" means a "parent corporation," whether now or hereafter existing, as defined in Section 424(e) of the Code.

(kk) "**Participant**" means an Eligible Employee that participates in the Plan.

(ll) "**Person**" means an individual, entity or group.

(mm) "**Plan**" means this 10x Genomics, Inc. 2019 Employee Stock Purchase Plan.

(nn) "**Proceeding**" is defined in Section 31 of the Plan.

(oo) "**Purchase Period**" means, unless changed by the Administrator, the approximately six (6) month period commencing after one Exercise Date and ending with the next Exercise Date; *provided*, that, the Purchase Period during the first Offering Period shall commence on the IPO Date and end on the last Trading Day on or immediately preceding May 14, 2020. Unless otherwise determined by the Administrator, the Purchase Period will have the same duration and coincide with the length of the Offering Period.

(pp) "**Purchase Price**" means an amount equal to eighty-five percent (85%) of the Fair Market Value of a share of Class A Common Stock on the Enrollment Date or on the Exercise Date, whichever is lower; *provided*, that the Purchase Price may be determined for subsequent Offering Periods by the Administrator subject to compliance with Section 423 of the Code (or any successor rule or provision or any other Applicable Law, regulation or stock exchange rule) or pursuant to Section 20 of the Plan.

(qq) "**Subsidiary**" means a "subsidiary corporation," whether now or hereafter existing, as defined in Section 424(f) of the Code.

(rr) "**Trading Day**" means a day on which the national stock exchange upon which the Class A Common Stock is listed is open for trading.

(ss) "**U.S. Treasury Regulations**" means the Treasury regulations of the Code. References to a specific Treasury Regulation or Section of the Code shall include such Treasury Regulation or Section, any valid regulation promulgated under such Section, and any comparable provision of any future legislation or regulation amending, supplementing or superseding such Section or regulation.

3. Eligibility.

(a) First Offering Period. Any individual who is an Eligible Employee immediately prior to the first Offering Period will be automatically enrolled in the first Offering Period, subject to the provisions of Section 5 of the Plan.

(b) Subsequent Offering Periods. Any Eligible Employee on a given Enrollment Date following the first Offering Period will be eligible to participate in the Plan, subject to the requirements of Section 5 of the Plan.

(c) Non-U.S. Employees. Eligible Employees who are citizens or residents of a non-U.S. jurisdiction (without regard to whether they also are citizens or residents of the United States or resident aliens (within the meaning of Section 7701(b)(1)(A) of the Code)) may be excluded from participation in the Plan or an Offering if the participation of such Eligible Employees is prohibited under the laws of the applicable jurisdiction or if complying with the laws of the applicable jurisdiction would cause the Plan or an Offering to violate Section 423 of the Code. In the case of the Non-423 Component, an Eligible Employee may be excluded from participation in the Plan or an Offering if the Administrator has determined that participation of such Eligible Employee is not advisable or practicable.

(d) Limitations. Any provisions of the Plan to the contrary notwithstanding, no Eligible Employee will be granted an option under the Plan (i) to the extent that, immediately after the grant, such Eligible Employee (or any other Person whose stock would be attributed to such Eligible Employee pursuant to Section 424(d) of the Code) would own capital stock of the Company or any Parent or Subsidiary of the Company and/or hold outstanding options to purchase such stock possessing five percent (5%) or more of the total combined voting power or value of all classes of the capital stock of the Company or of any Parent or Subsidiary of the Company, or (ii) to the extent that his or her rights to purchase stock under all employee stock purchase plans (as defined in Section 423 of the Code) of the Company or any Parent or Subsidiary of the Company accrues at a rate that exceeds twenty-five thousand dollars ($25,000) worth of stock (determined at the Fair Market Value of the stock at the time such option is granted) for each calendar year in which such option is outstanding at any time, as determined in accordance with Section 423 of the Code and the regulations thereunder.

4. Offering Periods.

(a) Frequency and Duration. The Administrator may establish Offering Periods of such frequency and duration as it may from time to time determine as appropriate.

(b) First Offering Period. The first Offering Period under the Plan shall commence on the IPO Date and shall end on the last Trading Day on or immediately preceding May 14, 2020.

(c) Successive Offering Periods. Unless the Administrator determines otherwise, following the completion of the first Offering Period, a new Offering Period shall commence on the first Trading Day on or following May 15 and November 15 of each calendar year and end on or following the last Trading Day on or immediately preceding November 14 and May 14, respectively, approximately six (6) months later.

(d) Additional Offering Periods. At the discretion of the Administrator, additional Offering Periods may be conducted under the Plan. Such additional Offering Periods may, but need not, qualify under Section 423 of the Code. The Administrator shall determine the commencement and duration of each additional Offering Period, and additional Offering Periods may be consecutive or overlapping. The other terms and conditions of each additional Offering Period shall be those set forth in the Plan document, with such changes or additional features as the Administrator determines necessary to comply with Section 423 of the Code (or any successor rule or provision or any other Applicable Law, regulation or stock exchange rule). The Administrator shall have the power to change the duration of Offering Periods (including the commencement dates thereof) with respect to future Offerings without stockholder approval.

(e) Offering Period Limit. No Offering Period may last more than twenty-seven (27) months.

(f) Applicable Offering Period. For purposes of calculating the Purchase Price, the applicable Offering Period shall be determined as follows:

(A) Once a Participant is enrolled in the Plan for an Offering Period, such Offering Period shall continue to apply to him or her until the earliest of (x) the end of such Offering Period, (y) the end of his or her participation under Section 10 of the Plan or (z) re-enrollment for a subsequent Offering Period under Paragraph (B), below.

(B) In the event that the Fair Market Value of a share of Class A Common Stock on the first Trading Day of the Offering Period for which the Participant is enrolled is higher than on the first Trading Day of any subsequent Offering Period, the Participant shall automatically be re-enrolled for such subsequent Offering Period.

5. Participation.

(a) First Offering Period. An Eligible Employee will be entitled to continue to participate in the first Offering Period pursuant to Section 3(a) of the Plan only if such individual submits a subscription agreement authorizing Contributions in a form determined by the Administrator (which may be similar to the form attached hereto as Exhibit A) to the Company's designated plan administrator (i) no earlier than the effective date of the FormS-8 registration statement that registers the offer and sale of Class A Common Stock under the Plan and (ii) no later than ten (10) business days following the effective date of such S-8 registration statement or such other period of time as the Administrator may determine (the '**Enrollment Window**").

(b) Subsequent Offering Periods. An Eligible Employee may participate in the Plan pursuant to Section 3(b) of the Plan by (i) submitting to the Company's stock administration office (or its designee), on or before a date determined by the Administrator prior to an applicable Enrollment Date, a properly completed subscription agreement authorizing Contributions in the form provided by the Administrator for such purpose, or (ii) following an electronic or other enrollment procedure determined by the Administrator.

6. Contributions.

(a) At the time a Participant enrolls in the Plan pursuant to Section 5 of the Plan, he or she will elect to have Contributions (in the form of payroll deductions or otherwise, to the extent permitted by the Administrator) made on each pay day during the Offering Period in an amount not exceeding fifteen percent (15%) of the Compensation, which he or she receives on each pay day during the Offering Period (for illustrative purposes, should a pay day occur on an Exercise Date, a Participant will have any payroll deductions made on such day applied to his or her account under the then-current Purchase Period or Offering Period). The Administrator, in its sole discretion, may permit all Participants in a specified Offering to contribute amounts to the Plan through payment by cash, check or other means set forth in the subscription agreement prior to each Exercise Date of each Purchase Period. A Participant's subscription agreement will remain in effect for successive Offering Periods unless terminated as provided in Section 10 hereof.

(b) In the event Contributions are made in the form of payroll deductions, such payroll deductions for a Participant will commence on the first pay day following the Enrollment Date and will end on the last pay day prior to the Exercise Date of such Offering Period to which such authorization is applicable, unless sooner terminated by the Participant as provided in Section 10 hereof; *provided*, that for the first Offering Period, payroll deductions will commence on the first pay day on or following the end of the Enrollment Window.

(c) All Contributions made for a Participant will be credited to his or her account under the Plan, and Contributions will be made in whole percentages of Compensation only. A Participant may not make any additional payments into such account.

(d) A Participant may discontinue his or her participation in the Plan as provided in Section 10 of the Plan. Except as may be permitted by the Administrator, as determined in its sole discretion, a Participant may not change the rate of his or her Contributions during an Offering Period.

(e) Notwithstanding the foregoing, to the extent necessary to comply with Section 423(b)(8) of the Code and Section 3(d) hereof, a Participant's Contributions may be decreased to zero percent (0%) at any time during a Purchase Period. Subject to Section 423(b)(8) of the Code and Section 3(d) hereof, Contributions will recommence at the rate originally elected by the Participant effective as of the beginning of the first Purchase Period scheduled to end in the following calendar year, unless terminated by the Participant as provided in Section 10 of the Plan.

(f) Notwithstanding any provisions to the contrary in the Plan, the Administrator may allow Eligible Employees to participate in the Plan via cash contributions instead of payroll deductions if (i) payroll deductions are not permitted under applicable local law, (ii) the Administrator determines that cash contributions are permissible under Section 423 of the Code or (iii) for Participants participating in the Non-423 Component.

(g) At the time the option is exercised, in whole or in part, or at the time some or all of the Class A Common Stock issued under the Plan is disposed of (or any other time that a taxable event related to the Plan occurs), the Participant must make adequate provision for the Company's or the Employer's federal, state, local or any other tax liability payable to any authority including taxes imposed by jurisdictions outside of the U.S., national insurance, social security or other tax withholding obligations, if any, which arise upon the exercise of the option or the disposition of the Class A Common Stock (or any other time that a taxable event related to the Plan occurs). At any time, the Company or the Employer may, but will not be obligated to, withhold from the Participant's compensation the amount necessary for the Company or the Employer to meet applicable withholding obligations, including any withholding required to make available to the Company or the Employer any tax deductions or benefits attributable to sale or early disposition of Class A Common Stock by the Eligible Employee. In addition, the Company or the Employer may, but will not be obligated to, withhold from the proceeds of the sale of Class A Common Stock or any other method of withholding the Company or the Employer deems appropriate to the extent permitted by U.S. Treasury Regulation Section 1.423-2(f).

7. Grant of Option. On the Enrollment Date of each Offering Period, each Eligible Employee participating in such Offering Period will be granted an option to purchase on each Exercise Date during such Offering Period (at the applicable Purchase Price) up to a number of shares of Class A Common Stock determined by dividing such Eligible Employee's Contributions accumulated prior to such Exercise Date and retained in the Eligible Employee's account as of the Exercise Date by the applicable Purchase Price; *provided*, that in no event will an Eligible Employee be permitted to purchase during each Purchase Period more than 2,000 shares of Class A Common Stock and, during any one-year period, more than 4,000 shares of Class A Common Stock (subject, in each case, to any adjustment pursuant to Section 19 of the Plan); *provided*, *further*, that such purchase will be subject to the limitations set forth in Sections 3(d) and 13 of the Plan. The Eligible Employee may accept the grant of such option (i) with respect to the first Offering Period by submitting a properly completed subscription agreement in accordance with the requirements of Section 5 of the Plan on or before the last day of the Enrollment Window, and (ii) with respect to any subsequent Offering Period under the Plan, by electing to participate in the Plan in accordance with the requirements of Section 5 of the Plan. The Administrator may, for future Offering Periods, increase or decrease, in its absolute discretion, the maximum number of shares of Class A Common Stock that an Eligible Employee may purchase during each Purchase Period of an Offering Period. Exercise of the option will occur as provided in Section 8, unless the Participant has withdrawn pursuant to Section 10 of the Plan. To the extent not otherwise exercised in full, the option will expire on the last day of the Offering Period.

8. Exercise of Option.

(a) Unless a Participant withdraws from the Plan as provided in Section 10 of the Plan, his or her option for the purchase of shares of Class A Common Stock will be exercised automatically on the Exercise Date, and the maximum number of full shares subject to the option will be purchased for such Participant at the applicable Purchase Price with the accumulated Contributions from his or her account. No fractional shares of Class A Common Stock will be purchased; any Contributions accumulated in a Participant's account, which are not sufficient to purchase a full share will be returned to the Participant. Any other funds left over in a Participant's account after the Exercise Date will also be returned to the Participant. During a Participant's lifetime, a Participant's option to purchase shares hereunder is exercisable only by him or her.

(b) If the Administrator determines that, on a given Exercise Date, the number of shares of Class A Common Stock with respect to which options are to be exercised may exceed (i) the number of shares of Class A Common Stock that were available for sale under the Plan on the Enrollment Date of the applicable Offering Period, or (ii) the number of shares of Class A Common Stock available for sale under the Plan on such Exercise Date, the Administrator may in its sole discretion (x) provide that the Company will make a pro rata allocation of the shares of Class A Common Stock available for purchase on such Enrollment Date or Exercise Date, as applicable, in as uniform a manner as will be practicable and as it will determine in its sole discretion to be equitable among all Participants exercising options to purchase Class A Common Stock on such Exercise Date, and continue all Offering Periods then in effect or (y) provide that the Company will make a pro rata allocation of the shares available for purchase on such Enrollment Date or Exercise Date, as applicable, in as uniform a manner as will be practicable and as it will determine in its sole discretion to be equitable among all participants exercising options to purchase Class A Common Stock on such Exercise Date, and terminate any or all Offering Periods then in effect pursuant to Section 20 of the Plan. The Company may make a pro rata allocation of the shares available on the Enrollment Date of any applicable Offering Period pursuant to the preceding sentence, notwithstanding any authorization of additional shares for issuance under the Plan by the Company's stockholders subsequent to such Enrollment Date.

(c) Further, with respect to any Offering under the Non-423 Component that is made to Participants of Designated Companies within the European Economic Area (the "**EEA**"), if a prospectus may be required to be filed in accordance with EU Prospectus Directive No. 2003/71/EC, as currently and hereinafter amended (the "**EU Prospectus Directive**"), then until such time as a valid prospectus is on file or a prospectus is not required or is no longer required under the EU Prospectus Directive in connection with such Offerings under the Plan, the total Purchase Price payable for the aggregate number of shares of Class A Common Stock offered under the Plan under all Offerings that are not otherwise exempt from the EU Prospectus Directive made to Participants of Designated Companies within the EEA for any twelve (12)-month period shall not exceed EUR 5 million (the "**EEA Limit**"). If the Administrator determines that, on a given Enrollment Date, the total Purchase Price payable for the number of shares of Class A Common Stock with respect to which options are to be exercised may cause the EEA Limit to be exceeded, the Administrator may in its sole discretion (x) provide that the Company will make a pro rata allocation of the shares of Class A Common Stock available for purchase and under the EEA Limit on such Enrollment Date, as applicable, in as uniform a manner as will be practicable and as it will determine in its sole discretion to be equitable among all Participants of Designated Companies within the EEA exercising options to purchase Class A Common Stock by reference to the Offering Period beginning on that Enrollment Date, and continue all Offering Periods then in effect or (y) provide that the Company will make a pro rata allocation of the shares of Class A Common Stock available for purchase and under the EEA Limit on such Enrollment Date, as applicable, in

as uniform a manner as will be practicable and as it will determine in its sole discretion to be equitable among all Participants of Designated Companies within the EEA exercising options to purchase Class A Common Stock by reference to the Offering Period beginning on that Enrollment Date, and terminate any or all Offering Periods then in effect pursuant to Section 20 of the Plan.

9. Delivery. As soon as reasonably practicable after each Exercise Date on which a purchase of shares of Class A Common Stock occurs, the Company will arrange the delivery to each Participant of the shares purchased upon exercise of his or her option in a form determined by the Administrator (in its sole discretion) and pursuant to rules established by the Administrator. The Company may permit or require that shares be deposited directly with a broker designated by the Company or to a designated agent of the Company, and the Company may utilize electronic or automated methods of share transfer. The Company may require that shares be retained with such broker or agent for a designated period of time and/or may establish other procedures to permit tracking of disqualifying dispositions of such shares. No Participant will have any voting, dividend, or other stockholder rights with respect to shares of Class A Common Stock subject to any option granted under the Plan until such shares have been purchased and delivered to the Participant as provided in this Section 9.

10. Withdrawal.

(a) A Participant may withdraw all but not less than all the Contributions credited to his or her account and not yet used to exercise his or her option under the Plan at any time by (i) submitting to the Company's stock administration office (or its designee) a written notice of withdrawal in the form determined by the Administrator for such purpose (which may be similar to the form attached hereto as Exhibit B), or (ii) following an electronic or other withdrawal procedure determined by the Administrator. All of the Participant's Contributions credited to his or her account will be paid to such Participant promptly after receipt of notice of withdrawal and such Participant's option for the Offering Period will be automatically terminated, and no further Contributions for the purchase of shares will be made for such Offering Period. If a Participant withdraws from an Offering Period, Contributions will not resume at the beginning of the succeeding Offering Period, unless the Participant re-enrolls in the Plan in accordance with the provisions of Section 5 of the Plan.

(b) A Participant's withdrawal from an Offering Period will not have any effect upon his or her eligibility to participate in any similar plan that may hereafter be adopted by the Company or in succeeding Offering Periods that commence after the termination of the Offering Period from which the Participant withdraws.

11. Termination of Employment. Upon a Participant's ceasing to be an Eligible Employee, for any reason, he or she will be deemed to have elected to withdraw from the Plan and the Contributions credited to such Participant's account during the Offering Period but not yet used to purchase shares of Class A Common Stock under the Plan will be returned to such Participant or, in the case of his or her death, to the Person or Persons entitled thereto under Section 15 of the Plan, and such Participant's option will be automatically terminated. Unless determined otherwise by the Administrator in a manner that, with respect to an Offering under the 423 Component, is permitted by, and compliant with, Section 423 of the Code, a Participant whose employment transfers between entities through a termination with an immediate rehire (with no break in service) by the Company or a Designated Company shall not be treated as terminated under the Plan; *provided*, *however*, that no Participant shall be deemed to switch from an Offering under theNon-423 Component to an Offering under the 423 Component or vice versa unless (and then only to the extent) such switch would not cause the 423 Component or any Option thereunder to fail to comply with Section 423 of the Code.

12. Interest. No interest will accrue on the Contributions of a participant in the Plan, except as may be required by Applicable Law, as determined by the Company, and if so required by the laws of a particular jurisdiction, shall, with respect to Offerings under the 423 Component, apply to all Participants in the relevant Offering, except to the extent otherwise permitted by U.S. Treasury Regulation Section 1.423-2(f).

13. Stock.

(a) Subject to adjustment upon changes in capitalization of the Company as provided in Section 19 hereof, the maximum number of shares of Class A Common Stock that will be made available for sale under the Plan will be 2,000,000 shares of Class A Common Stock, which number shall be automatically increased on the first day of each calendar year commencing on January 1, 2021 and ending on January 1, 2029 in an amount equal to the lesser of (x) one percent (1%) of the total number of shares of Common Stock outstanding on the last day of the immediately preceding fiscal year and (y) such number of shares of Class A Common Stock as determined by the Board; provided, that, if on January 1 of a calendar year, the Board has not either confirmed the one percent (1%) increase described in clause (x) of this Section 13(a) or approved an increase of a lesser number of shares of Class A Common Stock for such calendar year, then the Board shall be deemed to have waived the automatic increase provided for by this Section 13(a), and no such increase shall occur for such calendar year.

(b) Until the shares of Class A Common Stock are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), a Participant will only have the rights of an unsecured creditor with respect to such shares, and no right to vote or receive dividends or any other rights as a stockholder will exist with respect to such shares.

(c) Shares of Class A Common Stock to be delivered to a Participant under the Plan will be registered in the name of the Participant or in the name of the Participant and his or her spouse.

14. Administration. The Plan will be administered by the Board or a Committee appointed by the Board, which Committee will be constituted to comply with Applicable Laws. The Administrator will have full and exclusive discretionary authority to construe, interpret and apply the terms of the Plan, to designate separate Offerings under the Plan, to designate Subsidiaries and Affiliates as participating in the 423 Component or Non-423 Component, to determine eligibility, to adjudicate all disputed claims filed under the Plan and to establish such procedures that it deems necessary for the administration of the Plan (including, without limitation, to adopt such procedures and sub-plans as are necessary or appropriate to permit the participation in the Plan by employees who are foreign nationals or employed outside the U.S., the terms of which sub-plans may take precedence over other provisions of the Plan, with the exception of Section 13(a) hereof, but unless otherwise superseded by the terms of such sub-plan, the provisions of the Plan shall govern the operation of such sub-plan). Unless otherwise determined by the Administrator, the employees eligible to participate in eachsub-plan will participate in a separate Offering and will be in the Non-423 Component, unless such designation would cause the 423 Component to violate the requirements of Section 423 of the Code. Without limiting the generality of the foregoing, the Administrator is specifically authorized to adopt rules and procedures regarding eligibility to participate, the definition of Compensation, handling of Contributions, making of Contributions to the Plan (including, without limitation, in forms other than payroll deductions), establishment of bank or trust accounts to hold Contributions, payment of interest, conversion of local currency, obligations to pay payroll tax, determination of beneficiary designation requirements, withholding procedures and handling of stock certificates that vary with applicable local requirements. The Administrator also is authorized to determine that, to the extent permitted by U.S. Treasury Regulation Section 1.423-2(f), the terms of an

option granted under the Plan or an Offering to citizens or residents of a non-U.S. jurisdiction will be less favorable than the terms of options granted under the Plan or the same Offering to employees resident solely in the U.S. Every finding, decision and determination made by the Administrator will, to the full extent permitted by law, be final and binding upon all parties.

15. Designation of Beneficiary.

(a) If permitted by the Administrator, a Participant may file a designation of a beneficiary who is to receive any shares of Class A Common Stock and cash, if any, from the Participant's account under the Plan in the event of such Participant's death subsequent to an Exercise Date on which the option is exercised but prior to delivery to such Participant of such shares and cash. In addition, if permitted by the Administrator, a Participant may file a designation of a beneficiary who is to receive any cash from the Participant's account under the Plan in the event of such Participant's death prior to exercise of the option. If a Participant is married and the designated beneficiary is not the spouse, spousal consent will be required for such designation to be effective.

(b) Such designation of beneficiary may be changed by the Participant at any time by notice in a form determined by the Administrator. In the event of the death of a Participant and in the absence of a beneficiary validly designated under the Plan who is living at the time of such Participant's death, the Company will deliver such shares and/or cash to the executor or administrator of the estate of the Participant, or if no such executor or administrator has been appointed (to the knowledge of the Company), the Company, in its discretion, may deliver such shares and/or cash to the spouse or to any one or more dependents or relatives of the Participant, or if no spouse, dependent or relative is known to the Company, then to such other Person as the Company may designate.

(c) All beneficiary designations will be in such form and manner as the Administrator may designate from time to time. Notwithstanding Sections 15(a) and 15(b) above, the Company and/or the Administrator may decide not to permit such designations by Participants in non-U.S. jurisdictions to the extent permitted by U.S. Treasury Regulation Section 1.423-2(f).

16. Transferability. Neither Contributions credited to a Participant's account nor any rights with regard to the exercise of an option or to receive shares of Class A Common Stock under the Plan may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will, the laws of descent and distribution or as provided in Section 15 hereof) by the Participant. Any such attempt at assignment, transfer, pledge or other disposition will be without effect, except that the Company may treat such act as an election to withdraw funds from an Offering Period in accordance with Section 10 hereof.

17. Use of Funds. The Company may use all Contributions received or held by it under the Plan for any corporate purpose, and the Company will not be obligated to segregate such Contributions except under Offerings or for Participants in the Non-423 Component for which Applicable Laws require that Contributions to the Plan by Participants be segregated from the Company's general corporate funds and/or deposited with an independent third party. Until shares of Class A Common Stock are issued, Participants will only have the rights of an unsecured creditor with respect to such shares.

18. Reports. Individual accounts will be maintained for each Participant in the Plan. Statements of account will be given to participating Eligible Employees at least annually, which statements will set forth the amounts of Contributions, the Purchase Price, the number of shares of Class A Common Stock purchased and the remaining cash balance, if any.

19. Adjustments, Dissolution, Liquidation, Merger or Change in Control.

(a) Adjustments. In the event that any subdivision or consolidation of outstanding shares of Class A Common Stock, declaration of a dividend payable in shares of Class A Common Stock or other stock split, other recapitalization or capital reorganization of the Company, any consolidation or merger of the Company with another corporation or entity, the adoption by the Company of any plan of exchange affecting the Class A Common Stock or any distribution to holders of Class A Common Stock of securities or property (other than normal cash dividends or dividends payable in Class A Common Stock), the Administrator, in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan, will, in such manner as it may deem equitable, adjust the number and class of Class A Common Stock that may be delivered under the Plan, the Purchase Price per share and the number of shares of Class A Common Stock covered by each option under the Plan that has not yet been exercised, and the numerical limits of Sections 7 and 13 of the Plan.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, any Offering Period then in progress will be shortened by setting a New Exercise Date, and will terminate immediately prior to the consummation of such proposed dissolution or liquidation, unless provided otherwise by the Administrator. The New Exercise Date will be before the date of the Company's proposed dissolution or liquidation. The Administrator will notify each Participant in writing or electronically, prior to the New Exercise Date, that the Exercise Date for the Participant's option has been changed to the New Exercise Date and that the Participant's option will be exercised automatically on the New Exercise Date, unless prior to such date the Participant has withdrawn from the Offering Period as provided in Section 10 hereof.

(c) Merger or Change in Control. In the event of a merger or Change in Control, each outstanding option will be assumed or an equivalent option substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. In the event that the successor corporation refuses to assume or substitute for the option, the Offering Period with respect to which such option relates will be shortened by setting a New Exercise Date on which such Offering Period shall end. The New Exercise Date will occur before the date of the Company's proposed merger or Change in Control. The Administrator will notify each Participant in writing or electronically prior to the New Exercise Date, that the Exercise Date for the Participant's option has been changed to the New Exercise Date and that the Participant's option will be exercised automatically on the New Exercise Date, unless prior to such date the Participant has withdrawn from the Offering Period as provided in Section 10 hereof.

20. Amendment or Termination.

(a) The Board or the Administrator, in its sole discretion, may amend, suspend, or terminate the Plan, or any part thereof, at any time and for any reason. If the Plan is terminated, the Board or the Administrator, in its discretion, may elect to terminate all outstanding Offering Periods either immediately or upon completion of the purchase of shares of Class A Common Stock on the next Exercise Date (which may be sooner than originally scheduled, if determined by the Administrator in its discretion), or may elect to permit Offering Periods to expire in accordance with their terms (and subject to any adjustment pursuant to Section 19 hereof). If the Offering Periods are terminated prior to expiration, all amounts then credited to Participants' accounts that have not been used to purchase shares of Class A Common Stock will be returned to the Participants (without interest thereon, except as otherwise required under Applicable Laws, as further set forth in Section 12 hereof) as soon as administratively practicable.

(b) Without stockholder consent and without limiting Section 20(a) hereof, the Administrator will be entitled to change the Offering Periods or Purchase Periods, designate separate Offerings, limit the frequency and/or number of changes in the amount withheld during an Offering Period, establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars, permit Contributions in excess of the amount designated by a Participant in order to adjust for delays or mistakes in the Company's processing of properly completed Contribution elections, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Class A Common Stock for each Participant properly correspond with Contribution amounts, and establish such other limitations or procedures as the Administrator determines in its sole discretion advisable that are consistent with the Plan.

(c) In the event the Administrator determines that the ongoing operation of the Plan may result in unfavorable financial accounting consequences, the Administrator may, in its discretion and, to the extent necessary or desirable, modify, amend or terminate the Plan to reduce or eliminate such accounting consequence including, but not limited to:

(i) amending the Plan to conform with the safe harbor definition under the Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto), including with respect to an Offering Period underway at the time;

(ii) altering the Purchase Price for any Offering Period or Purchase Period including an Offering Period or Purchase Period underway at the time of the change in Purchase Price;

(iii) shortening any Offering Period or Purchase Period by setting a New Exercise Date, including an Offering Period or Purchase Period underway at the time of the Administrator action;

(iv) reducing the maximum percentage of Compensation a Participant may elect to set aside as Contributions; and

(v) reducing the maximum number of shares of Class A Common Stock a Participant may purchase during any Offering Period or Purchase Period.

Such modifications or amendments will not require stockholder approval or the consent of any Plan Participants.

21. Notices. All notices or other communications by a Participant to the Company under or in connection with the Plan will be deemed to have been duly given when received in the form and manner specified by the Company at the location, or by the Person, designated by the Company for the receipt thereof.

22. Conditions Upon Issuance of Shares.

(a) Shares of Class A Common Stock will not be issued with respect to an option unless the exercise of such option and the issuance and delivery of such shares pursuant thereto will comply with all applicable provisions of law, domestic or foreign, including, without limitation, the Securities Act of 1933, as amended, the Exchange Act, the rules and regulations promulgated thereunder, and the requirements of any stock exchange upon which the shares may then be listed, and will be further subject to the approval of counsel for the Company with respect to such compliance.

(b) As a condition to the exercise of an option, the Company may require the Person exercising such option to represent and warrant at the time of any such exercise that the shares are being purchased only for investment and without any present intention to sell or distribute such shares if, in the opinion of counsel for the Company, such a representation is required by any of the aforementioned applicable provisions of law.

23. Restrictions on Sale. Unless another period is designated by the Administrator in advance of the Enrollment Date of an Offering Period, as discussed below, any shares of Class A Common Stock purchased under the Plan may not be sold, transferred or otherwise disposed of by a Participant (or such Participant's legal representative or estate, as applicable) for twelve (12) months following the applicable Exercise Date (the "**Restricted Period**"). The Administrator may, in its sole discretion, place additional restrictions on the sale or transfer of shares of Class A Common Stock purchased under the Plan during any Offering Period (including the designation of a new Restricted Period) by notice to all Participants of the nature of such restrictions given in advance of the Enrollment Date of such Offering Period. The additional restrictions may, among other things, change the Restricted Period to a period of up to two years from the Exercise Date, subject to such exceptions as the Administrator may determine (e.g., termination of employment with the Employer). Any certificates issued for shares that are restricted pursuant to this Section 23, shall, in the discretion of the Administrator, contain a legend disclosing the nature and duration of the restriction (including a description of the Restricted Period). Any such restrictions and exceptions determined by the Administrator shall be applicable equally to all shares of Class A Common Stock purchased during the Offering Period for which the restrictions are first applicable. In addition, the Restricted Period and such other restrictions and exceptions applicable to the Class A Common Stock shall remain applicable during, subsequent Offering Periods unless otherwise determined by the Administrator. If the Administrator should change or eliminate any restrictions for a subsequent Offering Period, notice of such action shall be given to all Participants.

24. Data Protection. By participating in the Plan or accepting any rights granted under it, each Participant consents to the collection and processing of personal data relating to the Participant so that the Company and its Affiliates can fulfill their obligations and exercise their rights under the Plan and generally administer and manage the Plan. This data will include, but may not be limited to, data about participation in the Plan and shares offered or received, purchased, or sold under the Plan from time to time and other appropriate financial and other data about the Participant and the Participant's participation in the Plan.

25. Code Section 409A. The 423 Component of the Plan is exempt from the application of Code Section 409A and any ambiguities herein will be interpreted to so be exempt from Code Section 409A. In furtherance of the foregoing and notwithstanding any provision in the Plan to the contrary, if the Administrator determines that an option granted under the Plan may be subject to Code Section 409A or that any provision in the Plan would cause an option under the Plan to be subject to Code Section 409A, the Administrator may amend the terms of the Plan and/or of an outstanding option granted under the Plan, or take such other action the Administrator determines is necessary or appropriate, in each case, without the Participant's consent, to exempt any outstanding option or future option that may be granted under the Plan from or to allow any such options to comply with Code Section 409A, but only to the extent any such amendments or action by the Administrator would not violate Code Section 409A. Notwithstanding the foregoing, the Company shall have no liability to a Participant or any other party if the option to purchase Class A Common Stock under the Plan that is intended to be exempt from or compliant with Code Section 409A is not so exempt or compliant or for any action taken by the Administrator with respect thereto. The Company makes no representation that the option to purchase Class A Common Stock under the Plan is compliant with Code Section 409A.

26. Term of Plan. The Plan will become effective upon the earlier to occur of its adoption by the Board or its approval by the stockholders of the Company. It will continue in effect for a term of ten (10) years, unless sooner terminated under Section 20 of the Plan.

27. Stockholder Approval. The Plan will be subject to approval by the stockholders of the Company within twelve (12) months before or after the date the Plan is adopted by the Board. Such stockholder approval will be obtained in the manner and to the degree required under Applicable Laws.

28. Governing Law. The Plan shall be governed by, and construed in accordance with, the laws of the State of Delaware (except its choice-of-law provisions).

29. No Right to Employment. Participation in the Plan by a Participant shall not be construed as giving a Participant the right to be retained as an employee of the Company or a Subsidiary or Affiliate, as applicable. Furthermore, the Employer may dismiss a Participant from employment at any time, free from any liability or any claim under the Plan.

30. Severability. If any provision of the Plan is or becomes or is deemed to be invalid, illegal, or unenforceable for any reason in any jurisdiction or as to any Participant, such invalidity, illegality or unenforceability shall not affect the remaining parts of the Plan, and the Plan shall be construed and enforced as to such jurisdiction or Participant as if the invalid, illegal or unenforceable provision had not been included.

31. Compliance with Applicable Laws. The terms of the Plan are intended to comply with all Applicable Laws and will be construed accordingly.

32. Jurisdiction; Waiver of Jury Trial. The Plan shall be governed by and construed in accordance with the internal laws of the State of Delaware applicable to contracts made and performed wholly within the State of Delaware, without giving effect to the conflict of laws provisions thereof. EACH PARTICIPANT IRREVOCABLY WAIVES ALL RIGHT TO A TRIAL BY JURY IN ANY SUIT, ACTION, OR OTHER PROCEEDING INSTITUTED BY OR AGAINST SUCH PARTICIPANT IN RESPECT OF THE PARTICIPANT'S RIGHTS OR OBLIGATIONS HEREUNDER.

Exhibit A

10x GENOMICS, INC.

2019 EMPLOYEE STOCK PURCHASE PLAN

SUBSCRIPTION AGREEMENT

_____ Original Application

_____ Change in Payroll Deduction Rate

Offering Period commencing on: _____

Capitalized terms used but not otherwise defined herein shall have the respective meanings given to such terms in the 10x Genomics, Inc. (the "Company") 2019 Employee Stock Purchase Plan (the "Plan").

1. I, _____, hereby elect to participate in the Plan and subscribe to purchase shares of Class A Common Stock in accordance with the terms of the Plan and this 2019 Employee Stock Purchase Plan Subscription Agreement (this "Subscription Agreement").

2. I hereby authorize payroll deductions from each paycheck in the amount of % of my Compensation on each pay day (not to exceed 15%) during the Offering Period in accordance with the Plan (please note that no fractional percentages are permitted).

3. I understand that the payroll deductions will be accumulated for the purchase of shares of Class A Common Stock at the applicable Purchase Price for each Purchase Period ending during the Offering Period determined in accordance with the Plan. I understand that if I do not withdraw from an Offering Period, any accumulated payroll deductions will be used to automatically exercise my option and purchase shares of Class A Common Stock under the Plan on the Exercise Date for each Purchase Period ending during the Offering Period. Notwithstanding the foregoing, and notwithstanding anything in the Plan to the contrary, to the extent that my accumulated payroll deductions would result in my ability to purchase more than shares of Class A Common Stock during any Offering Period (the "Offering Period Maximum"), I understand and agree that I will only be permitted to purchase a number of shares of Class A Common Stock equal to the Offering Period Maximum, and that any excess payroll deductions remaining after such purchase will be returned to me as soon as practicable following the expiration of such Offering Period.

4. I have received a copy of the complete Plan and its accompanying prospectus. I understand that my participation in the Plan is in all respects subject to the terms of the Plan, including this Subscription Agreement. The Company reserves the right to modify the Plan and to impose other requirements on my participation in the Plan, on the option and on any shares of Class A Common Stock purchased under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons. I agree to be bound by such modifications regardless of whether notice is given to me of such event, subject, in any case, to my right to withdraw from participation in the Plan. I further agree to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

5. I understand that if I dispose of any shares of Class A Common Stock received by me pursuant to an Offering within two (2) years after the applicable Enrollment Date (generally the first Trading Day of the applicable Offering Period) or one (1) year after the applicable Exercise Date (generally the last Trading Day of the applicable Purchase Period), I will be treated for U.S. federal income tax purposes as having received ordinary income at the time of such disposition in an amount equal to the excess of the Fair Market Value of the shares of Class A Common Stock at the time such shares of Class A Common Stock were purchased by me over the Purchase Price. I hereby agree to notify the Company in writing within thirty(30) days after the date of any disposition of my shares of Class A Common Stock and I will make adequate provision for U.S. federal, state or other tax withholding obligations, if any, which arise upon the disposition of the shares of Class A Common Stock. The Company may, but will not be obligated to, withhold from my compensation the amount necessary to meet any applicable withholding obligation including any withholding necessary to make available to the Company any tax deductions or benefits attributable to the sale or early disposition of shares of Class A Common Stock by me. If I dispose of such shares of Class A Common Stock at any time after the expiration of the two (2)-year and one (1)-year holding periods described above, I understand that I will be treated for U.S. federal income tax purposes as having received income only at the time of such disposition, and that such income will be taxed as ordinary income only to the extent of an amount equal to the lesser of: (a) the amount by which the Fair Market Value of the shares of Class A Common Stock on the date of the disposition exceeds the Purchase Price paid for the shares of Class A Common Stock (generally 85% of the Fair Market Value of the shares of Class A Common Stock on the Enrollment Date or on the Exercise Date, whichever is lower), or (b) 15% of the Fair Market Value of the shares of Class A Common Stock on the Enrollment Date. The remainder of the gain, if any, recognized on such disposition will be taxed as capital gain.

6. The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. I hereby consent to receive such documents by electronic delivery and agree to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

7. I acknowledge that the Company is neither providing any tax, legal or financial advice, nor is the Company making any recommendations regarding my participation in the Plan or my acquisition or sale of the underlying shares of Class A Common Stock. I understand that I am hereby advised to consult with my own personal tax, legal and financial advisors regarding my participation in the Plan before taking any action related to the Plan.

8. This Subscription Agreement shall be governed by and construed in accordance with the internal laws of the State of Delaware applicable to contracts made and performed wholly within the State of Delaware, without giving effect to the conflict of laws provisions thereof.

9. I hereby agree to be bound by the terms of the Plan, including this Subscription Agreement which is incorporated and made a part thereof. The effectiveness of this Subscription Agreement is dependent upon my eligibility to participate in the Plan.

Please print:

Participant's Name _____

Participant's Tax ID Number _____

Participant's Address _____

_____

_____

I ACKNOWLEDGE AND UNDERSTAND THAT THIS SUBSCRIPTION AGREEMENT AND MY PARTICIPATION IN THE PLAN WILL REMAIN IN EFFECT THROUGHOUT SUCCESSIVE OFFERING PERIODS UNLESS AFFIRMATIVELY TERMINATED BY ME.

Dated: _____

_____

Signature of Participant

Exhibit A

10x GENOMICS, INC.

2019 EMPLOYEE STOCK PURCHASE PLAN

SUBSCRIPTION AGREEMENT

(Non-U.S. Participant)

_____ Original Application

_____ Change in Payroll Deduction Rate

Offering Period commencing on: _____

Capitalized terms used but not otherwise defined herein shall have the respective meanings given to such terms in the 10x Genomics, Inc. (the "Company") 2019 Employee Stock Purchase Plan (the "Plan").

1. I, _____, hereby elect to participate in the Plan and subscribe to purchase shares of Class A Common Stock in accordance with the terms of the Plan and this 2019 Employee Stock Purchase Plan Subscription Agreement (this "Subscription Agreement").

2. I hereby authorize payroll deductions from each paycheck in the amount of % of my Compensation on each pay day (not to exceed 15%) during the Offering Period in accordance with the Plan (please note that no fractional percentages are permitted).

3. I understand that, if my payroll deductions under the Plan are made in any currency other than U.S. dollars, such payroll deductions will be converted to U.S. dollars on or prior to Exercise Date using a prevailing exchange rate in effect at the time such conversion is performed, as determined by the Committee.

4. I understand that the payroll deductions will be accumulated for the purchase of shares of Class A Common Stock at the applicable Purchase Price for each Purchase Period ending during the Offering Period determined in accordance with the Plan. I understand that if I do not withdraw from an Offering Period, any accumulated payroll deductions will be used to automatically exercise the Purchase Right (as defined below) and purchase shares of Class A Common Stock under the Plan on the Exercise Date for each Purchase Period ending during the Offering Period. Notwithstanding the foregoing, and notwithstanding anything in the Plan to the contrary, to the extent that my accumulated payroll deductions would result in my ability to purchase more than shares of Class A Common Stock during any Offering Period (the "Offering Period Maximum"), I understand and agree that I will only be permitted to purchase a number of shares of Class A Common Stock equal to the Offering Period Maximum, and that any excess payroll deductions remaining after such purchase will be returned to me as soon as practicable following the expiration of such Offering Period.

Regardless of any action the Company or, if applicable, any Parent or Subsidiary takes with respect to any or all income tax, social insurance, payroll tax, payment on account or other tax-related items related to the participation in the Plan and legally applicable to me ("Tax-Related Items"), I acknowledge that the ultimate liability for all Tax-Related Items is and remains my responsibility and may exceed the amount actually withheld by the Company or, if applicable, any Parent or Subsidiary. I further acknowledge that the Company or, if applicable, any Parent or Subsidiary (1) makes no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Purchase Right (as defined below) to purchase a number of shares of Class A Common Stock determined by dividing such Eligible Employee's Contributions accumulated prior to such Exercise Date and retained in the Eligible Employee's account as of the Exercise Date by the applicable Purchase Price (the "Purchase Right"), including, but not limited to, the grant or exercise of the Purchase Right, purchase of shares of Class A Common Stock upon exercise of the Purchase Right, the subsequent sale of shares of Class A Common Stock acquired pursuant to such exercise and the receipt of any dividends and/or any dividend equivalents; and (2) does not commit to and are under no obligation to structure the terms of the Purchase Right or any aspect of the Purchase Right to reduce or eliminate the my liability for Tax-Related Items or achieve any particular tax result. Further, if I am subject to tax in more than one jurisdiction, I acknowledge that the Company or, if applicable, any Parent or Subsidiary may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

Prior to any relevant taxable or tax withholding event, as applicable, I will pay or make adequate arrangements satisfactory to the Company or, if applicable, any Parent or Subsidiary to satisfy all Tax-Related Items. In this regard, I authorize the Company or, if applicable, any Parent or Subsidiary, or their respective agents, at their discretion, to satisfy their withholding obligations with regard to all Tax-Related Items by one or a combination of the following:

(a) withholding from my wages or other cash compensation paid to me by the Company or, if applicable, any Parent or Subsidiary;

(b) withholding from proceeds of the sale of shares of Class A Common Stock acquired upon exercise of the Purchase Right either through a voluntary sale or through a mandatory sale arranged by the Company (on my behalf pursuant to this authorization without further consent); or

(c) withholding in shares of Class A Common Stock to be purchased upon exercise of the Purchase Right.

Depending on the withholding method, the Company may withhold or account forTax-Related Items by considering applicable minimum statutory withholding rates or other applicable withholding rates, including maximum applicable rates, in which case I will receive a refund of any over-withheld amount in cash and will have no entitlement to the shares of Class A Common Stock equivalent. If the obligation for Tax-Related Items is satisfied by withholding in shares of Class A Common Stock, for tax purposes, I am deemed to have been purchased the full number of shares of Class A Common Stock subject to the Purchase Right, notwithstanding that a number of the shares of Class A Common Stock are held back solely for the purpose of paying the Tax-Related Items

due as a result of any aspect of the participation in the Plan. Finally, I must pay to the Company or, if applicable, any Parent or Subsidiary any amount of Tax-Related Items that the Company or, if applicable, any Parent or Subsidiary may be required to withhold or account for as a result of my participation in the Plan that cannot be satisfied by the means previously described. The Company may refuse to sale or deliver the shares of Class A Common Stock or the proceeds of the sale of shares of Class A Common Stock, if I fail to comply with my obligations in connection with the Tax-Related Items.

5. I have received a copy of the complete Plan and its accompanying prospectus. I understand that my participation in the Plan is in all respects subject to the terms of the Plan, including this Subscription Agreement. The Company reserves the right to modify the Plan and to impose other requirements on my participation in the Plan, on the option and on any shares of Common Stock purchased under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons. I agree to be bound by such modifications regardless of whether notice is given to me of such event, subject, in any case, to my right to withdraw from participation in the Plan. I further agree to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

6. I understand that if I dispose of any shares of Class A Common Stock received by me pursuant to an Offering within two (2) years after the applicable Enrollment Date (generally the first Trading Day of the applicable Offering Period) or one (1) year after the applicable Exercise Date (generally the last Trading Day of the applicable Purchase Period), I will be treated for U.S. federal income tax purposes as having received ordinary income at the time of such disposition in an amount equal to the excess of the Fair Market Value of the shares of Class A Common Stock at the time such shares of Class A Common Stock were purchased by me over the Purchase Price. I hereby agree to notify the Company in writing within thirty(30) days after the date of any disposition of my shares of Class A Common Stock and I will make adequate provision for U.S. federal, state or other tax withholding obligations, if any, which arise upon the disposition of the shares of Class A Common Stock. The Company may, but will not be obligated to, withhold from my compensation the amount necessary to meet any applicable withholding obligation including any withholding necessary to make available to the Company any tax deductions or benefits attributable to the sale or early disposition of shares of Class A Common Stock by me. If I dispose of such shares of Class A Common Stock at any time after the expiration of the two (2)-year and one (1)-year holding periods described above, I understand that I will be treated for U.S. federal income tax purposes as having received income only at the time of such disposition, and that such income will be taxed as ordinary income only to the extent of an amount equal to the lesser of: (a) the amount by which the Fair Market Value of the shares of Class A Common Stock on the date of the disposition exceeds the Purchase Price paid for the shares of Class A Common Stock (generally 85% of the Fair Market Value of the shares of Class A Common Stock on the Enrollment Date or on the Exercise Date, whichever is lower), or (b) 15% of the Fair Market Value of the shares of Class A Common Stock on the Enrollment Date. The remainder of the gain, if any, recognized on such disposition will be taxed as capital gain.

7. By electing to participate in the Plan, I hereby acknowledge and agree that:

(a) The Plan is established voluntarily by the Company. It is discretionary in nature and it may be modified, amended, suspended or terminated by the Company at any time, unless otherwise provided in the Plan and this Subscription Agreement.

(b) The grant of the Purchase Right is voluntary and occasional and does not create any contractual or other right to receive future grants of the Purchase Right, or benefits in lieu of the Purchase Right, even if the Purchase Rights have been granted repeatedly in the past.

(c) All decisions with respect to future Purchase Right grants, if any, will be at the sole discretion of the Company.

(d) The Purchase Right grant and my participation in the Plan shall not create a right to further employment or service or be interpreted as forming an employment or service contract with the Company or, if applicable, any Parent or Subsidiary and shall not interfere with the ability of with the Company or, if applicable, any Parent or Subsidiary to terminate my service or employment, subject to applicable law.

(e) I am voluntarily participating in the Plan.

(f) The Purchase Rights, any shares of Class A Common Stock acquired under the Plan and the income and value of the same are an extraordinary item that does not constitute compensation of any kind for service of any kind rendered to the Company or, if applicable, any Parent or Subsidiary, and which is outside the scope of my employment contract, if any.

(g) The Purchase Rights are not part of normal or expected compensation or salary for any purpose, including, but not limited to, calculating any severance, resignation, termination, redundancy, end-of-service payments, bonuses, long-service awards, pension or retirement benefits or similar payments.

(h) The Purchase Rights, the shares of Class A Common Stock and the value and income of same are not part of normal or expected compensation or salary for any purpose.

(i) In the event that I am not an employee of the Company or, if applicable any Parent or Subsidiary, the Purchase Rights grant will not be interpreted to form an employment contract or relationship with the Company or, if applicable, any Parent or Subsidiary.

(j) The future value of the underlying shares of Class A Common Stock is unknown, indeterminable and cannot be predicted with certainty. The value of the shares of Class A Common Stock may increase or decrease even below the Purchase Price.

(k) No claim or entitlement to compensation or damages will arise from forfeiture of the Purchase Rights resulting from my termination as an employee or service provider, as applicable (for any reason whatsoever and whether or not in breach of applicable laws), and in consideration of the grant of the Purchase Right to which I am otherwise not entitled, I irrevocably agree never to institute any claim against the Company, any Parent or Subsidiary, waive my ability, if any, to bring such claim against the Company, any Parent or Subsidiary,

and release the Company, any Parent or Subsidiary from any such claim; if, notwithstanding the foregoing, any such claim is allowed by a court of competent jurisdiction, then, by participating in the Plan, I shall be deemed irrevocably to have agreed not to pursue such claim and agree to execute any and all documents necessary, or reasonably requested by the Company, to request dismissal or withdrawal of such claims.

(l) None of the Company, any Parent or Subsidiary will be liable for any foreign exchange rate fluctuation between any local currency and the United States Dollar that may affect the value of the Purchase Right, any amounts due to me pursuant to the exercise of the Purchase Rights or the subsequent sale of any purchased shares of Class A Common Stock.

8. *Data Privacy*.

The following provisions shall only apply to me if I reside outside the European Economic Area:

(a) I voluntarily consent to the collection, use, disclosure and transfer to the United States and other jurisdictions, in electronic or other form, of my personal data as described in this Subscription Agreement and any other award materials ("Data") by and among, as applicable, the Company and any Parent or Subsidiary for the exclusive purpose of implementing, administering, and managing my participation in the Plan.

(b) I understand that the Company and any Parent or Subsidiary may collect, maintain, process and disclose, certain personal information about me, including, but not limited to, my name, home address and telephone number, date of birth, social insurance number or other identification number, salary, nationality, job title, any shares of Class A Common Stock or directorships held in the Company, details of all equity awards or any other entitlement to stock awarded, canceled, exercised, vested, unvested or outstanding in my favor, for the exclusive purpose of implementing, administering and, managing the Plan.

(c) I understand that Data will be transferred to one or more stock plan service provider(s) selected by the Company, which may assist the Company with the implementation, administration and management of the Plan. I understand that the recipients of the Data may be located in the United States or elsewhere, and that the recipient's country (e.g., the United States) may have different, including less stringent, data privacy laws and protections than my country. I understand that if I reside outside the United States, I may request a list with the names and addresses of any potential recipients of the Data by contacting my local human resources representative. I authorize the Company and any other possible recipients that may assist the Company (presently or in the future) with implementing, administering and managing the Plan to receive, possess, use, retain and transfer the Data, in electronic or other form, for the sole purposes of implementing, administering and managing my participation in the Plan.

(d) I understand that Data will be held only as long as is necessary to implement, administer and manage my participation in the Plan, including to maintain records regarding participation. I understand that if I reside in certain jurisdictions, to the extent required by applicable laws, I may, at any time, request access to Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents given by accepting these Purchase Rights, in any case without cost, by contacting in writing my local human resources representative. Further, I understand that I am providing these consents on a purely voluntary basis. If I do not consent or if I later seek to revoke my consent, my engagement as a service provider with the Company or any Parent or Subsidiary will not be adversely affected; the only consequence of refusing or withdrawing my consent is that the Company will not be able to grant me awards under the Plan or administer or maintain awards. Therefore, I understand that refusing or withdrawing my consent may affect my ability to participate in the Plan (including the right to retain these Purchase Rights). I understand that I may contact my local human resources representative for more information on the consequences of my refusal to consent or withdrawal of consent.

The following provisions shall only apply to me if I reside in the European Economic Area or the United Kingdom:

(a) Data Collected and Purposes of Collection. I understand that the Company, acting as controller, as well as the employer, may collect, to the extent permissible under applicable law, certain personal information about my, including name, home address and telephone number, information necessary to process the Purchase Right (e.g., mailing address for a check payment or bank account wire transfer information), date of birth, social insurance number or other identification number, salary, nationality, job title, employment location, any capital shares or directorships held in the Company (but only where needed for legal or tax compliance), any other information necessary to process mandatory tax withholding and reporting, details of all Purchase Rights granted, canceled, vested, unvested or outstanding in my favor, and where applicable service termination date and reason for termination (all such personal information is referred to as "Data"). The Data is collected from me, any Parent or Subsidiary, and from the Company, for the exclusive purpose of implementing, administering and managing the Plan pursuant to the terms of this Subscription Agreement. The legal basis (that is, the legal justification) for processing the Data is to perform this Subscription Agreement. The Data must be provided in order for me to participate in the Plan and for the parties to this Subscription Agreement to perform their respective obligations thereunder. If I do not provide Data, I will not be able to participate in the Plan and become a party to this Subscription Agreement.

(b) Transfers and Retention of Data. I understand that my employer will transfer Data to the Company for purposes of plan administration. The Company and the employer or any Parent or Subsidiary may also transfer the my Data to other service providers (such as accounting firms, payroll processing firms or tax firms), as may be selected by the Company in the future, to assist the Company with the implementation, administration and management of this Subscription Agreement. I understand that the recipients of the Data may be located in the United States, a country that does not benefit from an adequacy decision issued by the European Commission. Where a recipient is located in a country that does not benefit from an adequacy decision, the transfer of the Data to that recipient will be made pursuant to European Commission-approved standard contractual clauses, a copy of which may be obtained at gc@10xgenomics.com. I understand that Data will be held only as long as is necessary to implement, administer and manage my rights and obligations under this Subscription Agreement, and for the duration of the relevant statutes of limitations, which may be longer than the term of this Subscription Agreement.

(c) Participant's Rights in Respect of Data. The Company will take steps in accordance with applicable legislation to keep Data accurate, complete and up-to-date. I am entitled to have any inadequate, incomplete or incorrect Data corrected (that is, rectified). I also have the right to request access to my Data as well as additional information about the processing of that Data. Further, I am entitled to object to the processing of Data or have my Data erased, under certain circumstances. As from May 25, 2018, and subject to conditions set forth in applicable law, I also am entitled to (i) restrict the processing of my Data so that it is stored but not actively processed (e.g., while the Company assesses whether I am entitled to have Data erased) and (ii) receive a copy of the Data provided pursuant to this Subscription Agreement or generated by me, in a common machine-readable format. To exercise my rights, I may contact the local human resources representative. I may also contact the relevant data protection supervisory authority, as I have the right to lodge a complaint. The data protection officer may be contacted at gc@10xgenomics.com.

9. The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. I hereby consent to receive such documents by electronic delivery and agree to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

10. I acknowledge that the Company is neither providing any tax, legal or financial advice, nor is the Company making any recommendations regarding my participation in the Plan or my acquisition or sale of the underlying shares of Class A Common Stock. I understand that I am hereby advised to consult with my own personal tax, legal and financial advisors regarding my participation in the Plan before taking any action related to the Plan.

11. This Subscription Agreement shall be governed by and construed in accordance with the internal laws of the State of Delaware applicable to contracts made and performed wholly within the State of Delaware, without giving effect to the conflict of laws provisions thereof.

12. I hereby agree to be bound by the terms of the Plan, including this Subscription Agreement which is incorporated and made a part thereof. The effectiveness of this Subscription Agreement is dependent upon my eligibility to participate in the Plan.

13. If I have received the Subscription Agreement or any other document related to the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control, subject to applicable laws.

14. I understand and agree that notwithstanding any provisions in the Plan and this Subscription Agreement, the grant of the Purchase Right shall be subject to any special terms and conditions set forth in the Appendix to this Subscription Agreement for my country. Moreover, if I relocate to one of the countries included in the Appendix, the special terms and conditions for such country will apply to me, to the extent the Company determines that the application of such provisions is necessary or advisable in order to comply with laws of the country where I reside or to facilitate the administration of the Plan. Appendix constitutes part of this Subscription Agreement.

Please print:

Participant's Name _____

Participant's Tax ID Number _____

Participant's Address _____

_____

_____

I ACKNOWLEDGE AND UNDERSTAND THAT THIS SUBSCRIPTION AGREEMENT AND MY PARTICIPATION IN THE PLAN WILL REMAIN IN EFFECT THROUGHOUT SUCCESSIVE OFFERING PERIODS UNLESS AFFIRMATIVELY TERMINATED BY ME.

Dated: _____

_____

Signature of Participant

APPENDIX

ADDITIONAL TERMS AND CONDITIONS OF THE

10x GENOMICS, INC.

2019 EMPLOYEE STOCK PURCHASE PLAN

SUBSCRIPTION AGREEMENT

FOR INTERNATIONAL PARTICIPANTS

This Appendix includes additional terms and conditions that govern the Purchase Right granted to me under the Plan if I reside in one of the countries listed below. Capitalized terms used but not defined in this Appendix have the meanings set forth in the Plan and/or the Subscription Agreement.

This Appendix also includes information regarding securities, exchange controls and/or certain other issues of which I should be aware with respect to participation in the Plan. Such laws are often complex and change frequently. As a result, the Company strongly recommends that I do not rely on the information in this Appendix as the only source of information relating to the consequences of participation in the Plan because the information may be out of date at the time I exercise the Purchase Right and purchase the shares of Class A Common Stock or I sell shares of Class A Common Stock purchased under the Plan. In addition, the information contained herein is general in nature and may not apply to my particular situation and the Company is not in a position to assure a particular result. Accordingly, I am advised to seek appropriate professional advice as to how the relevant laws in my country may apply to my situation. Finally, if I am a citizen or resident of a country other than the one in which I am currently working, the information contained herein may not be applicable to me.

GERMANY

Notifications

Exchange Control Information

Cross-border payments in excess of €12,500 must be reported monthly to the German Federal Bank (*Bundesbank*). In the event that I make or receive a payment in excess of this amount, I am required to report the payment to Bundesbank electronically using the "General Statistics Reporting Portal" ("*Allgemeines Meldeportal Statistik*") available via Bundesbank's website (www.bundesbank.de).

Securities Disclaimer

The participation in the Plan is exempt or excluded from the requirement to publish a prospectus under current rules as implemented in Germany.

NETHERLANDS

Notifications

I should be aware the Dutch insider trading rules, which may affect the sale of shares of Class A Common Stock acquired under the Plan. In particular, I may be prohibited from effecting certain share transactions if I have insider information regarding the Company. Below is a discussion of the applicable restrictions. I am advised to read the discussion carefully to determine whether the insider rules could apply to me. If it is uncertain whether the insider rules apply, the Company recommends that I consult with a legal advisor. The Company cannot be held liable if I violate the Dutch insider trading rules. I am responsible for ensuring my compliance with these rules.

Prohibition Against Insider Trading

I should be aware of the Dutch insider trading rules, which may affect the sale of shares of Class A Common Stock acquired under the Plan. In particular, I may be prohibited from effecting certain share transactions if I have insider information regarding the Company. Below is a discussion of the applicable restrictions. I am advised to read the discussion carefully to determine whether the insider rules could apply to me. If it is uncertain whether the insider rules apply, the Company recommends that I consult with a legal advisor. The Company cannot be held liable if I violate the Dutch insider trading rules. I am responsible for ensuring my compliance with these rules.

Dutch securities laws prohibit insider trading. As of 3 July 2016, the European Market Abuse Regulation (MAR), is applicable in the Netherlands. For further information, I am referred to the website of the Authority for the Financial Markets (*AFM*): https://www.afm.nl/en/professionals/onderwerpen/marktmisbruik.

Given the broad scope of the definition of inside information, certain employees of the Company working at its Dutch Subsidiary may have inside information and thus are prohibited from making a transaction in securities in the Netherlands at a time when they have such inside information. By entering into the Subscription Agreement and participating in the Plan, I acknowledge having read and understood the notification above and acknowledges that it is my responsibility to comply with the Dutch insider trading rules, as discussed herein.

Securities Disclaimer

The participation in the Plan is exempt or excluded from the requirement to publish a prospectus under current rules as implemented in the Netherlands.

SINGAPORE

Notifications

Securities Law Information

The grant of the Purchase Right under the Plan is being made pursuant to the "Qualifying Person" exemption under section 273(1)(f) of the Singapore Securities and Futures Act (Chapter 289, 2006 Ed.) ("SFA"). The Plan has not been lodged or registered as a prospectus with the Monetary Authority of Singapore. Further, the Purchase Rights granted under the Plan are subject to section 257 of the SFA and I am not permitted to sell, or offer to sell, any shares of Class A Common Stock in Singapore unless such sale or offer is made pursuant to the exemptions under Part XIII Division (1) Subdivision (4) (other than section 280) of the SFA.

Director Notification Obligation

Directors, associate directors or shadow directors of a Singapore Parent or Subsidiary are subject to certain notification requirements under the Singapore Companies Act. Among these requirements is an obligation to notify such entity in writing within two business days of any of the following events: (i) the acquisition or disposal of an interest (*e.g.*, the Purchase Rights granted under the Plan or shares of Class A Common Stock) in the Company or any Parent or Subsidiary, (ii) any change in previously-disclosed interests (*e.g.*, upon exercise of the Purchase Rights granted under the Plan), or (iii) becoming a director, associate director or shadow director of a Subsidiary in Singapore, if the individual holds such an interest at that time.

Insider Trading Notification

I should be aware of the Singapore insider-trading rules as these rules may impact my ability to acquire or dispose of shares of Class A Common Stock or rights to acquire shares (*e.g.*, the Purchase Rights granted under the Plan). Under the Singapore insider-trading rules, I am prohibited from selling shares of Class A Common Stock when I am in possession of information concerning the Company which is not generally available and which I know or should know will have a material effect on the price of such shares once such information is generally available.

SWEDEN

Notifications

Exchange Control

I understand and agree that foreign and local banks or financial institutions (including brokers) engaged in cross-border transactions generally may be required to report any payments to or from a foreign country exceeding a certain amount to The National Tax Board, which receives the information on behalf of the Swedish Central Bank (Sw.Riksbanken). This requirement may apply even if I have a brokerage account with a foreign broker.

Securities Disclaimer

The participation in the Plan is exempt or excluded from the requirement to publish a prospectus under current rules as implemented in Sweden.

UNITED KINGDOM

Notification

Securities Disclaimer

Neither this Subscription Agreement nor Appendices are an approved prospectus for the purposes of section 85(1) of the Financial Services and Markets Act 2000 ("FSMA") and no offer of transferable securities to the public (for the purposes of section 102B of FSMA) is being made in connection with the Plan. The Plan is exclusively available in the UK to bona fide employees and former employees and any other UK Subsidiary.

Non-Qualification

The Purchase Rights are not intended to be tax-qualified or tax-preferred for purposes of tax rules in the United Kingdom.

Tax Consultation

I understand that I may suffer adverse tax consequences as a result of my acquisition or disposition of the shares of Class A Common Stock. I represent that I will consult with any tax advisors I deem appropriate in connection with the acquisition or disposition of the shares of Class A Common Stock and that I am not relying on the Company or any Subsidiary for any tax advice.

10x GENOMICS, INC.

2019 EMPLOYEE STOCK PURCHASE PLAN

NOTICE OF WITHDRAWAL

Capitalized terms used but not otherwise defined herein shall have the respective meanings given to such terms in the 10x Genomics, Inc. (the "Company") 2019 Employee Stock Purchase Plan (the "Plan").

I, _____, hereby notify the Company that I hereby withdraw from the Offering Period of the Plan that began on_____. I hereby direct the Company to pay to me, as promptly as practicable, all the payroll deductions credited to my account with respect to such Offering Period (without interest) that has not been used to purchase shares of Class A Common Stock during a prior Exercise Date during such Offering Period. I understand and agree that my option for such Offering Period will be automatically terminated. I further understand that no additional payroll deductions will be made for the purchase of shares of Class A Common Stock in the current Offering Period and that I will be eligible to participate in succeeding Offering Periods only by delivering to the Company a new Subscription Agreement.

Please print:

Participant's Name _____

Participant's Tax ID Number _____

Participant's Address _____

_____

_____

Date: _____

_____

Signature of Participant

Exhibit 31.1

CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Serge Saxonov, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of 10x Genomics, 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 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 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 12, 2019

By: /s/ Serge Saxonov
Serge Saxonov
Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Justin McAnear, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of 10x Genomics, 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 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 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 12, 2019

By: /s/ Justin McAnear
Justin McAnear
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

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

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Serge Saxonov, the Chief Executive Officer of 10x Genomics, Inc. (the "Company"), hereby certify, that, to my knowledge:

1. The Quarterly Report on Form 10-Q for the period ended September 30, 2019 (the "Report") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 12, 2019

By: /s/ Serge Saxonov
Serge Saxonov
Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 32.2

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

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Justin McAnear, the Chief Financial Officer of 10x Genomics, Inc. (the "Company"), hereby certify, that, to my knowledge:

3. The Quarterly Report on Form 10-Q for the period ended September 30, 2019 (the "Report") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

4. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 12, 2019

By: /s/ Justin McAnear
Justin McAnear
Chief Financial Officer
(Principal Financial and Accounting Officer)