COMPLETE GENOMICS INC
Form 10-Q
May 10, 2011
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2011

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: 001-34939

Complete Genomics, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware **(State or Other Jurisdiction of Incorporation or Organization)**	**20-3226545** **(I.R.S. Employer Identification No.)**

2071 Stierlin Court

Mountain View, California **(Address of Principal Executive Offices)**	**94043** **(Zip Code)**

(650) 943-2800

(Registrant s Telephone Number, Including Area Code)

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 x

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ¨ No ¨

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

Large accelerated filer ¨	Accelerated filer ¨
Non-accelerated filer x (Do not check if a smaller reporting company)	Smaller reporting company ¨

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

As of April 29, 2011, the number of outstanding shares of the registrant s common stock, par value $0.001 per share, was 26,011,321.

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COMPLETE GENOMICS, INC.

FORM 10-Q FOR THE QUARTER ENDED MARCH 31, 2011

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PART I FINANCIAL INFORMATION

COMPLETE GENOMICS, INC.

CONDENSED BALANCE SHEETS

(UNAUDITED)

	March 31, 2011	December 31, 2010
	(in thousands, except par value and share data)	
Assets		
Current assets		
Cash and cash equivalents	$ 68,791	$ 68,918
Accounts receivable	7,385	4,943
Inventory	3,176	3,980
Prepaid expenses	770	1,101
Other current assets	54	78
Total current assets	80,176	79,020
Property and equipment, net	24,256	23,843
Other assets	657	297
Total assets	$ 105,089	$ 103,160
Liabilities, Convertible Preferred Stock and Stockholders Equity		
Current liabilities		
Accounts payable	$ 3,256	$ 3,066
Accrued liabilities	3,788	3,102
Notes payable, current	1,412	5,780
Deferred revenue	7,021	5,739
Total current liabilities	15,477	17,687
Notes payable, net of current	22,724	7,521
Deferred rent, net of current	4,132	4,316
Total liabilities	42,333	29,524
Commitments and contingencies (Note 6)		
Preferred stock, par value $0.001 5,000,000 shares authorized and no shares outstanding at March 31, 2011 and December 31, 2010		
Stockholders equity		
Common stock, $0.001 par value 300,000,000 shares authorized and 25,988,934 shares issued and outstanding at March 31, 2011; 300,000,000 shares authorized and 25,922,627 shares issued and outstanding at December 31, 2010	26	26
Additional paid-in capital	214,039	212,458
Accumulated deficit	(151,309)	(138,848)
Total stockholders equity	62,756	73,636
Total liabilities, convertible preferred stock and stockholders equity	$ 105,089	$ 103,160

See accompanying notes to condensed financial statements.

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COMPLETE GENOMICS, INC.

CONDENSED STATEMENTS OF OPERATIONS

(UNAUDITED)

	Three months ended March 31, 2011	Three months ended March 31, 2010
	(in thousands, except share and per share data)	
Revenue	$ 6,833	$ 336
Costs and expenses:		
Cost of revenues	6,582	
Start-up production costs		4,077
Research and development	6,808	6,169
General and administrative	2,780	3,099
Sales and marketing	2,700	1,226
Total costs and expenses	18,870	14,571
Loss from operations	(12,037)	(14,235)
Interest expense	(340)	(311)
Interest and other income (expense), net	(84)	210
Net loss	$ (12,461)	$ (14,336)
Net loss per share attributed to common stockholders basic and diluted	$ (0.48)	$ (51.15)
Weighted-average shares of common stock outstanding used in computing net loss per share attributed to common stockholders basic and diluted	25,959,929	280,283

See accompanying notes to condensed financial statements.

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COMPLETE GENOMICS, INC.

CONDENSED STATEMENTS OF CASH FLOWS

(UNAUDITED)

	Three months ended March 31,	
	2011	2010
Cash flows from operating activities		
Net loss	$ (12,461)	$ (14,336)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	2,544	1,309
Amortization of debt issuance costs		65
Issuance of common stock to founders		1,840
Increase in inventory reserves	32	
Change in fair value of warrant liability	96	(209)
Stock-based compensation	494	540
Noncash interest expense related to notes payable	27	43
Loss on the disposal of property and equipment	7	33
Changes in assets and liabilities		
Accounts receivable	(2,442)	(72)
Inventory	772	(364)
Prepaid expenses	331	4,616
Other current assets	24	63
Other assets	(110)	28
Accounts payable	96	401
Accrued liabilities	590	500
Deferred revenue	1,282	1,484
Deferred rent	(184)	(166)
Net cash used in operating activities	(8,902)	(4,225)
Cash flows from investing activities		
Purchase of property and equipment	(2,870)	(10,172)
Purchase of patent	(250)	
Net cash used in investing activities	(3,120)	(10,172)
Cash flows from financing activities		
Proceeds from notes payable	20,000	
Repayment of notes payable	(8,205)	(1,065)
Proceeds from issuance of convertible preferred stock, net of issuance costs		10,060
Exercise of stock options	100	8
Net cash provided by financing activities	11,895	9,003
Net decrease in cash and cash equivalents	(127)	(5,394)
Cash and cash equivalents at beginning of period	68,918	7,765
Cash and cash equivalents at end of period	$ 68,791	$ 2,371

Supplemental disclosure of cash flow information

Cash paid for interest	$	315	$	199
Supplemental disclosure of noncash investing and financing activities				
Issuance of warrants for common stock in connection with term debt	$	987	$	
Acquisition of property and equipment under accounts payable	$	94	$	1,440

See accompanying notes to condensed financial statements.

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Complete Genomics, Inc.

Notes to Financial Statements (unaudited)

1. THE COMPANY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations

Complete Genomics, Inc. (the Company) is a human genome sequencing company that has developed and commercialized a DNA sequencing platform for complete human genome sequencing and analysis. The Company s Complete Genomics Analysis Platform (CGA Platform) combines its proprietary human sequencing technology with its advanced informatics and data management software and its end-to-end outsourced service model to provide customers with data that is immediately ready to be used for genome-based research. The Company s solution provides academic and biopharmaceutical researchers with complete human genomic data and analysis without requiring them to invest in in-house sequencing instruments, high-performance computing resources and specialized personnel. In the DNA sequencing industry, complete human genome sequencing is generally deemed to be coverage of at least 90% of the nucleotides in the genome. The Company was incorporated in Delaware on June 14, 2005 and began operations in March 2006. Since inception, the Company has been engaged in developing its complete human genome sequencing technology, raising capital and recruiting personnel. In May 2010, the Company commenced full commercial operations.

These financial statements are prepared on a going concern basis that contemplates the realization of assets and discharge of liabilities in their normal course of business. The Company has incurred net operating losses and negative cash flows from operations during every year since inception. At March 31, 2011, the Company had an accumulated deficit of $151.3 million. Operating losses and negative cash flows may continue for the foreseeable future so failure to generate sufficient revenues, raise additional funds through public or private financings, or other arrangements, or reduce certain discretionary spending could have a material adverse effect on the Company s ability to achieve its intended business objectives. There can be no assurance that such additional financings, if needed, will be available on terms attractive to the Company, if at all. The Company s failure to raise capital when needed could have a material adverse effect on its business, financial condition and operating results. If additional funds are raised through the issuance of equity securities, the percentage ownership of the Company s then-current, stockholders would be reduced. Furthermore, such equity securities may have rights, preferences or privileges senior to those of the Company s currently outstanding common stock.

Basis of Presentation

The interim condensed financial statements have been prepared and presented by the Company in accordance with accounting principles generally accepted in the United States (GAAP) and the rules and regulations of the Securities and Exchange Commission, without audit, and reflect all adjustments necessary to present fairly the Company s interim financial information. The accounting principles and methods of computation adopted in these financial statements are the same as those of the audited financial statements for the year ended December 31, 2010.

The preparation of the Company s unaudited condensed financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the unaudited condensed financial statements and the reported amounts of expenses during the reporting period. Significant estimates include assumptions made in the liability for warrants to purchase common stock and stock-based compensation. Actual results could differ from those estimates.

Certain information and footnote disclosures normally included in the Company s annual financial statements prepared in accordance with GAAP have been condensed or omitted. The accompanying unaudited financial statements should be read in conjunction with the audited financial statements for the year ended December 31, 2010 included in the Company s Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 30, 2011. The financial results for any interim period are not necessarily indicative of financial results for the full year or any other interim period.

The Company operates in one segment, providing complete human genome sequencing and analysis.

Summary of Significant Accounting Policies

There have been no changes to the Company s significant accounting policies during the three months ended March 31, 2011 as compared to the significant accounting policies described in its audited financial statements included in the Company s Annual Report on Form 10-K for the year

ended December 31, 2010.

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2. CONCENTRATION OF CREDIT RISKS AND OTHER RISKS AND UNCERTAINTIES

The Company is subject to all of the risks inherent in an early-stage company developing a new approach to DNA sequencing. These risks include, but are not limited to, significant capital requirements, limited management resources, intense competition, dependence upon customer acceptance of the products in development and the changing nature of the DNA sequencing industry. The Company s operating results may be materially affected by the foregoing factors.

The Company depends on a limited number of suppliers, including single-source suppliers, of various critical components in the sequencing process. The loss of these suppliers, or their failure to supply the Company with the necessary components on a timely basis, could cause delays in the sequencing process and adversely affect the Company.

The Company derives accounts receivable from direct sales and amounts contractually due, but not received, under contracts. The Company reviews its exposure to accounts receivable and generally requires no collateral for any of its accounts receivable. The allowance for doubtful accounts is the Company s best estimate of the amount of expected credit losses existing in accounts receivable and is based upon specific customer issues that have been identified. As of March 31, 2011 and December 31, 2010, the Company has not recorded any allowance for doubtful accounts.

The Company allocates its revenues to individual countries based on the primary locations of its customers.

As of March 31, 2011 and December 31, 2010, customers representing greater than 10% of accounts receivable were as follows:

Customer	March 31, 2011	December 31, 2010
Customer F	25%	27%
Customer G	*	16%
Customer D	17%	*
Customer E	18%	*

* *Less than 10%*

For the three months ended March 31, 2011 and 2010, customers representing greater than 10% of revenue were as follows:

Customer	Three months ended March 31, 2011	Three months ended March 31, 2010
Customer A	*	30%
Customer B	*	30%
Customer C	*	30%
Customer D	34%	*
Customer E	18%	*

* *Less than 10%*

For the three months ended March 31, 2011 and 2010, countries representing greater than 10% of revenue were as follows:

Country	Three months ended March 31, 2011	Three months ended March 31, 2010
United States	70%	70%

Canada	*	30%
The Netherlands	24%	*
Other	*	*

* *Less than 10%*

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3. NET LOSS PER SHARE

Basic net loss per share is computed by dividing net loss attributed to common stockholders by the weighted-average number of common shares outstanding during the period. The Company s potential dilutive shares, which include outstanding common stock options and restricted stock units, convertible preferred stock and warrants, have not been included in the computation of diluted net loss per share for all periods as the result would be anti-dilutive. Such potentially dilutive shares are excluded when the effect would be to reduce the net loss per share.

The following outstanding shares of potentially dilutive securities 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:

	March 31,	
	2011	2010
Options to purchase common stock	2,875,125	2,430,287
Restricted stock units for common stock	27,500	
Warrants to purchase convertible preferred stock		384,153
Warrants to purchase common stock	2,165,323	1,630,629
Convertible preferred stock (on an as-if converted basis)		10,533,490
Total	5,067,948	14,978,559

4. FAIR VALUE MEASUREMENT

Assets and liabilities recorded at fair value in the financial statements are categorized based upon the level of judgment associated with the inputs used to measure their fair value. Hierarchical levels which are directly related to the amount of subjectivity associated with the inputs to the valuation of these assets or liabilities are as follows:

Level 1: Observable inputs, such as quoted prices in active markets for identical assets or liabilities.

Level 2: Observable inputs, other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3: Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following tables set forth the Company s financial instruments that are measured at fair value on a recurring basis as of March 31, 2011 and December 31, 2010 and by level within the fair value hierarchy. Assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company s assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and consider factors specific to the asset or liability.

As of March 31, 2011, the Company s fair value hierarchy for its financial assets and financial liabilities that are carried at fair value was as follows:

	Level 1	Level 2	Level 3	Total
		(in thousands)		
Assets				
Money market fund (included in Cash and cash equivalents)	$ 40,634	$	$	$ 40,634
Liabilities				
Warrants to purchase common stock (included in accrued liabilities)	$	$	$ 378	$ 378

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As of December 31, 2010, the Company s fair value hierarchy for its financial assets and financial liabilities that are carried at fair value was as follows:

	Level 1	Level 2	Level 3	Total
		(in thousands)		
Assets				
Money market fund (included in cash and cash equivalents)	$ 50,623	$	$	$ 50,623
Liabilities				
Warrants to purchase common stock (included in accrued liabilities)	$	$	$ 282	$ 282

The Company valued its warrant liabilities using the Black-Scholes option pricing model. The expected term for these warrants is based on the remaining contractual life of these warrants. The expected volatility assumption was determined by examining the historical volatility for industry peers, as the Company did not have a sufficient trading history for its common stock. The risk-free interest rate assumption is based on U.S. Treasury investments whose term is consistent with the expected term of the warrants and purchase rights. The expected dividend assumption is based on the Company s history and expectation of dividend payouts.

The change in the fair value of the common stock warrant liability is summarized below:

	(in thousands)
Fair value at December 31, 2010	$ 282
Increase in the fair value recorded in interest and other income (expense), net	96
Fair value at March 31, 2011	$ 378

5. BALANCE SHEET COMPONENTS

Inventory

Inventory consists of the following:

	March 31, 2011	December 31, 2010
	(in thousands)	
Raw materials	$ 944	$ 1,426
Work-in-progress	1,559	1,917
Finished goods	673	637
	$ 3,176	$ 3,980

Property and Equipment, Net

Property and equipment, net, consist of the following:

	March 31, 2011	December 31, 2010
	(in thousands)	
Computer equipment	$ 7,688	$ 7,519

Computer software	1,863	1,857
Furniture and fixtures	354	354
Machinery and equipment	20,402	19,362
Leasehold improvements	7,301	7,024
Equipment under construction	1,502	37
	39,110	36,153
Less: Accumulated depreciation and amortization	(14,854)	(12,310)
	$ 24,256	$ 23,843

Depreciation and amortization expense for the three months ended March 31, 2011 and 2010 was $2.5 million and $1.3 million, respectively.

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Accrued Liabilities

Accrued liabilities consist of the following:

	March 31, 2011	December 31, 2010
	(in thousands)	
Accrued compensation and benefits	$ 2,164	$ 1,934
Warrants to purchase common stock	378	282
Deferred rent, current	719	702
Other	527	184
	$ 3,788	$ 3,102

Intangible Assets, Net

In March 2006, the Company entered into an intellectual property agreement with Callida Genomics, Inc. for licenses related to the Company s core technology. Under the agreement, the Company has made annual payments of $250,000 for a duration of six years beginning in March 2006. Prior to March 2011, the payments are recorded in research and development expense. In 2011, the Company exited the development stage. Accordingly, the $250,000 licensing payment made in March 2011 is recorded as intangible assets in Other Assets. The intangible assets have an estimated useful life of five years and as of March 31, 2011, there was no accumulated amortization recorded.

6. COMMITMENTS AND CONTINGENCIES

Oxford Loan Agreement

On March 25, 2011, the Company entered into a loan and security agreement (the Oxford Loan and Security Agreement) with Oxford Finance Corporation (Oxford). The Oxford Loan Agreement provides for a term loan of $20.0 million. The outstanding balance of the term loan must be repaid in full by October 1, 2014 (the Maturity Date). Under the terms of the Oxford Loan Agreement, the outstanding balance accrues interest at a rate of 9.80% per annum. Until May 1, 2012 (the Amortization Date), the Company is required to make monthly payments equal to the accrued interest on the outstanding loan balance, and, following the Amortization Date through the Maturity Date the outstanding loan balance will be repaid in thirty (30) equal monthly payments of principal and interest.

As a condition to the Oxford Loan Agreement, a portion of the term loan was used to repay the remaining balance of $7.4 million on the Company s existing loan agreement with Comerica. Following repayment of the outstanding indebtedness, the Loan and Security Agreement with Comerica was terminated. The remainder of the term loan will be used to fund the Company s working capital requirements.

The term loan is secured by a senior priority on all of the Company s assets, excluding the Company s intellectual property and those assets securing borrowings under the Loan and Security Agreement with Atel (the Atel Loan Agreement). In addition, the Company has agreed not to pledge its intellectual property to another entity without Oxford s approval or consent.

In connection with the entry into the Oxford Loan Agreement, the Company issued to Oxford warrants to purchase an aggregate of 160,128 shares of common stock at an exercise price of $7.495 per share (Note 7). The warrants expire on the seventh anniversary of the issuance date. The Company also agreed to provide Oxford certain registration rights covering the warrants.

The Oxford Loan Agreement contains customary representations and warranties, covenants, closing and advancing conditions, events of defaults and termination provisions by, among and for the benefit of the parties. The affirmative covenants include, among other things, that the Company timely file taxes, maintain certain operating accounts subject to control agreements in favor of Oxford, maintain liability and other insurance, and pledge security interests in any ownership interest of a future subsidiary. The negative covenants preclude, among other things, disposing of certain assets, engaging in any merger or acquisition, incurring additional indebtedness, encumbering any collateral, paying dividends or making prohibited investments, in each case, without the prior consent of Oxford. The Oxford Loan Agreement provides that an event of default will occur if (1) there is a material adverse change in the Company s business, operations or condition (financial or otherwise), (2) there is a material impairment in the prospects of the Company repaying any portion of its obligations under the term loan, (3) there is a material impairment in the value of the collateral pledged to secure the Company s obligations under the agreement or in Oxford s perfection or

priority over the collateral, (4) the Company defaults in the payment of any amount payable under the agreement when due, or (5) the Company breaches any negative covenant or certain affirmative covenants in the agreement (subject to a grace period in some cases). The repayment of the term loan is accelerated following the occurrence of an event of default or otherwise, requiring the Company to immediately pay to Oxford an amount equal to the sum of: (i) all outstanding principal plus accrued but unpaid interest, (ii) the prepayment fee, (iii) the final payment, plus (iv) all other sums, that shall have become due and payable but have not been paid, including interest at the default rate with respect to any past due amounts. As of March 31, 2011, the Company was in compliance with all the covenants.

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The Company paid to Oxford an aggregate of approximately $100,000 in commitment fees in connection with the Oxford Loan Agreement. In connection with the entry into the Oxford Loan Agreement, the Company and Atel amended the Atel Loan Agreement for certain technical and administrative amendments.

Atel Loan Agreement

The Atel Loan Agreement consists of a $6.0 million term loan for equipment purchases. Under the terms of the Atel Loan Agreement, the term loan balance is being repaid in 36 equal monthly payments of principal and interest. Interest accrues on the term loan at a rate of 11.26% per annum. The outstanding borrowings under the term loan are collateralized by a senior priority interest in certain of the Company s current property and equipment, and all property and equipment that is purchased during the term of the Atel Loan Agreement.

In connection with the Atel Loan Agreement, the Company issued to Atel a warrant to purchase 49,834 shares of the Company s common stock at an exercise price of $7.224 per share, as discussed in Note 7.

The Atel Loan Agreement contains customary representations and warranties, covenants, closing and advancing conditions, events of defaults and termination provisions by, among and for the benefit of the parties. The affirmative covenants include, among other things, that the Company maintain liability and other insurance and pledge security interests in any ownership interest of a future subsidiary. The negative covenants preclude, among other things, disposing of certain assets, engaging in any merger or acquisition, incurring additional indebtedness, encumbering any collateral, paying dividends or making prohibited investments, in each case, without the prior consent of Atel. As of March 31, 2011, the Company was in compliance with all the covenants.

Legal Proceedings

On August 3, 2010, a patent infringement lawsuit was filed by Illumina, Inc. and Solexa, Inc. (an entity acquired by Illumina), or the plaintiffs, against the Company in the U.S District Court in Delaware. The case caption is *Illumina, Inc. and Solexa, Inc. v. Complete Genomics, Inc.*, Civil Action No. 10-649. The complaint alleges that Complete Genomics Analysis Platform, and in particular the combinatorial probe anchor ligation technology, infringes upon three patents held by Illumina and Solexa. The plaintiffs seek unspecified monetary damages and injunctive relief. If the Company is found to infringe one or more valid claims of a patent-in-suit and if the district court grants an injunction, the Company may be forced to redesign portions of our sequencing process, seek a license or cease the infringing activity. On September 23, 2010, the Company filed an answer to the complaint as well as its counterclaims against the plaintiffs. On November 9, 2010, the U.S. District Court in Delaware granted the Company s motion to transfer the case to the Northern District of California. On May 5, 2011, the Court entered a stipulated order to dismiss two patents from the lawsuit. The dismissal is without prejudice but includes conditions on the ability to file lawsuits on these patents, including a limitation that Illumina may not re-file such lawsuits against the Company until the later of (1) August 1, 2012, or (2) the exhaustion of all appeal rights in both (a) the pending reexaminations in the U.S. Patent and Trademark Office and (b) the pending civil litigation in which these patents are also asserted, *Life Technologies Corp. v. Illumina*, Case No. 11-CV703 (S.D. Cal.). The Company believes that it has substantial and meritorious defenses to the plaintiffs claims and intend to vigorously defend its position. However, a negative outcome in this matter could have a material adverse effect on the Company s financial position, results of operations, cash flows and business. The Company is not currently able to estimate the potential loss, if any, that may result from this litigation.

From time to time, the Company may become involved in other legal proceedings and claims arising in the ordinary course of its business. Other than as described above, the Company is not currently a party to any legal proceedings the outcome of which, if determined adversely to the Company, would individually or in the aggregate have a material adverse effect on its business, operating results, financial condition or cash flows.

7. WARRANTS FOR COMMON STOCK

In March 2011, the Company issued a warrant to purchase 160,128 shares of common stock at an exercise price of $7.495 per share in connection with the Oxford Loan Agreement. The warrant expires on the seventh anniversary of its issuance date. The initial fair value of the warrant was calculated using the Black-Scholes option pricing model with the following assumptions: seven year contractual term; 75.01% volatility; 0% dividend rate; and a risk-free interest rate of 2.87%. The fair value of the warrant was determined to be $987,000 and was recorded as equity in additional paid-in capital and a discount to the carrying value of the loan.

The discount is being amortized to interest expense using the effective interest rate method over the 42-month term of the loan.

In December 2010, the Company issued a warrant to purchase 49,834 shares of common stock at an exercise price of $7.224 per share in connection with the Atel Loan Agreement. The warrant expires on the tenth anniversary of its issuance date. The initial fair value of the warrant

was calculated using the Black-Scholes option pricing model with the following assumptions: 10 year contractual term; 76.2% volatility; 0% dividend rate; and a risk-free interest rate of 3.33%. The fair value of the warrant was determined to be $282,000 and was recorded as liability and a discount to the carrying value of the loan. The fair value of the warrant was recorded as a liability due to certain mandatory redemption features at the option of the holder. The discount is being amortized to interest expense using the effective interest rate method over the three-year term of the loan. These warrants will be marked to market each reporting period and the fair value will be impacted in part by the change in the Company s stock price, among other factors.

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8. STOCK-BASED COMPENSATION

Stock-based Compensation Plans

The number of shares reserved for issuance under the 2010 Equity Incentive Award Plan (the 2010 Plan) and the Employee Stock Purchase Plan (the ESPP) increased by 1,036,905 shares and 518,452 shares, respectively, effective January 1, 2011. As of March 31, 2011, there were 3,938,944 and 1,268,452 shares available to be granted under the 2010 Plan and the ESPP, respectively.

Compensation Expense

During the three months ended March 31, 2011 and 2010, the Company granted stock options to employees to purchase common stock as follows:

	Three Months Ended March 31,	
	2011	2010
	(in thousands, except share and per share amounts)	
Number of options granted to employees	103,700	915,189
Weighted-average grant date fair value per share of options granted to employees	$ 4.99	$ 1.70
Total fair value of options granted to employees which vested	$ 309	$ 177

During the three months ended March 31, 2011 and 2010, the Company did not grant any options to nonemployees nor did it grant any restricted stock units.

The following table summarizes the stock-based compensation expense from stock option and restricted stock unit awards to employees and nonemployees:

	Three Months Ended March 31,	
	2011	2010
	(in thousands)	
Employee awards	$ 473	$ 476
Nonemployee awards	21	64
Total compensation expense	**$ 494**	**$ 540**

As of March 31, 2011, the Company had unrecognized stock-based compensation expense related to unvested stock options and restricted stock units granted to employees of $3.9 million, which is expected to be recognized over the remaining weighted-average vesting period of 2.8 years.

9. SUBSEQUENT EVENTS

On May 5, 2011, the Company s Board of Directors approved the filing of a Registration Statement on Form S-1 with the Securities and Exchange Commission.

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ITEM 2. MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, a amended, 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. Forward-looking statements are based on our management s beliefs and assumptions and on information currently available to our management. All statements other than statements of historical factors are forward-looking statements for purposes of these provisions. In some cases you can identify forward-looking statements by terms such as may, will, should, could, would, expect, plan, anticipate, believe, estimate, project, predict, and potential, and similar expressions intended to identify forward-looking statements. Such forward-looking statements are subject to risks, uncertainties and other important factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled Risk Factors in this report. Furthermore, such forward-looking statements speak only as of the date of this report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

Overview

We are a life sciences company that has developed and commercialized a DNA sequencing platform for complete human genome sequencing and analysis, and our goal is to become the preferred solution for complete human genome sequencing and analysis. Our Complete Genomics Analysis Platform, or CGA Platform, combines our proprietary human genome sequencing technology with our advanced informatics and data management software and our innovative, end-to-end, outsourced service model to provide our customers with data that is immediately ready to be used for genome-based research. We believe that our solution provides academic and biopharmaceutical researchers with complete human genomic data and analysis at an unprecedented combination of quality, cost and scale without requiring them to invest in in-house sequencing instruments, high-performance computing resources and specialized personnel. By removing these constraints and broadly enabling researchers to conduct large-scale complete human genome studies, we believe that our solution has the potential to significantly advance medical research and expand understanding of the basis, treatment and prevention of complex diseases.

We have targeted our complete human genome sequencing service at academic, governmental and other research institutions, as well as pharmaceutical and other life science companies. In the DNA sequencing industry, complete human genome sequencing is generally deemed to be coverage of at least 90% of the nucleotides in the genome. We perform our sequencing service at our Mountain View, California headquarters facility, which began commercial operation in May 2010. In the near term, we expect to make significant expenditures related to the expansion of our Mountain View sequencing facility and our research and development initiatives, as well as to increase our sales and marketing and general and administrative expenses to support our commercial operations and anticipated growth. In future years, we may construct additional genome centers in the United States and in other strategic markets to accommodate an expected growing, global demand for high-quality, low-cost complete human genome sequencing on a large scale.

Our ability to generate revenue, and the timing of our revenue, will depend on generating new orders and contracts, receiving qualified DNA samples from customers and the rate at which we can convert our backlog of sequencing orders into completed and delivered data and the price per genome contracted with the customer. We define backlog as the number of genomes for which customers have placed orders that we believe are firm and for which no revenue has yet been recorded. As of March 31, 2011, we had a backlog of orders for sequencing over 2,000 genomes which we believe could result in approximately $15.0 million in revenue over the next 12 months. The speed with which we can convert orders into revenue depends principally on:

- the speed with which our customers provide us with qualified samples after submitting an order;
- the rate at which our system can sequence a genome; and
- the rate at which all significant contractual obligations are fulfilled.

The presence or absence in a specific quarter of one or more new large orders for hundreds of genomes combined with our uncertain sales cycle and changes in the variables that influence conversion of orders to revenue will cause our results of operations and our backlog to fluctuate on a quarterly basis, perhaps significantly from one quarter to the next. In addition, we have only recently engaged in commercial-scale manufacturing, so we have a very limited history on which we can rely in making predictions regarding operating variables such as equipment

failure, throughput yield, customer delivery of qualified genomic samples and other factors that could affect our ability to sequence genomes and recognize revenue.

We have not been profitable in any quarterly period since we were formed. We incurred net losses attributable to stockholders of $12.5 million and $14.3 million for the three months ended March 31, 2011 and 2010, respectively. For the three months ended March 31, 2011 and 2010, we recognized revenue of $6.8 million and $0.3 million, respectively. As of March 31, 2011, we had an accumulated deficit of $151.3 million.

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Although we do not anticipate any material seasonal effects, given our limited operating history as a revenue generating company, our sales cycle is uncertain. A limited number of customers accounted for all of the revenue we recognized for the three months ended March 31, 2011, with Pfizer and the University of Amsterdam accounting for approximately 34% and 18%, respectively, of this revenue. If demand for our services expands as expected, we do not anticipate that the loss of any of the customers named above would have a material adverse effect on our future results of operations.

Critical Accounting Policies and Estimates

Our management s discussion and analysis of our financial condition and results of operations are based on our unaudited financial statements that have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of our financial statements requires our management to make estimates, assumptions and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the applicable periods. Management bases its estimates, assumptions and judgments on historical experience and on various other factors that it believes to be reasonable under the circumstances. Different assumptions and judgments would change the estimates used in the preparation of our financial statements, which, in turn, could materially change the results from those reported. Our management evaluates its estimates, assumptions and judgments on an ongoing basis. Historically, our critical accounting estimates have not differed materially from actual results. However, if our assumptions change, we may need to revise our estimates, or take other corrective actions, either of which may also have a material adverse effect on our statements of operations, liquidity and financial condition.

There have been no significant changes in critical accounting policies during the three months ended March 31, 2011, as compared to the critical accounting policies described in *Management s Discussion and Analysis of Financial Condition and Results of Operations Critical Accounting Policies and Estimates* in our Annual Report on Form 10-K for the year ended December 31, 2010.

Results of Operations

During the three months ended March 31, 2010 we had not yet achieved full commercial production. Revenue during this period was derived from genomic samples that were sequenced on our prototype production instruments. In addition, a substantial number of our research and development employees operated in production capacities while we continued to develop and refine our commercial genome sequencing process and validate our prototype instruments in anticipation of full commercial production. As a result, the costs that we incurred related to the sequencing of genomic samples during this period have been included in start-up production costs in the statement of operations.

By 2011 we achieved full commercial production as the development of the commercial genome sequencing process was completed and employees were dedicated to the production process. Therefore, the costs we incurred sequencing genomic samples during the three months ended March 31, 2011 are included in cost of revenue in the statement of operations.

Start-up production costs and cost of revenue include the costs related to acceptance testing of customer genomic samples, sample preparation and sequencing, the processing of data generated by our sequencing instruments and delivery of data to our customers.

Comparison of Three Months Ended March 31, 2011 and 2010

The following table shows the amounts of the listed items from our statements of operations for the periods presented, showing period-over-period changes (in thousands, except for percentages).

	Three months ended March 31,		First Quarter 2011 vs. First Quarter 2010	
	2011	2010	$ Change	% Change
			(unaudited)	
Revenue	$ 6,833	$ 336	$ 6,497	1,934%
Costs and expenses:				
Costs of revenue	6,582		(6,582)	*
Start-up production costs		4,077	4,077	*
Research and development	6,808	6,169	(639)	(10)%
General and administrative	2,780	3,099	319	10%
Sales and marketing	2,700	1,226	(1,474)	(120)%

Total costs and expenses	18,870	14,571	(4,299)	(30)%
Loss from operations	(12,037)	(14,235)	2,198	15%
Interest expense	(340)	(311)	(29)	(9)%
Interest and other income (expense), net	(84)	210	(294)	(140)%
Net loss	$ (12,461)	$ (14,336)	$ 1,875	13%

* result is not meaningful

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Revenue

During the three months ended March 31, 2011, we recognized $6.8 million of revenue, compared to $0.3 million during the same period in 2010. In the three months ended March 31, 2010, we generated limited revenue from small-scale pilot projects. The significant revenue increase in the three months ended March 31, 2011 as compared to the corresponding period in 2010 reflects an increase in sequencing orders resulting from our expanded marketing and sales activities, which have expanded our customer base over the last nine months.

The per-genome price of our sequencing service is based principally on the number of genomes to be sequenced in the arrangement, with price per genome decreasing as order size increases. We anticipate periodically reducing the price per genome for our service as the costs of sequencing decreases and competitive conditions change. Average price per genome decreased from the fourth quarter of 2010 to the first quarter of 2011. Current pricing of genome services starts at $9,500 per genome for small order sizes and ranges to between $5,000 to $7,500 per genome for orders in the hundreds of genomes.

Costs of Revenue

During the three months ended March 31, 2011, we incurred $6.6 million of costs to provide our genome sequencing service. The $6.6 million of cost of revenue primarily consisted of $2.0 million in salaries and benefits expense, $1.7 million in depreciation expense and $0.8 million in materials.

We anticipate that these costs as a percentage of revenue will fluctuate as we increase sequencing capacity and our capacity utilization changes, as the sequencing price we charge to our customers changes and as we continue to improve and automate our human genome sequencing processes. However, we anticipate that our total cost of revenue will increase in absolute dollars as we sequence additional genomes and our revenue grows.

Start-up Production Costs

During the three months ended March 31, 2010, we incurred $4.1 million of start-up production costs to support the development of our genome sequencing service. The $4.1 million of start-up production costs primarily consisted of $1.4 million in salaries and benefits expense and $0.7 million in depreciation expense.

Research and Development

Research and development expenses were $6.8 million during the three months ended March 31, 2011, compared to $6.2 million during the three months ended March 31, 2010, representing an increase of $0.6 million, or 10%. The increase in research and development expenses was primarily due to an increase in salaries and benefits expense of $0.5 million and an increase of $0.8 million in genome sequencing costs due to an increase in the number of genomes sequenced for research purposes. These increases were partially offset by a decrease in bonus expense of $0.4 million. The increase in salaries and benefits cost is a result of increased headcount and refocusing of certain research and development resources that had been directed to start-up production activities in prior quarters.

We expect to continue to invest in research and development activities as we seek to enhance our sequencing processes, components and systems to improve the yield and throughput and reduce the cost of our sequencing service. Consequently, we believe that in the near future, our research and development expenses will increase.

General and Administrative

General and administrative expenses were $2.8 million for the three months ended March 31, 2011, compared to $3.1 million for the three months ended March 31, 2010, representing a decrease of $0.3 million, or 10%. The decrease in general and administrative expenses was primarily due to a $0.9 million reduction in stock-based compensation expense related to equity grants to two founders in the three months ended March 31, 2010. Consulting fees also decreased by $0.2 million in the first quarter of 2011 when compared to the same period in 2010. These decreases were partially offset by increases in employee salaries and benefits and legal and accounting fees of $0.3 million each. The increase in salaries and benefits expense was primarily due to increased headcount to support operations as a public company. In addition, outside services expense for legal and accounting support increased primarily due to operating as a public company.

We expect that general and administrative expenses will increase for the remainder of 2011 as we operate as a public company in 2011.

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Sales and Marketing

Sales and marketing expenses were $2.7 million during the three months ended March 31, 2011, compared to $1.2 million during the three months ended March 31, 2010, representing an increase of $1.5 million, or 120%. The increase in sales and marketing expenses is due primarily to an increase in employee salaries and benefits expense of $0.9 million, and an increase in consulting expense and seminar expense of $0.1 million each. The increase in expenses was primarily a result of the growth of our sales and marketing organization to support the increased sales activity and overall growth of the Company.

We expect that sales and marketing expenses will continue to increase for the remainder of 2011 as we increase our headcount for sales and marketing personnel to expand our customer base and to generate growth in terms of both complete human genomes ordered and revenues.

Interest Expense

During the three months ended March 31, 2011, we incurred interest expense of $340,000 compared to $311,000 during the three months ended March 31, 2010. The increase in interest expense of $29,000 between the two periods was primarily due to higher debt balances related to our loans.

Interest and Other Income (Expense), Net

Interest and other income (expense), net, for the three months ended March 31, 2011 was an expense of $0.1 million compared to income of $0.2 million for the three months ended March 31, 2010. The change between the two periods was primarily due to the change in the valuation of our warrant liability.

Liquidity and Capital Resources

Since our inception, we have generated operating losses in every quarter, resulting in an accumulated deficit of $151.3 million as of March 31, 2011. We have financed our operations to date primarily through private placements of preferred stock and promissory notes, borrowings under our credit facilities, proceeds from our initial public offering and term debt. As of March 31, 2011, we had working capital of $64.7 million, consisting of $80.2 million in current assets and $15.5 million in current liabilities. As of December 31, 2010, working capital was $61.3 million, consisting of $79.0 million in current assets and $17.7 million in current liabilities. Our cash is invested primarily in money market funds. Cash in excess of immediate operating requirements is invested in accordance with our investment policy, primarily with the goals of capital preservation and liquidity maintenance.

Cash Flows for the Three Months Ended March 31, 2011 and 2010

The following table summarizes our cash flows for the three months ended March 31, 2011 and 2010.

	Three months ended March 31,	
	2011	2010
	(in thousands)	
Net cash used in operating activities	$ (8,902)	$ (4,225)
Net cash used in investing activities	(3,120)	(10,172)
Net cash provided by financing activities	11,895	9,003
Net decrease in cash and cash equivalents	$ (127)	$ (5,394)

Operating Activities

Net cash used in operating activities was $8.9 million during the three months ended March 31, 2011 and consisted of a net loss of $12.5 million, offset by noncash items of $3.2 million and a net increase in operating assets and liabilities of $0.4 million. Noncash items for the three months ended March 31, 2011 consisted primarily of the change in valuation of our warrant liability of $0.1 million, depreciation expense of $2.5 million and stock-based compensation expense of $0.5 million. The significant items in the change in operating assets and liabilities include

an increase in accounts receivable of $2.4 million partially offset by a decrease in prepaid expenses and inventory of $0.3 million and $0.8 million, respectively, and increases in deferred revenue and accounts payable of $1.3 million and $0.1 million, respectively. The increase in accounts receivable and deferred revenue were due to increased revenue and advance billing arrangements during the first three months of 2011. The increase in accounts payable was due to purchases and expenses incurred as a result of the growth of the Company during the first three months of 2011.

Net cash used in operating activities was $4.2 million during the three months ended March 31, 2010 and consisted of a net loss of $14.3 million, offset by noncash items of $3.6 million and a net increase in operating assets and liabilities of $6.5 million. Noncash items for the three months ended March 31, 2010 consisted primarily of depreciation expense of $1.3 million, noncash compensation expense related to stock grants to our founders and stock-based compensation expense of $1.8 million and $0.5 million, respectively. The significant changes in operating assets and liabilities include increases in prepaid expenses and deferred revenues of $4.6 million and $1.5 million, respectively, offset by a decrease in inventory of $0.4 million.

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Investing Activities

Net cash used in investing activities was $3.1 million and $10.2 million for the three months ended March 31, 2011 and 2010, respectively. The amounts related entirely to purchases of property and equipment and a patent. The purchases of property and equipment during the first three months of 2011 and 2010 were primarily for sequencing equipment used in production.

Financing Activities

Net cash provided by financing activities during the three months ended March 31, 2011 of $11.9 million consisted primarily of $20.0 million in proceeds from our term loan with Oxford. These proceeds were partially offset by repayments on term loans of $8.2 million.

Net cash provided by financing activities during the three months ended March 31, 2010 of $9.0 million consisted primarily of $10.1 million in net proceeds from the issuance and sale of Series D preferred stock. These proceeds were partially offset by repayment of notes payable of $1.1 million.

Operating and Capital Expenditure Requirements

To date, we have not achieved profitability on a quarterly or annual basis. We expect our cash expenditures to increase significantly in the short-term. We plan to fund our short-term liquidity requirements using cash on hand at March 31, 2011. Our principal short-term liquidity needs are:

- to fund our working capital for commercial operations, including personnel costs and other operating expense;
- to expand the sequencing and computing capacity in our Mountain View and Santa Clara leased facilities;
- to finance the further development of our sequencing technology and services;
- to finance sales and marketing activities; and
- to service our debt obligations.

The cost of expansion of our current sequencing and supporting computing capacity in our Mountain View and Santa Clara, California leased facilities California in 2011 is estimated to be approximately $20.0 million. In addition, as a public company we also incur significant legal, accounting and other expenses that we did not incur as a private company. We anticipate that we will continue to incur net losses for the foreseeable future as we continue to expand our business and build our infrastructure. We believe that, based on our current level of operations and anticipated growth, the net proceeds from our initial public offering, our cash and cash equivalent balances, including interest income we earn on those balances, will be sufficient to meet our anticipated cash requirements for the 12 months from the date of this filing.

In addition to our continued expenditures for the expansion of our Mountain View sequencing facility, further development of our sequencing technology and services, and expansion of our sales and marketing activities, our principal long-term liquidity needs are:

- to fund our working capital for commercial operations, including any growth in working capital required by growth in our business;
- to finance the possible development of additional sequencing centers; and

to service our debt obligations.

Our current cash resources are insufficient to satisfy our long term liquidity requirements. Based on our current operating projections, we will need to raise additional capital to fund our operations in 2012 and expand our business to meet our long-term business objectives. Additional financing, which is not in place at this time, may be from the sale of equity or convertible or other debt securities in a public or private offering, from an additional credit facility, or strategic partnership coupled with an investment in our company or a combination of both. If we raise additional funds through the issuance of convertible debt securities, or other debt securities, these securities could have rights senior to those of our common stock and could contain covenants that restrict our operations. The issuance of any equity securities will also dilute the interest of our current stockholders.

We may be unable to raise sufficient additional financing on terms that are acceptable, if at all. Given the risks associated with our business, including our limited operating history and our new business model in an emerging industry, and recent difficulties for life sciences companies raising funds in the capital markets, we cannot guarantee that we will be able to raise additional capital in the amounts we require, if at all. Our failure to raise additional capital and in sufficient amounts will severely impact our ability to operate our business in 2012 and meet our long-term business objectives. The timing and amount of our future capital requirements will depend on many factors, including, but not limited to, the following:

- the financial success of our genome sequencing business;
- our ability to increase the genome sequencing capacity in our Mountain View facility;

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- whether we are successful in obtaining payments from customers;
- whether we can enter into collaborations and establish a recurring customer base;
- the progress and scope of our research and development projects;
- the filing, prosecution and enforcement of patent claims;
- the rate at which we establish possible additional genome sequencing centers and whether we can find suitable partners with which to establish those centers;
- the effect of any joint ventures or acquisitions of other businesses or technologies that we may enter into or make in the future; and
- the costs associated with lawsuits brought against us by third parties, including our current litigation with Illumina, Inc.

Our forecast of the period of time through which our financial resources will be adequate to support our operations and the costs to support our general and administrative, sales and marketing and research and development activities are forward-looking statements and involve risks and uncertainties. Actual results could vary materially and negatively as a result of a number of factors, including the factors discussed in our risk factors in Part II Item 1A below. We have based these estimates on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect.

Term Loans

On December 17, 2010, we entered into a loan and security agreement with Atel Ventures, Inc. (Atel). On March 25, 2011, we entered into a new loan and security agreement with Oxford Finance Corporation (Oxford).

Atel Loan Agreement

The loan and security agreement with Atel (the Atel Loan Agreement) consists of a $6.0 million term loan for equipment purchases, which is collateralized to secure the term loan. Under the terms of the Atel Loan Agreement, the term loan balance is being repaid in 36 equal monthly payments of principal and interest. Interest accrues on the term loan at a rate of 11.26% per annum. The outstanding borrowings under the term loan are collateralized by a senior priority interest in certain of our current property and equipment, and all property and equipment that was purchased during the term of the Atel Loan Agreement. In connection with entering into the loan and security agreement with Oxford, we and Atel made certain administrative and technical amendments to the Atel Loan Agreement.

In connection with the Atel Loan Agreement, we issued to Atel a warrant to purchase 49,834 shares of our common stock at an exercise price of $7.224 per share. The Atel Warrant expires on the 10th anniversary of the issuance date.

The Atel Loan Agreement contains customary representations and warranties, covenants, including closing and advancing conditions, events of defaults and termination provisions. The affirmative covenants include, among other things, that we maintain certain cash account balances, and liability and other insurance, and that we pledge security interests in any ownership interest of a future subsidiary. The negative covenants preclude us from, among other things, disposing of certain assets, engaging in any merger or acquisition, incurring additional indebtedness, encumbering any collateral, paying dividends or making prohibited investments, in each case without the prior consent of Atel. As of March 31, 2011, we were in compliance with all the covenants in the Atel Loan Agreement.

Oxford Loan Agreement

On March 25, 2011, we entered into a loan and security agreement (the Oxford Loan Agreement) with Oxford Finance Corporation (Oxford). The Oxford Loan Agreement provides for a term loan of $20.0 million. The outstanding balance of the term loan must be repaid in full by

October 1, 2014 (the Maturity Date). Under the terms of the Oxford Loan Agreement, the outstanding balance accrues interest at a rate of 9.80% per annum. Until May 1, 2012 (the Amortization Date), we must make monthly payments equal to the accrued interest on the outstanding loan balance, and, following the Amortization Date through the Maturity Date the outstanding loan balance will be repaid in thirty (30) equal monthly payments of principal and interest.

As a condition to the Oxford Loan Agreement, a portion of the term loan was used to repay the remaining balance of $7.4 million on our existing term loan agreement with Comerica. Following repayment of the outstanding indebtedness, the Comerica Loan Agreement was terminated. We intend to use the remainder of the Oxford term loan to fund our working capital requirements.

The term loan is secured by a senior priority on all of our assets, excluding our intellectual property and those assets securing borrowings under the Atel loan agreement. In addition, we have agreed not to pledge our intellectual property to another entity without Oxford s approval or consent.

In connection with the entry into the Oxford Loan Agreement, we issued to Oxford warrants to purchase an aggregate of 160,128 shares of our common stock (the Warrant Shares) at an exercise price of $7.495 per share. The warrants expire on the seventh anniversary of the issuance date. We also agreed to provide Oxford certain registration rights covering the Warrant Shares.

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The Oxford Loan Agreement contains customary representations and warranties, covenants, closing and advancing conditions, events of defaults and termination provisions. The affirmative covenants include, among other things, that we timely file taxes, maintain certain operating accounts subject to control agreements in favor of Oxford, maintain liability and other insurance, and pledge security interests in any ownership interest of a future subsidiary. The negative covenants preclude, among other things, disposing of certain assets, engaging in any merger or acquisition, incurring additional indebtedness, encumbering any collateral, paying dividends or making prohibited investments, in each case, without the prior consent of Oxford. The Oxford Loan Agreement provides that an event of default will occur if (1) there is a material adverse change in our business, operations or condition (financial or otherwise), (2) there is a material impairment in the prospects of us repaying any portion of our obligations under the term loan, (3) there is a material impairment in the value of the collateral pledged to secure our obligations under the agreement or in Oxford s perfection or priority over the collateral, (4) we default in the payment of any amount payable under the agreement when due, or (5) we breach any negative covenant or certain affirmative covenants in the agreement (subject to a grace period in some cases). The repayment of the term loan is accelerated following the occurrence of an event of default or otherwise, which would require us to immediately pay an amount equal to the sum of: (i) all outstanding principal plus accrued but unpaid interest, (ii) the prepayment fee, (iii) the final payment, plus (iv) all other sums, that shall have become due and payable but have not been paid, including interest at the default rate with respect to any past due amounts. As of March 31, 2011, we were in compliance with all the covenants.

Contractual Obligations and Commitments

There have been no material changes to our contractual obligations as reported in our Annual Report on Form 10-K for the year ended December 31, 2010, as filed with the Securities Exchange Commission on March 30, 2011.

Off-Balance Sheet Arrangements

We do not currently have, nor have we ever had, any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. In addition, we do not engage in trading activities involving non-exchange traded contracts.

ITEM 3: QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

As of March 31, 2011, our investment portfolio consists of money market funds. The primary objectives of our investment are to preserve capital and maintain liquidity. Our primary exposures to market risk are interest rate income sensitivity, which is affected by changes in the general level of U.S. interest rates, and conditions in the credit markets, including default risk. However, since all of our investments are in money market funds, we do not believe we are subject to any material market interest rate risk exposure. We do not have any foreign currency or any other derivative financial instruments.

ITEM 4: CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive and financial officers, evaluated the effectiveness of our disclosures controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of March 31, 2011. The term disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company s management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2011, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting during the quarter ended March 31, 2011 identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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PART II OTHER INFORMATION

ITEM 1: LEGAL PROCEEDINGS

On August 3, 2010, a patent infringement lawsuit was filed by Illumina, Inc. and Solexa, Inc. (an entity acquired by Illumina), or the plaintiffs, against us in the U.S District Court in Delaware. The case caption is *Illumina, Inc. and Solexa, Inc. v. Complete Genomics, Inc.*, Civil Action No. 10-649. The complaint alleges that our Complete Genomics Analysis Platform, and in particular our combinatorial probe anchor ligation technology, infringes upon three patents held by Illumina and Solexa. The plaintiffs seek unspecified monetary damages and injunctive relief. If we are found to infringe one or more valid claims of a patent-in-suit and if the district court grants an injunction, we may be forced to redesign portions of our sequencing process, seek a license or cease the infringing activity. On September 23, 2010, we filed our answer to the complaint as well as our counterclaims against the plaintiffs. On November 9, 2010, the U.S. District Court in Delaware granted our motion to transfer the case to the Northern District of California. On May 5, 2011, the Court entered a stipulated order to dismiss two patents from the lawsuit. The dismissal is without prejudice but includes conditions on the ability to file lawsuits on these patents, including a limitation that Illumina may not re-file such lawsuits against us until the later of (1) August 1, 2012, or (2) the exhaustion of all appeal rights in both (a) the pending reexaminations in the U.S. Patent and Trademark Office and (b) the pending civil litigation in which these patents are also asserted, *Life Technologies Corp. v. Illumina*, Case No. 11-CV703 (S.D. Cal.). We believe that we have substantial and meritorious defenses to the plaintiffs claims and intend to vigorously defend our position. However, a negative outcome in this matter could have a material adverse effect on our financial position, results of operations, cash flows and business. We are not currently able to estimate the potential loss, if any, that may result from this litigation.

From time to time, we may become involved in other legal proceedings and claims arising in the ordinary course of our business. Other than as described above, we are not currently a party to any legal proceedings the outcome of which, if determined adversely to us, we believe would individually or in the aggregate have a material adverse effect on our business, operating results, financial condition or cash flows.

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ITEM 1A. RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below and the other information in this Annual Report on Form 10-Q. If any of such risks actually occur, our business, operating results or financial condition could be adversely affected. In those cases, the trading price of our common stock could decline and you may lose all or part of your investment.

Risks Related to Our Limited Operating History, Financial Condition and Capital Requirements

We are an early, commercial-stage company and have a limited operating history, which may make it difficult to evaluate our current business and predict our future performance.

We are an early, commercial-stage company and have a limited operating history. We were incorporated in Delaware in June 2005 and began operations in March 2006. From March 2006 until mid-2009, our operations focused on research and development of our DNA sequencing technology platform. In December 2009, we recognized our first revenue from the sale of our genome sequencing services, and in 2010 and the three months ended March 31, 2011, our revenue was $9.4 million and $6.8 million, respectively. Our limited operating history, particularly in light of our novel, service-based business model in the rapidly evolving genome sequencing industry, may make it difficult to evaluate our current business and predict our future performance. Our lack of a long operating history, and especially our very short history as a revenue-generating company, make any assessment of our profitability or prediction about our future success or viability subject to significant uncertainty. We have encountered and will continue to encounter risks and difficulties frequently experienced by early, commercial-stage companies in rapidly evolving industries. If we do not address these risks successfully, our business will suffer.

Based on our current operating projections, we will need substantial additional capital in the future in order to maintain and expand our business. A failure to secure additional capital will have a material effect on our ability to meet our long-term objectives.

Our future capital requirements are substantial, particularly as we further develop our business, expand the sequencing and computing capacity in our Mountain View and Santa Clara, California leased facilities and establish additional genome sequencing centers. Historically, we have financed our operations through private placements of preferred stock, convertible debt, borrowings under our credit facility, secured debt and through our recently completed IPO.

We believe that, based on our current level of operations and anticipated growth, our cash and cash equivalent balances, including interest income we earn on those cash balances, will be sufficient to meet our anticipated cash requirements for the next 12 months from the date of filing. However, based on our current operating projections, we will need additional capital to fund our operations in 2012 and to expand our business to achieve our longer term business objectives.

We may not be able to raise sufficient additional financing on terms that are acceptable, if at all. Given the risks associated with our business, including our limited operating history and our new business model in an emerging industry, and recent difficulties for life sciences companies raising funds in the capital markets, we may be unable to raise additional capital in the amounts we require, if at all. Our failure to raise additional capital in sufficient amounts, will severely impact our ability to achieve our long-term business objectives. In addition, if future financings involve the issuance of equity securities, our existing stockholders would suffer dilution. If we raise additional debt financing, we may be subject to restrictive covenants that limit our ability to conduct our business. If we fail to raise sufficient funds and continue to incur losses, our ability to operate our business, take advantage of strategic opportunities, further develop and enhance our technology or otherwise respond to competitive pressures could significantly suffer. If this happens, we may be forced to:

- slow or halt the expansion of our Mountain View facility and the establishment of additional genome sequencing centers;
- slow the commercialization of our services;
- delay or terminate research or development programs;
- curtail or cease operations; or

seek to obtain funds through collaborative and licensing arrangements, which may require us to relinquish commercial rights or grant licenses on terms that are not favorable to us.

The amount of additional capital and timing at which we require the additional capital necessary to fund our operations and expand our business depends on many factors, including:

the financial success of our genome sequencing business;

our ability to increase the sequencing and computing capacity in our Mountain View and Santa Clara leased facilities;

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- the rate at which we establish additional genome sequencing centers and whether we can find suitable partners to establish such centers, if at all;
- whether we are successful in obtaining payments from customers;
- whether we can enter into collaborations or establish a recurring customer base;
- the progress and scope of our research and development projects;
- the effect of any joint ventures or acquisitions of other businesses or technologies that we may enter into or make in the future;
- the filing, prosecution and enforcement of patent claims; and
- the costs associated with lawsuits brought against us by third parties, including our current litigation with Illumina, Inc.

We have a history of losses, and we may not achieve or sustain profitability in the future, on a quarterly or annual basis.

We have not been profitable in any quarterly period since we were formed. We incurred net losses of $28.4 million, $35.9 million and $57.7 million for the years ended December 31, 2008, 2009 and 2010, respectively. As of March 31, 2011, our accumulated deficit was $151.3 million. Based on our current operating plans and assumptions, we do not expect to achieve profitability on an annual basis in the near future. In addition, we expect our cash expenditures to increase significantly in the near term, including significant expenditures for the expansion of our Mountain View, California sequencing facility, research and development, sales and marketing and general and administrative expenses and the possible development of additional sequencing centers. We may encounter unforeseen difficulties, complications and delays in expanding our Mountain View sequencing facility or in establishing additional genome sequencing centers and other unforeseen factors that require additional expenditures. These costs, among other factors, have had and will continue to have an adverse effect on our working capital and stockholders equity. We will have to generate and sustain substantially increased revenue to achieve and maintain profitability, which we may never do. If we are unable to achieve and then maintain profitability, the market value of our common stock will decline.

Our operating results may fluctuate in the future. As a result, we may fail to meet or exceed the expectations of research analysts or investors, which could cause our stock price to decline.

Our financial condition and operating results may fluctuate from quarter to quarter and year to year in the future due to a variety of factors, many of which are beyond our control. Factors relating to our business that may contribute to these fluctuations include the following, as well as other factors described elsewhere in this Form 10-Q:

- our ability to achieve profitability;
- our need for and ability to obtain capital necessary to operate and expand our business;
- the size and frequency of customer orders;
- the presence or absence in a specific quarter of one or more new large orders for hundreds of genomes;

our ability to expand our sequencing operations;

the cost of our sequencing services;

the demand for the sequencing of complete human genomes;

the existence and extent of government funding for research and development relating to genome sequencing;

the emergence of alternative genome sequencing technologies;

risks associated with expanding our business into international markets;

our ability to lower the average cost per genome that we sequence;

our dependence on single-source suppliers;

our ability to manage our growth;

our ability to successfully partner with other businesses in joint ventures or collaborations, or integrate any businesses we may acquire with our business;

our dependence on, and the need to attract and retain, key management and qualified sales personnel;

our ability to obtain, protect and enforce our intellectual property rights and avoid infringing the intellectual property rights of others;

our ability to prevent the theft or misappropriation of our know-how or technologies;

lawsuits brought against us by third parties;

business interruptions, such as earthquakes and other natural disasters;

public concerns about the ethical, legal and social concerns related to the use of genetic information;

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- our ability to comply with current laws and regulations and new or expanded regulatory schemes;
- our ability to properly handle and dispose of hazardous materials used in our business and biological waste; and
- our ability to use our net operating loss carryforwards to offset future taxable income.

Due to the various factors mentioned above, and others, the results of any prior quarterly or annual periods are not necessarily indicative of our future operating performance.

Risks Related to Our Business

Our only source of revenue is our human genome sequencing service, which is a new business model in an emerging industry, and failure to achieve market acceptance will harm our business.

Since our inception, all of our efforts have been focused on the creation of a technology platform for our human genome sequencing service, which we have only just recently commercialized. We expect to generate all of our revenue from our human genome sequencing service for the foreseeable future. As a result, market acceptance of our human genome sequencing service is critical to our future success.

Providing genome sequencing as a service is a new and unproven business model in a relatively new and rapidly evolving industry. We are using proprietary technology, involving multiple scientific and engineering disciplines, and a novel service model to bring complete human genome sequencing to an unproven market. Historically, companies in this industry have sold sequencing instruments directly to customers, and the customer performs the sequencing itself. We do not know if the purchasers and users of sequencing instruments will adopt our service model. For example, many potential customers want to sequence human genomes for proprietary studies that may lead to discoveries which they would seek to exploit, either commercially or through the publication of scientific literature. Accordingly, these potential customers may have significant reservations about allowing a third party to control the sequencing processes for their proprietary studies. Alternatively, other potential customers may want to sequence only portions of human genomes, rather than complete human genomes. There are many reasons why our services might not become widely adopted, ranging from logistical or quality problems to a failure by our sales force to engage potential customers, and including the other reasons stated in this Risk Factors section. As a result, our genome sequencing service may not achieve sufficient market acceptance to allow us to become profitable.

Our success depends on the growth of markets for analysis of genetic variation and biological function, and the shift of these markets to complete human genome sequencing.

We are currently targeting customers for our genome sequencing service in academic and government research institutions and in the pharmaceutical and other life science industries. Our customers are using our service for small- and large-scale human genome studies for a wide variety of diagnostic and discovery applications. These markets are new and emerging, and they may not develop as quickly as we anticipate, or reach their full potential. The development of the market for complete human genome sequencing and the success of our service depend in part on the following factors:

- demand by researchers for complete human genome sequencing;
- the usefulness of genomic data in identifying or treating disease;
- the ability of our customers to successfully analyze the genomic data we provide;
- the ability of researchers to convert genomic data into medically valuable information;

- the capacity and scalability of the hardware storage components necessary to store, manage, backup, retain and safeguard genomic data; and

- the development of software tools to efficiently search, correlate and manage genomic data.

For instance, demand for our genome sequencing service may decrease if researchers fail to find meaningful correlations between genetic variation and disease susceptibility through genome-wide association studies. In addition, factors affecting research and development spending generally, such as changes in the regulatory environment affecting pharmaceutical and other life science companies and changes in government programs that provide funding to companies and research institutions, could harm our business. If our target markets do not develop in a timely manner, demand for our service may grow at a slower rate than we expect, or may fall, and we may not achieve profitability.

To date, relatively few complete human genomes have been sequenced, in large part due to the high cost of large-scale sequencing. Our business plan assumes that the demand for sequencing complete human genomes will increase significantly as the cost of complete human genome sequencing decreases. This assumption may prove to be incorrect, or the increase in demand may take significantly more time than we anticipate. For example, potential customers may not think our cost reductions are sufficient to permit or justify large-scale sequencing. Moreover, some companies and institutions have focused on sequencing targeted areas of the genome that are believed to be primarily associated with disorders and diseases, as opposed to the entire genome. Demand for sequencing complete human genomes may not increase if these targeted sequencing strategies, such as exome sequencing, where selected regions containing key portions of genes are sequenced, prove to be more cost effective or are viewed as a more efficient method of genetic analysis than complete human genome sequencing. Since exome sequencing is currently less expensive than the sequencing of an entire human genome, customers, including those with limited budgets, may choose to sequence exomes instead of using our human genome sequencing services.

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We face significant competition. Our failure to compete effectively could adversely affect our sales and results of operations.

We currently compete with companies that develop, manufacture and market genome sequencing instruments or provide genome sequencing services. We expect competition to increase as our competitors develop new, improved or cheaper instruments or expand their businesses to include sequencing services, and as new companies enter the market with innovative technologies.

The market for genome sequencing technology is highly competitive and is served by several large companies with significant market shares. For example, established companies such as Illumina, Inc., Life Technologies Corporation and Roche Diagnostics Corporation are marketing instruments for genetic sequencing that are directly competitive with our services, and these companies have significantly greater financial, technical, marketing and other resources than we do to invest in new technologies and have substantial intellectual property portfolios and substantial experience in product development and regulatory expertise. Also, there are many other companies, such as NABsys, Inc., Oxford Nanopore Technologies, Ltd., and Pacific Biosciences, Inc., that are developing sequencing technologies or services that would compete with ours. Moreover, large established companies may acquire smaller companies with emerging technologies and use their extensive resources to develop and commercialize such technologies or incorporate such technologies into their instruments and services. For example, in 2010, Life Technologies acquired Ion Torrent Systems, Inc., a chip-based sequencing technology company.

In addition, there are many research, academic and other non-profit institutions that are pursuing new sequencing technologies. These institutions often have access to significant government and other funding. For example, BGI (formerly known as Beijing Genomics Institute) in the People s Republic of China offers a service that is similar to ours and is funded by the government of China. In the United States, agencies such as the National Human Genome Research Institute provide funding to institutions to discover new sequencing technology. We may compete directly with these institutions, or these institutions may license their technologies to third parties with whom we would compete.

While many of our existing competitors primarily sell sequencing instruments, they may also provide sequencing services like us. Since these competitors have already developed their own sequencing technology, they will not experience significant technological barriers to entry and can likely enter the sequencing services market fairly quickly and with little additional cost. For example, Illumina started providing whole genome sequencing services in-house and through its Illumina Genome Network in mid-2010, and Life Technologies has recently announced a collaboration to build a genome sequencing facility. Furthermore, many of these instrumentation companies have already established a significant market presence and are trusted by customers in the industry. As established instrumentation companies enter the sequencing services market, many potential customers may purchase sequencing services from these companies instead of us, even if we offer superior technology and services.

The emergence of competitive genome sequencing technologies may harm our business.

The success of our genome sequencing services will depend, in part, on our ability to continue to enhance the performance and decrease the cost of our genome sequencing technology. A number of genome sequencing technologies exist, and new methods and improvement to existing methods are currently being developed, including technology platforms developed by companies that we expect will directly compete with us as providers of sequencing services or instruments. These new technologies may result in faster, more cost-effective and more accurate sequencing methods than ours. For example, our sequencing technology does not currently cover all of the nucleotides in the genome. If competitive technologies emerge that sequence portions of the genome that our technology does not, our business could suffer if those portions contain important genomic information. We expect to face competition from emerging companies, including NABsys, Oxford Nanopore Technologies and Pacific Biosciences. As a result of the emergence of these competitive sequencing technologies, demand for our service may decline or never develop sufficiently to sustain our operations.

Our industry is rapidly changing, with emerging and continually evolving technologies that increase the efficiency and reduce the cost of sequencing genomes. As new technologies emerge, we believe that the cost and error rates of, and the time required to, sequence human genomes will eventually decrease to a level where competition in the industry will shift to other factors, such as providing related services and analytical technologies. We may not be able to maintain any technological advantage over these new sequencing technologies, and if we fail to compete effectively on other factors relevant to our customers, our business will suffer.

Our order backlog may never be completed, and we may never earn revenue on backlogged contracts to sequence genomes.

As of March 31, 2011, we had a backlog of orders for sequencing over 2,000 genomes, which we believe could result in approximately $15.0 million in revenue over the next 12 months. This figure represents the number of genomes for which customers have placed sequencing orders that we believe are firm and for which we have not yet recognized revenue. We may not be able to convert order backlog into revenue at the rate or times we anticipate, or at all. Consequently, the order backlog we report in this Form 10-Q and elsewhere from time to time may not be indicative of future revenue.

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We may fail to complete backlog orders as we expect for many reasons. We may experience sequencing delays or customers might cancel orders. We are in the early stages of launching our services, and while we have been increasing our throughput capacity rapidly, we have in the past experienced growing backlog due to our inability to keep pace with new orders. Delays in sequencing for which we are responsible could cause backlog orders to be cancelled by customers, which has happened to us at least once. Even with sufficient throughput capacity, we are not always in control of the rate at which we complete orders and therefore convert backlog to revenue. For example, customers often place firm orders with us before providing us with genomic samples, delaying our start of the sequencing process by weeks or months. Additionally, once we receive a customer s samples, we test them to assure that they are of sufficient quality and quantity for sequencing. If not, we contact the customer and request additional samples, resulting in further delay. Also, customers may negotiate a period of time, measured in weeks or in some cases months, to accept or reject our sequencing reports once delivered. Customer acceptance in these instances is a prerequisite for recording revenue for those orders. For these reasons, you should use caution in adopting changes in, or the absolute amount of, our backlog as a proxy for market acceptance of our sequencing services or as an indicator of future revenue.

The presence or absence in a specific quarter of one or more new large orders, or the cancellation of any previous orders, for hundreds of genomes may cause our results of operations and backlog to fluctuate significantly on a quarterly basis.

Since beginning commercial operations, we have received purchase orders or contracts from a limited number of customers each quarter, typically between 10 and 20 customers quarterly. Historically, the size of each purchase order has fluctuated between a few genomes and multiple hundreds of genomes. As a result, the presence or absence in a specific quarter of one or more new large orders, or the cancellation of any previous orders, for hundreds of genomes. Combined with our uncertain sales cycle and changes in the variables that influence conversion of orders into revenue, may cause our results of operations and our backlog to fluctuate on a quarterly basis. These fluctuations may be significant from one quarter to the next. In addition, our limited commercial history and the characteristic of our quarterly orders makes it very difficult to predict or forecast our future operating results and backlog.

We must significantly increase our production capabilities in order to achieve profitability.

We have very limited experience in running a commercial-scale production facility. We have only one sequencing facility, which at present has the capacity to sequence over 400 complete human genomes per month. This capacity is significantly less than what would be required to achieve profitability. Our business plan assumes that we will be able to increase our capacity multiple fold.

We plan to increase the capacity of our sequencing facility by installing additional sequencing machines, improving our software and designing and installing newer generations of sequencing instruments that are currently under research and development. We may also construct additional genome sequencing centers in the United States and elsewhere in 2012 and afterward. We may encounter difficulties in expanding our sequencing infrastructure, and we may not build and improve this infrastructure in time to meet the volume, quality or timing requirements necessary to be successful. Manufacturing and supply quality issues may arise, including due to third parties who provide the components of our technology platform. Implementing improvements to our sequencing technology may involve significant changes, which may result in delays, or may not achieve expected results. For example, we are experimenting with increasing the density of DNBs on our DNA arrays. These experiments may be unsuccessful and may not lead to feasible technological improvements that increase the capacity or reduce the costs of our sequencing services. If capacity or cost limitations prevent us from meeting our customers expectations, we will lose revenue and our potential customers may take their business to our competitors.

Our need to increase capacity may require us to upgrade our machines to enhance our current production process. This may render our current machines obsolete sooner than anticipated. If this occurs, the value of these machines could be impaired and we may need to write down the value of this equipment, which could have a material impact on our financial statements in light of the dollar significance of the long-lived assets carried on our balance sheet.

Our genome sequencing technology platform was developed for human DNA and is not currently optimized to sequence non-human DNA.

Our technology platform was developed and has been optimized for sequencing human DNA, and we do not intend to sequence non-human DNA. We face significant competition from established companies who sell genome sequencing instruments that can sequence both human and non-human DNA. Many of the academic and research institutions that are our target customers conduct studies on both human and non-human DNA. Prospective customers may choose to purchase sequencing instruments from a competitor because of their broader sequencing application. Our competitors may also choose to provide sequencing services for non-human DNA. As a result, there may not be sufficient demand for our human genome sequencing service, which will harm our business.

We depend on a limited number of suppliers, including single-source suppliers, of various critical components for our sequencing process. The loss of these suppliers, or their failure to supply us with the necessary components on a timely basis, could cause delays in the current

and future capacity of our sequencing center and adversely affect our business.

We depend on a limited number of suppliers, including some single-source suppliers, of various critical components for our sequencing process. We do not have long-term contracts with our suppliers or service providers. Because we do not have long-term contracts, our suppliers generally are not required to provide us with any guaranteed minimum production levels. As a result, we may not be able to obtain sufficient quantities of critical components in the future.

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Although alternative suppliers exist for each of the critical components of our sequencing process, that process has been designed around the functions, limitations, features and specifications of the components that we currently utilize. For example, the cameras in our sequencers are supplied by Hamamatsu Photonics and the optical equipment is supplied by Carl Zeiss, Inc. A failure by either or both of these companies to supply these components would require us to integrate alternative cameras and optical equipment, and potentially integrate other components, into future sequencing instruments. If we are required to integrate new components into future sequencers, we would experience a delay in the deployment of these sequencers, and, as a result, our efforts to expand our sequencing capacity would be delayed.

A delay or interruption by our suppliers may also harm our business. For example, the wafers that comprise the base of our sample slide are fabricated by SVTC Technologies, L.L.C. We have not yet qualified an alternative source for the supply of these wafers, which are critical to our sequencing process, and the custom manner in which these wafers are made may make it difficult to qualify other semiconductor suppliers to manufacture them for us. Similarly, an interruption of services by Amazon Web Services, on whom we rely to deliver finished genomic data to our customers, would result in our customers not receiving their data on time.

In addition, the lead time needed to establish a relationship with a new supplier can be lengthy, and we may experience delays in meeting demand in the event we must switch to a new supplier. The time and effort to qualify a new supplier could result in additional costs, diversion of resources or reduced manufacturing yields, any of which would negatively impact our operating results. Our dependence on single-source suppliers exposes us to numerous risks, including the following:

- our suppliers may cease or reduce production or deliveries, raise prices or renegotiate terms;
- delays by our suppliers could significantly limit our ability to sequence customer data and delay our efforts to increase our sequencing capacity;
- we may be unable to locate a suitable replacement on acceptable terms or on a timely basis, if at all; and
- delays caused by supply issues may harm our reputation, frustrate our customers and cause them to turn to our competitors for future projects.

If our Mountain View genome sequencing facility becomes inoperable, we will be unable to perform our genome sequencing services and our business will be harmed.

We currently do not have redundant sequencing facilities on a scale that could support our business. We perform all of our commercial genome sequencing in our facility located in Mountain View, California. Mountain View is situated on or near earthquake fault lines. Our facility, the equipment we use to perform our sequencing services and our other business process systems are costly to replace and could require substantial time to repair or replace. The facility may be harmed or rendered inoperable by natural or man-made disasters, including earthquakes, wildfires, floods, acts of terrorism or other criminal activities, infectious disease outbreaks and power outages, which may render it difficult or impossible for us to sequence genomes for some period of time. In addition, these events may temporarily interrupt our ability to receive samples from our customers or materials from our suppliers and our access to our various systems necessary to operate our business. The inability to perform our sequencing service would result in the loss of customers and harm our reputation. While we currently maintain approximately $40.0 million in property insurance coverage, we do not currently have insurance coverage for damage arising from an earthquake. Our insurance covering damage to our property may not be sufficient to cover all of our potential losses and will not cover us in the event of an earthquake, and may not continue to be available to us on acceptable terms, or at all.

Failure to achieve expected sequencing process yields, or variability in our sequencing process yields, could harm our operating results and damage our reputation.

Our sequencing process, like any other commercial-scale production process, is not flawless. For example, our DNBs may not adhere to all of the sticky spots on the surface of the silicon wafers we use to sequence DNA, or parts of the wafers may be unreadable. We refer to the efficiency of our sequencing process as its yield. The sequencing process yields we achieve depend on the design and operation of our sequencing process, which uses a number of complex and sophisticated biochemical, informatics, optical and mechanical processes. An operational or technology failure in one of these complex processes may result in sequencing processing yields that are lower than we anticipate

or that vary between sequencing runs. In addition, we are regularly evaluating and refining our sequencing process. These refinements may initially result in unanticipated issues that further reduce our sequencing process yields or increase the variability of our sequencing yields. Low sequencing yields, or higher than anticipated variability, increases total sequencing costs and reduces the number of genomes we can sequence in a given time period, which can cause variability in our operating results and damage our reputation.

We may have to resequence genomes due to contamination of DNA samples or other failures in the sequencing process. In the past, we have had to resequence various genome samples as a result of contamination occurring in the sample preparation and library construction process. The sequencing process is highly sensitive, and the presence of any foreign substances during the preparation of the slide samples can corrupt the results of the sequencing process. The quality of our sequencing runs may also vary for other reasons. Resequencing requires additional expense, time and capacity and delays the recognition of revenue from the service. Samples may be contaminated in the future or the quality of our sequencing results may vary, which may damage our reputation and decrease the demand for our service.

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Mishandling or switching of DNA samples or genomic data may harm our reputation and result in litigation against us.

We may unintentionally mishandle DNA samples. For example, if customer samples or sequencing results are switched, our customers would receive the wrong sequencing data, which could have significant consequences, particularly if that data is used to diagnose or treat disease. Mishandling customer samples or data could lead to loss of current or future business, harm our reputation and result in litigation against us.

If we are not successful in reducing the average cost of our sequencing service, demand for our services, and therefore our business, will suffer.

Our ability to expand our customer base depends highly on our ability to reduce the average cost of sequencing a human genome. For example, certain academic or government-sponsored research organizations may forgo or delay whole genome-wide studies based on the cost required to sequence complete human genomes, in favor of other less expensive studies. Additionally, certain of our target customers may decide it is more cost-effective to purchase sequencing instruments from a competitor than contract for our sequencing service. To compete effectively with competitors who sell and market sequencing instruments, our service must provide cost advantages, superior quality and time savings over the purchase of sequencing instruments. In addition, as new competitors enter the market or expand their business model to include sequencing services, or as the price of competitor sequencing services decreases, we expect increased pricing pressure, which may force us to decrease the price of our genome sequencing service. Our gross profit and operating results will suffer if we are unable to offset any reductions in our prices by reducing our costs by developing new or enhanced technologies or methods, or increasing our sales volumes.

Reduction or delay in research and development budgets and government funding may adversely impact our sales.

We expect that for the foreseeable future, our revenue will be derived primarily from selling our genome sequencing service to a relatively small number of academic, governmental and other research institutions, as well as pharmaceutical and other life science companies. Our revenue may decline substantially due to reductions and delays in research and development expenditures by these customers, which depend, in part, on their budgets and the availability of government funding. Factors that could affect the spending levels of our customers include:

- weakness in the global economy and changing market conditions that affect our customers;
- changes in the extent to which the pharmaceutical and life science industry may use genetic information and genetic testing as a methodology for drug discovery and development;
- changes in government programs that provide funding to companies and research institutions;
- changes in the regulatory environment affecting pharmaceutical and life science companies and research;
- impact of consolidation within the pharmaceutical and life science industry; and
- cost-reduction initiatives of customers.

Also, government funding of research and development is subject to the political process, which is inherently unpredictable. Any reduction in the funding of life science research and development or delay surrounding the approval of government budget proposals may cause our customers to delay or forgo purchases of our services. A reduction or delay in demand for our service will adversely affect our ability to achieve profitability.

The timing and extent of funding provided by the American Recovery and Reinvestment Act of 2009 could adversely affect our business, financial condition or results of operations.

In February 2009, the U.S. government enacted the American Recovery and Reinvestment Act of 2009, which we refer to as the Recovery Act, to provide stimulus to the U.S. economy in the wake of the economic downturn. As part of the Recovery Act, over $10 billion in research funding was provided to the National Institutes of Health, or NIH, through September 2010 to support the advancement of scientific research. A portion of the stimulus funding supported the analysis of genetic variation and biological function and may have a significant positive long-term impact on our business and the industry generally. In the short-term, however, potential customers may delay or forgo their purchases of our services as they wait to learn whether, and to what extent, they will receive stimulus funding. If potential customers are unable to obtain stimulus money, they may reduce their research and development budgets, resulting in a decrease in demand for our service. In addition, even if potential customers receive these stimulus funds, they may not purchase our services, and we may not benefit from the Recovery Act.

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Ethical, legal and social concerns related to the use of genetic information could reduce demand for our genome sequencing services.

Our genome sequencing services are intended to facilitate large-scale human genome studies for a wide variety of diagnostic and discovery applications. However, genetic testing has raised ethical, legal and social issues regarding privacy and the appropriate uses of the resulting information. Governmental authorities could, for social or other purposes, limit or regulate the use of genetic testing or prohibit testing for genetic predisposition to certain conditions, particularly for those that have no known cure. Similarly, these concerns may lead individuals to refuse to use genetics tests even if permissible.

In addition, we do not control how our customers use the genomic data we provide. In most cases, we do not know the identity of the individuals whose DNA we sequence, the reason why their DNA is being sequenced or the intended use of the genomic data we provide. If our customers use our services or the resulting genomic data irresponsibly or in violation of legal restrictions, our reputation could be harmed and litigation may be brought against us.

Ethical and social concerns may also influence U.S. and foreign patent offices and courts with regard to patent protection for technology relevant to our business. These and other ethical, legal and social concerns may limit market acceptance of our technology for certain applications or reduce the potential markets for our technology, either of which could have an adverse effect on our business, financial condition or results of operations.

We use biological and hazardous materials that require considerable expertise and expense for handling, storage and disposal and may result in claims against us.

We work with materials, including chemicals, biological agents and compounds and DNA samples that could be hazardous to human health and safety or the environment. Our operations also produce hazardous and biological waste products. Federal, state and local laws and regulations govern the use, generation, manufacture, storage, handling and disposal of these materials and wastes. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental laws and regulations may restrict our operations. If we do not comply with applicable regulations, we may be subject to fines and penalties.

In addition, we cannot eliminate the risk of accidental injury or contamination from these materials or wastes. While our property insurance policy provides limited coverage in the event of contamination from hazardous and biological products and the resulting cleanup costs, we do not currently have any additional insurance coverage for legal liability for claims arising from the handling, storage or disposal of hazardous materials. Further, our general liability insurance and workers compensation insurance policies do not cover damages and fines arising from biological or hazardous waste exposure or contamination. Accordingly, in the event of contamination or injury, we could be liable for damages or penalized with fines in an amount exceeding our resources and our operations could be suspended or otherwise adversely affected.

We have limited selling and marketing resources and may be unable to successfully commercialize our human genome sequencing service.

To grow our business as planned, we must expand our sales, marketing and customer support capabilities. We may be unable to attract, retain and manage the specialized workforce necessary to gain market acceptance and successfully commercialize our services. In addition, developing these functions is time consuming and expensive.

The sale of genome sequencing services involves extensive knowledge about genomic research and sequencing technology, including the sequencing technology of our competitors. To be successful, our sales force and related personnel must be technically proficient in a variety of disciplines. For example, many of our existing salespersons have a Ph.D. or other advanced degree in relevant scientific fields. There are relatively few people that have the necessary knowledge and qualifications to be successful salespersons or support personnel in our industry.

In certain regions or markets, we may seek to partner with others to assist us with sales, marketing and customer support functions. However, we may be unable to find appropriate third parties with whom to enter into these arrangements. Furthermore, if we do enter into these arrangements, these third parties may not perform as expected.

Our software may incorrectly analyze the raw genomic data produced by our sequencing equipment.

Our sequencing instruments generate raw genomic data from various segments of the genome being sequenced. This data must be arranged into the correct order to reconstruct the original genomic structure of the sample. We have developed software algorithms that facilitate this reconstruction. However, these algorithms rely on statistical models that provide only relative assurance, and not absolute assurance, that the original genomic structure has been reconstructed.

In addition, the genomic data we provide our customers includes a comparison of the sequenced genome against a reference genome to help identify possible mutations or variations. This reference genome is designed to approximate a standard human genome. However, this approximation may not be accurate.

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If the algorithms we use to reconstruct genomic data incorrectly reconstruct the sequenced genome, or if our reference genome is significantly flawed, the genomic data we deliver could be inaccurate and of little or no use to our customers.

An inability to manage our planned growth or expansion of our operations could adversely affect our business, financial condition or results of operations.

Our business has grown rapidly, and we expect this growth to continue as we expand our sequencing capacity. For example, we had three employees at the end of 2005 and 202 employees as of March 31, 2011. The rapid expansion of our business and addition of new personnel may place a strain on our management and operational systems. To effectively manage our operations and growth, we must continue to expend funds to enhance our operational, financial and management controls, reporting systems and procedures and to attract and retain sufficient numbers of talented employees. If we are unable to expand our genome sequencing capacity and implement improvements to our control systems efficiently and quickly, or if we encounter deficiencies in existing systems and controls, then we will not be able to successfully expand the commercialization of our services. In addition to enhancing our sequencing capacity, our future operating results will depend on our management s ability to:

- implement and improve our sales, marketing and customer support programs and our research and development efforts;
- enhance our operational and financial control systems;
- expand, train and manage our employee base;
- integrate acquired businesses, if applicable; and
- effectively address new issues related to our growth as they arise.

We may not manage our expansion successfully, which could adversely affect our business, financial condition or results of operations.

If we expand our operations outside of the United States, we will face risks that may increase our operating costs.

We plan to expand our operations to include additional genome sequencing centers outside of the United States. Because the laws of certain countries currently prohibit the export of DNA, we will have to establish local facilities to access those markets and establish a presence in other markets. To date, we have not expanded our operations outside the United States. Operating in international markets requires significant resources and management attention and will subject us to regulatory, economic and political risks that are different from those in the United States. Because of our limited experience with international operations, our international expansion efforts may be unsuccessful. In addition, we will face risks in doing business internationally that could increase our operating costs, including the following:

- economic conditions in various parts of the world;
- unexpected and more restrictive laws and regulations, including those laws governing ownership of intellectual property, collection and use of personal information and other privacy considerations, hazardous materials and other activities important to our business;
- new and different sources of competition;

- multiple, conflicting and changing tax laws and regulations that may affect both our international and domestic tax liabilities and result in increased complexity and costs;
- the difficulty of managing and staffing additional genome sequencing centers and the increased travel, infrastructure and legal compliance costs associated with multiple international locations;
- difficulties in enforcing contracts and collecting accounts receivable, especially in developing countries;
- fluctuations in exchange rates; and
- tariffs and trade barriers, import/export controls and other regulatory or contractual limitations on our ability to sell or develop our services in certain foreign markets.

The success of the expansion of our business internationally will depend, in part, on our ability to anticipate and effectively manage these and other risks associated with international operations. Our failure to manage any of these risks successfully could increase our operating costs.

Certain of our potential customers may require that we become certified under the Clinical Laboratory Improvement Amendments of 1988.

Although we are not currently subject to the Clinical Laboratory Improvement Amendment of 1988, or CLIA, we may in the future be required by certain customers to obtain a CLIA certification. CLIA, which extends federal oversight over clinical laboratories by requiring that they be certified by the federal government or by a federally approved accreditation agency, is designed to ensure the quality and reliability of clinical laboratories by mandating specific standards in the areas of personnel qualifications, administration and participation in proficiency testing, patient test management, quality control, quality assurance and inspections. If our customers require a CLIA certification, we will have to continually expend time, money and effort to ensure that we meet the applicable quality and safety requirements, which may divert the attention of management and disrupt our core business operations.

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Because the market for genome sequencing is relatively new and rapidly evolving, we may become subject to additional future governmental regulation, which may place additional cost and time burdens on our operations.

We are subject, both directly and indirectly, to the adverse impact of existing and potential future government regulation of our operations and markets. The life sciences and pharmaceutical industries, which are significant target markets for our services, have historically been heavily regulated. There are comprehensive federal and state laws regarding matters such as the privacy of patient information and research in genetic engineering. For example, if we inadvertently disclose private patient information in the course of providing our sequencing services, we could be prosecuted for violations of federal law.

Legislative bodies or regulatory authorities may adopt additional regulation that adversely affects our market opportunities. They could also extend existing regulations to cover our services. For example, medical diagnostic products may, depending on their intended use, be regulated as medical devices by the Food and Drug Administration, or FDA, if they are:

- used in the diagnosis of disease or other conditions;
- used in the cure, mitigation, treatment or prevention of disease; or
- intended to affect the structure or any function of the body.

Medical devices generally cannot be marketed without first receiving clearance or approval (depending on the regulatory pathway) from the FDA. We do not believe that our sequencing services are currently subject to the FDA s medical device requirements because we do not intend our services to be used for the diagnosis of disease. However, we cannot control how the genomic information we provide will be used by our customers.

In addition, the FDA is focusing on our market, which has created uncertainty regarding the regulatory landscape. The FDA has recently taken actions suggesting that it interprets the applicable regulations expansively to cover certain genomic devices and services, particularly those sold directly to consumers. Since June 2010, the FDA has sent numerous letters to certain companies in this market, including 23andMe, Inc., deCODE Genetics, Knome, Inc., Navigenics, Inc. and Pathway Genomics. In these letters, the FDA noted that it considers genetic tests marketed by these companies to be subject to FDA regulation and, accordingly, unapproved medical devices. Additionally, in March 2011, the FDA held a public two-day meeting discussing the appropriate regulation of the direct-to-consumer genetic tests. The FDA may extend this position to services such as ours. In addition, the FDA may implement new regulations that may be broad enough to cover our operations. Changes to the current regulatory framework, including the imposition of new regulations, could arise anytime, and we may be unable to obtain or maintain FDA or comparable regulatory approval or clearance for our services, if required. For example, the FDA may impose restrictions on the types of customers to which we can market and sell our services and the types of persons whose DNA we may sequence. Also, future legislation may require that patients provide specific consent to have their DNA sequenced. This could require our customers to obtain new consents before they can submit DNA samples to us for sequencing.

In any event, if we expand our business to include sequencing services intended to be used for the diagnosis of disease, we will likely become subject to regulation by the FDA or other comparable agencies of other countries, which may require us to obtain regulatory approval or clearance before we can market those services.

These regulatory approval processes may be expensive, time-consuming and uncertain, and our failure to obtain or comply with these approvals or clearances could harm our business, financial condition or operating results.

Disruption to or failure of our data center or other technical systems may disrupt our business and harm our operating results.

We rely on our network infrastructure, data centers, enterprise applications and technology systems for the development and support of our sequencing service, including the preparation, analysis and transmission of data from our sequencing center, as well as for the internal operation of our business. These systems are susceptible to disruption or failure in the event of natural disasters such as a major earthquake, fire, flood, cyber-attack, terrorist attack, telecommunications failure, power outage or other catastrophic event. Further, our data center and our sequencing facility, which houses certain of our technology systems, are located near major earthquake faults. Disruptions to or the failure of our data center or any of these technology systems, including the network connection between our Mountain View facility and our data center, and the resulting

loss of critical data, could cause delays in the transmission and analysis of the sequencing data, prevent us from fulfilling our customers orders and severely affect our ability to conduct normal business operations.

Our term loans contain restrictions that limit our flexibility in operating our business.

In December 2010, we entered into two loan and security agreements, and refinanced our existing credit facility. In March 2011, we entered into a new loan and security agreement for a term loan and repaid and terminated one of the December 2010 agreements with the proceeds from the new term loan. Our term loans contain various covenants that limit our ability to engage in specified types of transactions. These covenants limit our ability to, among other things:

- sell, transfer, lease or dispose of our assets;
- create, incur or assume additional indebtedness;

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- encumber or permit liens on certain of our assets;
- make restricted payments, including paying dividends on, repurchasing or making distributions with respect to our common stock;
- make specified investments (including loans and advances);
- consolidate, merge, sell or otherwise dispose of all or substantially all of our assets; and
- enter into certain transactions with our affiliates.

A breach of any of these covenants or a material adverse change to our business could result in a default under either or both of our term loans. Upon the occurrence of an event of default under our term loans, our lenders could elect to declare all amounts outstanding to be immediately due and payable and terminate all commitments to extend further credit. If we were unable to repay those amounts, the lenders could proceed against the collateral granted to them to secure such indebtedness. We have pledged substantially all of our assets, other than our intellectual property, as collateral under the term loans.

If we fail to retain the services of our key executives or if we are unable to attract and retain skilled personnel, our ability to grow our business and our competitive position would be impaired.

We believe our future success will depend in large part upon our ability to attract, retain and motivate highly skilled personnel. In particular, we depend highly on the contributions of Clifford A. Reid, Ph.D., our President and Chief Executive Officer, and Radoje Drmanac, Ph.D., our Chief Scientific Officer. The loss of either of these executives could make it more difficult to manage our operations and research and development activities, reduce our employee retention and revenue and impair our ability to compete. If either of these key executives were to leave us unexpectedly, we could face substantial difficulty in hiring qualified successors and could experience a loss in productivity, both during the search for, and integration of, any such successor.

Our research and development, operations and sales and marketing personnel represent a significant asset and serve as the source of our business strategy, scientific and technological innovations and sales and marketing initiatives. As a result, our success substantially depends on our ability to retain and attract personnel for all areas of our organization. Competition for qualified personnel is intense, and we may not be successful in attracting and retaining qualified personnel on a timely basis or on competitive terms, if at all. In addition, many qualified personnel are located outside of Northern California, where we are located, and some qualified personnel that we may recruit may not be interested in relocating. If we are unable to attract and retain the necessary personnel on a cost-effective basis, our ability to grow our business and our competitive position would be impaired.

We may engage in joint ventures or acquisitions that could disrupt our business, cause dilution to our stockholders, reduce our financial resources and result in increased expenses.

In the future, we may enter into joint ventures or acquire other businesses, products or technologies. Because we have not entered into any joint ventures or made any acquisitions to date, our ability to do so successfully is unproven. We may not be able to find suitable partners or acquisition candidates, and we may not be able to complete such transactions on favorable terms, if at all, or successfully integrate any acquired business, products or technologies into our operations. If we do enter into any joint ventures or complete acquisitions, we may not strengthen our competitive position or achieve our goals, or these transactions may be viewed negatively by customers or investors. In addition, we may have difficulty integrating and motivating personnel, technologies and operations from acquired businesses and retaining and motivating key personnel from those businesses. Joint ventures and acquisitions may disrupt our ongoing operations, divert management from day-to-day responsibilities and increase our expenses. Future acquisitions may reduce our cash available for operations and other uses, and could result in an increase in amortization expense related to identifiable intangible assets acquired, potentially dilutive issuances of equity securities or the incurrence of debt. We cannot predict the number, timing or size of future joint ventures or acquisitions, or the effect that any such transactions might have on our operating results.

We incur significant costs as a result of operating as a public company, and our management devotes substantial time to new compliance initiatives. We may fail to comply with the rules that apply to public companies, including section 404 of the Sarbanes-Oxley Act of 2002.

We have incurred and will continue to incur significant legal, accounting and other expenses as a public company, including costs resulting from public company reporting obligations under the Securities Exchange Act of 1934, as amended, and regulations regarding corporate governance practices. The listing requirements of The NASDAQ Global Market require that we satisfy certain corporate governance requirements relating to director independence, distributing annual and interim reports, stockholder meetings, approvals and voting, soliciting proxies, conflicts of interest and a code of conduct. Our management and other personnel will need to devote a substantial amount of time to all of these requirements. Moreover, the reporting requirements, rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. These reporting requirements, rules and regulations, coupled with the increase in potential litigation exposure associated with being a public company, could make it more difficult for us to attract and retain qualified persons to serve on our board of directors or board committees or to serve as executive officers.

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In addition, the Sarbanes-Oxley Act of 2002, or Sarbanes-Oxley Act, and the related rules of the Securities and Exchange Commission require that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, our management and, depending on the size of our public float, independent registered public accounting firm will have to provide a report on the effectiveness of our internal control over financial reporting with our annual report for the fiscal year ending December 31, 2011, as required by Section 404 of the Sarbanes-Oxley Act. To date, we have never conducted a review of our internal control for the purpose of providing the reports required by these rules. During the course of our review and testing, we may identify deficiencies and be unable to remediate them before we must provide the required reports. We or our independent registered public accounting firm may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting, which could harm our operating results, cause investors to lose confidence in our reported financial information and cause the trading price of our stock to fall.

Our compliance with Section 404 may require that we incur substantial expense and expend significant management time on compliance-related issues. Moreover, if we are unable to comply with the requirements of Section 404 in a timely manner, or if we or our independent registered public accounting firm is unable to conclude that our internal control over financial reporting is effective or otherwise identifies material weaknesses in our internal control, the market price of our stock would likely decline and we could be subject to sanctions or investigations by NASDAQ, the Securities and Exchange Commission or other regulatory authorities, which would require additional financial and management resources.

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

In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an ownership change is subject to limitations on its ability to use its pre-change net operating loss carryforwards, or NOLs, to offset future taxable income. If the Internal Revenue Service challenges our analysis that our existing NOLs will not expire before utilization due to previous ownership changes, our ability to use our NOLs could be limited by Section 382 of the Code. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Code. Furthermore, our ability to use NOLs of companies that we may acquire in the future may be subject to limitations. For these reasons, we may not be able to use a material portion of the NOLs reflected on our balance sheet, even if we attain profitability.

Unfavorable global economic conditions could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. The recent global financial crisis caused extreme volatility and disruptions in the capital and credit markets. A severe or prolonged economic downturn, such as the recent global financial crisis, could result in a variety of risks to our business, including, reductions or delays in planned research and development and other expenditures by our customers or decreased funding of genomic research by governmental entities. A weak or declining economy could also put strain on our suppliers, possibly resulting in supply disruption, or cause our customers to delay making payments for our services. Any of the foregoing could harm our business.

Risks Related to Intellectual Property

We currently are, and could in the future be, subject to litigation regarding patent and other proprietary rights that could harm our business.

Our commercial success depends in part on not infringing patents and proprietary rights of third parties. On August 3, 2010, Illumina, Inc. and Solexa, Inc. (an entity acquired by Illumina) filed a complaint in the U.S. District Court in Delaware alleging patent infringement by us. The complaint alleges that our Complete Genomics Analysis Platform, and in particular our combinatorial probe anchor ligation technology, infringes upon three patents held by Illumina and Solexa. The complaint seeks, among other things, a preliminary and permanent injunction against us from infringing these patents and unspecified monetary damages. We may incur substantial time and expense in defending against this complaint. If we were found to infringe one or more valid claims of a patent-in-suit and if the district court granted an injunction on that basis, we may be forced to redesign portions of our sequencing process, seek a license or cease the infringing activity. Redesigning portions of our sequencing process may take substantial time and resources and may delay our ability to generate revenue. In addition, a license to the necessary patent rights may not be available on commercially reasonable terms, if at all. In the event that the district court grants an injunction and we are unsuccessful in redesigning our sequencing process or obtaining a license, we may be forced to cease our sequencing operations altogether. See Part II, Item 1. Legal Proceedings.

As we enter our markets, it is possible other competitors will claim that our services infringe their intellectual property rights as part of a business strategy to impede our successful entry into those markets. Such competitors and other third parties may have obtained and may in the future obtain patents covering products or processes that are similar to or may include steps or processes used in our sequencing technology, allowing them to claim that the use of our technologies infringes these patents. In particular, we are aware of issued U.S. patents owned by

competitors and other third parties, including Illumina, to which we do not have licenses that may relate to our sequencing technology and which pertain to, among other things:

- sample preparation techniques;
- processes for making nucleic acid templates, or library construction;

- processes for making DNBs from nucleic acid templates;
- nucleic acid arrays;
- methods of making arrays of DNBs;
- sequencing methods, including those involving ligation;
- identifying genomic sequences on nucleic acid arrays;
- devices and apparatus used in nucleic acid detection systems, including optical systems; and
- information processing systems including software for base calling, sequence mapping and assembly.

Some of the third parties that own these patents, including Illumina, have strong economic incentives, and substantial financial resources, to claim that we are infringing their patent rights. In a patent infringement claim against us, we may assert, as a defense, that we do not infringe the relevant patent claims, that the patent is invalid or both. The strength of our defenses will depend on the patents asserted, the interpretation of these patents, our ability to identify invalidating prior art (that is, publication of the patent holder s invention or technology prior to the stated invention date) in order to invalidate the asserted patent and on other factors. However, we could be unsuccessful in advancing non-infringement and/or invalidity arguments in our defense. In the United States, issued patents enjoy a presumption of validity, and the party challenging the validity of a patent claim must present clear and convincing evidence of invalidity, which is a high burden of proof. Conversely, the patent owner need only prove infringement by a preponderance of the evidence, which is a lower burden of proof.

If we were found by a court to have infringed a valid patent claim, we could be prevented from using the patented technology or be required to pay the owner of the patent rights for the rights to use that technology. If we decide to pursue a license to one or more of these patents, we may not be able to obtain such a license on commercially reasonable terms, if at all, or the license we obtain may require us to pay substantial royalties or grant cross licenses to our patent rights. For example, if the relevant patent is owned by a competitor, that competitor may choose not to license patent rights to us, as it would be under no obligation to do so. If we decide to develop alternative technology, we may not be able to do so on a timely or cost-effective manner, if at all.

In addition, because patent applications can take years to issue and are often afforded confidentiality for some period of time, there may currently be pending applications, unknown to us, which later result in issued patents that processes in our sequencing technology infringe. Processes in our sequencing technology may also infringe existing issued patents of which we are currently unaware. Even though we own or have other rights to patents, these patents do not provide us with the freedom to offer our sequencing services unimpeded by the patent rights of others. For example, we may be required to pursue or defend a patent infringement action in order to protect our intellectual property rights or practice our sequencing technology. In addition, we do not currently provide sequencing services intended to be used for diagnosis of disease. If we expand our business to include sequencing services intended to be used for the diagnosis of disease, it may be necessary to license patents related to such services.

It is possible that, in addition to our current litigation, we may in the future receive, particularly as a public company, communications from competitors and others alleging that we may be infringing their patents, trade secrets or other intellectual property rights or offering licenses to such intellectual property or threatening litigation. For example, an educational institution has recently invited us to engage in negotiations for the license of certain of that institution s patent rights. We have not yet determined whether we will seek such a license. In addition to patent infringement claims, third parties may assert copyright, trademark or other proprietary rights against us. We may not be able to successfully defend against the claims asserted by Illumina, or future claims, and our business may suffer if we are found to have infringed upon the patents held by Illumina, or if future claims are brought against us.

We may not be able to protect our patent rights or other intellectual property which could impair our ability to compete effectively.

We depend on proprietary technology for our success and ability to compete. If others are able to reproduce our technology, our business will suffer significantly unless we can prevent them from competing with us. To protect our proprietary technology, we rely on patents and other intellectual property laws, as well as nondisclosure agreements, licensing arrangements and confidentiality provisions. U.S. patent, copyright and trade secret laws afford us only limited protection, and the laws of some foreign countries do not protect proprietary rights to the same extent.

We have licensed, from Callida Genomics, Inc., U.S. and international patents and patent applications relating to our business. Because the issuance of a patent is not conclusive of its validity or enforceability, our existing patent rights, and rights we may obtain in the future, may not provide us with meaningful protection. The patent rights on which we rely may be challenged and invalidated or may be interpreted not to be broad enough to cover the critical components of our technology. Our pending patent applications may have their claims limited or may not result in issued patents. Moreover, our patent rights become more limited as owned or licensed patents begin to expire in 2014. We will be able to protect our technologies from unauthorized use by third parties only to the extent that valid and enforceable patents or other proprietary rights cover them. Even if we have valid and enforceable patents or other proprietary rights, competitors may be able to design alternative methods or devices that avoid infringement of those patents or rights.

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Our key patent rights are licensed from Callida, which is owned by our Chief Scientific Officer and his spouse. If we breach the terms of these licenses, or if our relationship with Callida or its owners deteriorates, Callida may seek to terminate the licenses. If we lose our rights to use these patents, we may be forced to re-design our sequencing technology, which would be expensive and may not be possible.

The patent positions of biotechnology companies, including us, can be highly uncertain and involve complex and evolving legal and factual questions. No consistent policy regarding the breadth of claims allowed in biotechnology patents has emerged to date in the United States. Legal developments may preclude or limit the patent protection available for our sequencing technology.

Despite our efforts to protect our proprietary rights, attempts may be made to copy or reverse engineer aspects of our sequencing technology or to obtain and use information that we regard as proprietary. Accordingly, we may be unable to protect our proprietary rights against unauthorized third-party copying or use. Furthermore, policing the unauthorized use of our intellectual property is difficult. Litigation may be necessary in the future to enforce our intellectual property rights, to protect our trade secrets or to determine the validity and scope of the proprietary rights of others. Litigation could result in substantial costs and diversion of resources and could harm our business.

We may incur substantial costs as a result of our current, or future, litigation or other proceedings relating to patent and other proprietary rights.

The genomic sequencing industry includes several large companies that have rights to many broad issued patents and pending patent applications. Competitors in this industry have fiercely litigated their patent positions and alleged infringements by others. For example, Illumina and Affymetrix were recently involved in long and expensive patent litigation relating to DNA sequencing technology. This litigation resulted in a settlement involving the payment of $90 million by one party to the other.

Our involvement in intellectual property litigation, including our current litigation with Illumina, or administrative proceedings could result in significant expense. Some of our competitors, including Illumina, Life Technologies and Affymetrix, have considerable resources available to them. We, on the other hand, are an early-stage commercial company with comparatively few resources available to us to engage in costly and protracted litigation. Intellectual property infringement claims asserted against us, whether with or without merit, could be costly to defend and could limit our ability to use some technologies in the future. They will be time consuming, will divert our management s and scientific personnels attention and may result in liability for substantial damages. In addition, our standard customer contract requires us to indemnify our customers for claims alleging that any of our products misappropriate or violate any third party patent, copyright, trade secret or other intellectual property or proprietary rights.

If third parties file patent applications or are issued patents claiming technology also claimed by us in pending applications, we may be required to participate in interference proceedings with the U.S. Patent Office or in other proceedings outside the United States, including oppositions, to determine priority of invention or patentability. Even if we are successful in these proceedings, we may incur substantial costs, and the time and attention of our management and scientific personnel will be diverted in pursuit of these proceedings.

We may not be able to enforce our intellectual property rights throughout the world.

The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of some countries, particularly developing countries, do not favor the enforcement of patents and other intellectual property protection, especially those relating to biotechnology. This could make it difficult for us to stop the infringement of our patents or the misappropriation of our other intellectual property rights. For example, many foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties. In addition, many countries limit the enforceability of patents against third parties, including government agencies or government contractors. In these countries, patents may provide limited or no benefit.

Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate. In addition, changes in the law and legal decisions by courts in the U.S. and foreign countries may affect our ability to obtain adequate protection for our technology and the enforcement of intellectual property.

Confidentiality agreements with employees and others may not adequately prevent disclosures of our trade secrets and other proprietary information.

We rely in part on trade secret protection to protect our confidential and proprietary information and processes. However, trade secrets are difficult to protect. We have taken measures to protect our trade secrets and proprietary information, but these measures may not be effective.

We require new employees and consultants to execute confidentiality agreements upon the commencement of an employment or consulting arrangement with us. These agreements generally require that all confidential information developed by the individual or made known to the individual by us during the course of the individual s relationship with us be kept confidential and not disclosed to third parties. These agreements also generally provide that inventions conceived by the individual in the course of rendering services to us will be our exclusive property. Despite these measures, our proprietary information may be disclosed, third parties could reverse engineer our sequencing technologies and others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

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Risks Related to Ownership of Our Common Stock

Our stock price is volatile and purchasers of our common stock could incur substantial losses.

Our stock price is volatile, and from November 11, 2010, the first day of trading of our common stock, to May 6, 2011, the trading prices of our stock have ranged from $17.25 to $6.60 per share. The market price of our common stock may fluctuate significantly in response to a number of factors. These factors include those discussed in this Risk Factors section of this Quarterly Report and others such as:

- quarterly variations in our results of operations or those of our competitors;
- changes in earnings estimates or recommendations by securities analysts;
- announcements by us or our competitors of new products or services, significant contracts, commercial relationships, acquisitions or capital commitments;
- developments with respect to intellectual property rights;
- our commencement of, or involvement in, litigation;
- changes in financial estimates or guidance, including our ability to meet our future revenue and operating profit or loss estimates or guidance;
- announcements regarding equity or debt financing transactions;
- any major changes in our board of directors or management;
- changes in governmental regulations; and
- a decrease in government funding of research and development or a slowdown in the general economy.

In recent years, the stock market in general, and the market for technology/life science companies in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry factors may seriously affect the market price of our common stock, regardless of our actual operating performance. In addition, in the past, following periods of volatility in the overall market and the market price of a particular company s securities, securities class action litigation has often been instituted against these companies. This litigation, if instituted against us, could result in substantial costs and divert our management s attention and resources.

If securities or industry analysts do not publish research or reports about our business or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. If any of the analysts who cover us issue an adverse or misleading opinion regarding us, business model, technology or stock performance, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly,

we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline. Moreover, the unpredictability of our financial results likely reduces the certainty, and therefore reliability, of the forecasts by securities or industry analysts of our future financial results, adding to the potential volatility of our stock price.

Our directors, executive officers and principal stockholders and their respective affiliates will continue to have substantial influence over us and could delay or prevent a change in corporate control.

Our directors, executive officers and the holders of more than 5% of our common stock, together with their affiliates, beneficially own approximately 80% of our outstanding common stock based on the number of shares outstanding on April 29, 2011. These stockholders, acting together, have significant influence over the outcome of matters submitted to our stockholders for approval, including the election of directors and any merger, consolidation or sale of all or substantially all of our assets. In addition, these stockholders, acting together, have significant influence over our management and affairs. Accordingly, this concentration of ownership might harm the market price of our common stock by:

- delaying, deferring or preventing a change in control;
- impeding a merger, consolidation, takeover or other business combination involving us; or
- discouraging a potential acquiror from making a tender offer or otherwise attempting to obtain control of us.

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Future sales of shares by existing stockholders could cause our stock price to decline.

If our existing stockholders sell, or if the market believes our existing stockholders will sell, substantial amounts of our common stock in the public market, the trading price of our common stock could decline significantly. As of April 29, 2011, we had 26,011,321 shares of common stock outstanding. Of these shares, 19,976,693 shares are currently subject to contractual lock-up agreements entered into by certain of our stockholders with the underwriters in connection with our IPO and will become freely tradable on May 10, 2011, subject to extension or reduction. Upon the expiration of these restrictions contained in these contractual lock-up agreements, except for shares of common stock held by directors, executive officers and our other affiliates, which will be subject to volume limitations under Rule 144 of the Securities Act of 1933, as amended.

Some of our existing stockholders have demand and piggyback rights to require us to register with the SEC up to approximately 21.7 million shares of our common stock, including shares issuable upon exercise of outstanding options. If we register these shares of common stock, the stockholders would be able to sell those shares freely in the public market, subject to the lock-up agreements described above.

We also registered 6,628,347 shares of our common stock that are subject to outstanding stock options and reserved for issuance under our equity plans. These shares can be freely sold in the public market upon issuance, subject to vesting restrictions and the lock-up agreements described above.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of management.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could delay or prevent changes in control or changes in our management without the consent of our board of directors. These provisions include the following:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;
- the ability of our board of directors to alter our bylaws without obtaining stockholder approval;
- the required approval of at least $66\,^{2}/3\%$ of the shares entitled to vote at an election of directors to adopt, amend or repeal our bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;

the requirement that a special meeting of stockholders may be called only by the chairman of the board of directors, the chief executive officer, the president or the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and

advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror s own slate of directors or otherwise attempting to obtain control of us.

We are also subject to the anti-takeover provisions contained in Section 203 of the Delaware General Corporation Law. Under Section 203, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other exceptions, the board of directors has approved the transaction.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

In connection with the entry into the Oxford Loan Agreement, we issued to Oxford warrants to purchase an aggregate of 160,128 shares of our common stock (the Warrant Shares) at an exercise price of $7.495 per share. The warrants expire on the 7th anniversary of the issuance date. We also agreed to provide Oxford certain registration rights covering the Warrant Shares. The warrants issued to Oxford were issued in reliance upon exemptions from the registration requirements of the Securities Act pursuant to Section 4(2) of the Securities Act and Rule 506 promulgated thereunder.

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ITEM 3. DEFAULTS UPON SENIOR SECURITIES
None.

ITEM 4. (REMOVED AND RESERVED)

ITEM 5. OTHER INFORMATION
Not applicable

ITEM 6. EXHIBITS

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Date	Number	Filed Herewith
3.1	Amended and Restated Certificate of Incorporation of Complete Genomics, Inc.	8-K	11/16/2010	3.1	
3.2	Amended and Restated Bylaws of Complete Genomics, Inc.	S-1/A	10/04/2010	3.4	
4.1	Reference is made to exhibits 3.1 and 3.2.				
4.2	Specimen Common Stock Certificate.	S-1/A	10/20/2010	4.2	
4.3	Form of Warrant to purchase shares of Common Stock issued in connection with the 2010 convertible bridge loan financing transaction.	S-1	07/30/2010	4.4	
4.4	Form of Warrant to purchase shares of Common Stock issued in connection with the Loan and Security Agreement, dated September 21, 2006.	S-1	07/30/2010	4.5	
4.5	Form of Warrant to purchase shares of Common Stock issued in connection with the Loan and Security Agreement, dated August 3, 2007.	S-1	07/30/2010	4.7	
4.6	Form of Warrant to purchase shares of Common Stock issued in connection with the Loan and Security Agreement, dated July 30, 2008.	S-1	07/30/2010	4.9	
4.7	Warrant to purchase shares of Common Stock issued in connection with the Loan and Security Agreement with Atel Ventures, Inc., dated December 17, 2010.	10-K	03/30/2011	4.7	
4.8	Form of Warrant to purchase shares of Common Stock issued in connection with the Loan and Security Agreement with Oxford Finance Corporation, dated March 25, 2011.	10-K	03/30/2011	4.8	
10.4e	Loan and Security Agreement, dated March 25, 2011, by and between Oxford Finance Corporation and Complete Genomics, Inc.	10-K	03/30/2011	10.4e	
31.1	Certification of Chief Executive Officer of Complete Genomics, Inc., as required by Rule 13a-14(a) or Rule 15d-14(a).				X
31.2	Certification of Chief Financial Officer of Complete Genomics, Inc., as required by Rule 13a-14(a) or Rule 15d-14(a).				X

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Exhibit Number	Exhibit Description	Incorporated by Reference Form	Date	Number	Filed Herewith
32.1	Certification by the Chief Executive Officer, as required by Rule 13a-14(b) or Rule 15d-14(b) and Section 1350 of Chapter 36 of Title 18 of the United States Code (18 U.S.C. §1350).**				X
32.2	Certification by the Chief Financial Officer, as required by Rule 13a-14(b) or Rule 15d-14(b) and Section 1350 of Chapter 36 of Title 18 of the United States Code (18 U.S.C. §1350).**				X

** The certifications attached as Exhibits 32.1 and 32.2 that accompanies this Quarterly Report on Form 10-Q are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of Complete Genomics, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Form 10-Q, irrespective of any general incorporation language contained in such filing.

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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.

COMPLETE GENOMICS, INC.

May 9, 2011

By: /s/ Ajay Bansal
Ajay Bansal
Chief Financial Officer (Principal Financial and Accounting Officer)

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