PACIFIC BIOSCIENCES OF CALIFORNIA, INC.
Form 10-Q
November 12, 2013

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2013

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 001-34899

Pacific Biosciences of California, Inc.

(Exact name of registrant as specified in its charter)

Delaware	16-1590339
(State or other jurisdiction of	(I.R.S. Employer

incorporation or organization)	Identification No.)
1380 Willow Road	
Menlo Park, CA 94025	94025
(Address of principal executive offices)	(Zip Code)

(650) 521-8000

(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 x No ¨

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 (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x 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	x
Non-accelerated filer	(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

Number of shares outstanding of the issuer's common stock as of October 31, 2013: 66,152,099

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PART I. FINANCIAL INFORMATION

Item 1.Financial Statements

PACIFIC BIOSCIENCES OF CALIFORNIA, INC.

Condensed Consolidated Balance Sheets

(Unaudited)

(in thousands except par value amounts)	September 30, 2013	December 31, 2012
Assets		
Current assets		
Cash and cash equivalents	$ 64,767	$ 46,540
Investments	62,169	54,040
Accounts receivable	3,814	2,822
Inventory, net	9,819	9,592
Prepaid expenses and other current assets	1,194	2,006
Total current assets	141,763	115,000
Property and equipment, net	10,544	14,329
Other long-term assets	493	354
Total assets	$ 152,800	$ 129,683
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 3,413	$ 2,988
Accrued expenses and other current liabilities	8,506	8,204
Deferred revenue, current	10,359	3,378
Facility financing obligation, current	201	173
Total current liabilities	22,479	14,743
Deferred revenue, non-current	28,875	800
Deferred rent and other long-term liabilities	1,378	2,145
Notes payable	13,173	—
Financing derivative	894	—
Facility financing obligation, non-current	2,458	2,613
Total liabilities	69,257	20,301
Commitments and contingencies (Note 6)		
Stockholders' equity		
Convertible Preferred Stock, $0.001 par value:		
Authorized 50,000 shares; No shares issued or outstanding	—	—

Common Stock and additional paid-in-capital, $0.001 par value:		
Authorized 1,000,000 shares; Issued and outstanding 66,143 shares at September 30, 2013 and 56,170 shares at December 31, 2012	681,614	645,372
Accumulated other comprehensive income	11	30
Accumulated deficit	(598,082)	(536,020)
Total stockholders' equity	83,543	109,382
Total liabilities and stockholders' equity	$ 152,800	$ 129,683

See accompanying notes to the condensed consolidated financial statements.

PACIFIC BIOSCIENCES OF CALIFORNIA, INC.

Condensed Consolidated Statements of Operations and Comprehensive Loss

(Unaudited)

(in thousands, except per share amounts)	Three-Month Periods Ended September 30, 2013	Three-Month Periods Ended September 30, 2012	Nine-Month Periods Ended September 30, 2013	Nine-Month Periods Ended September 30, 2012
Revenue:				
Product revenue	$ 5,814	$ 1,268	$ 14,248	$ 15,810
Service and other revenue	1,607	1,283	4,528	3,620
Grant revenue	—	225	272	675
Total revenue	7,421	2,776	19,048	20,105
Cost of Revenue:				
Cost of product revenue	4,616	960	11,138	14,949
Cost of service and other revenue	1,564	1,626	4,680	4,843
Total cost of revenue	6,180	2,586	15,818	19,792
Gross profit	1,241	190	3,230	313
Operating Expense:				
Research and development	10,419	12,626	34,084	35,971
Sales, general and administrative	10,757	10,143	29,685	36,986
Total operating expense	21,176	22,769	63,769	72,957
Operating loss	(19,935)	(22,579)	(60,539)	(72,644)
Interest expense	(686)	(68)	(1,785)	(207)
Other income (expense), net	134	(82)	262	55
Net loss	(20,487)	(22,729)	(62,062)	(72,796)
Other comprehensive income (loss):				
Unrealized gain (loss) on investments	13	(9)	(19)	9
Comprehensive loss	$ (20,474)	$ (22,738)	$ (62,081)	$ (72,787)
Net loss per share:				
Basic and diluted net loss per share	$ (0.31)	$ (0.41)	$ (1.01)	$ (1.31)
Shares used in computing basic and diluted net loss per share	65,523	55,877	61,636	55,582

See accompanying notes to the condensed consolidated financial statements.

PACIFIC BIOSCIENCES OF CALIFORNIA, INC.

Condensed Consolidated Statements of Cash Flows

(Unaudited)

(in thousands)	Nine-Month Periods Ended September 30, 2013	2012
Cash flows from operating activities		
Net loss	$ (62,062)	$ (72,796)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation	4,238	5,041
Amortization of debt discount and financing costs	418	—
Stock-based compensation	7,361	7,158
Other items	(73)	270
Changes in assets and liabilities		
Accounts receivable	(992)	4,025
Inventory	171	4,151
Prepaid expenses and other assets	791	734
Accounts payable	425	(1,845)
Accrued expenses and other current liabilities	302	(3,249)
Deferred revenue	35,056	(1,297)
Other long-term liabilities	(894)	(791)
Net cash used in operating activities	(15,259)	(58,599)
Cash flows from investing activities		
Purchase of property and equipment	(807)	(1,263)
Purchase of investments	(141,549)	(69,436)
Sales of investments	—	7,896
Maturities of investments	133,391	92,392
Net cash provided by (used in) investing activities	(8,965)	29,589
Cash flows from financing activities		
Proceeds from issuance of common stock, net of issuance costs	22,685	2,703
Proceeds from issuance of debt facility, net of issuance costs	19,766	—
Net cash provided by financing activities	42,451	2,703
Net increase (decrease) in cash and cash equivalents	18,227	(26,307)
Cash and cash equivalents at beginning of period	46,540	58,865
Cash and cash equivalents at end of period	$ 64,767	$ 32,558

See accompanying notes to the condensed consolidated financial statements.

PACIFIC BIOSCIENCES OF CALIFORNIA, INC.

Notes to Condensed Consolidated Financial Statements

(Unaudited)

NOTE 1. OVERVIEW

Pacific Biosciences of California, Inc., ("Pacific Biosciences", the "Company", "we", "us") has commercialized the PacBio RS High Resolution Genetic Analyzer and the PacBio RS II Sequencing System to help scientists solve genetically complex problems. Based on our novel Single Molecule, Real-Time (SMRT) technology, our products enable scientists to increase their understanding of biological systems through targeted sequencing and insight into genetic variations.

The names "Pacific Biosciences," "PacBio," "SMRT," "SMRTbell" and our logo are our trademarks.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

In the opinion of management, the accompanying unaudited Condensed Consolidated Financial Statements ("financial statements") of Pacific Biosciences of California, Inc. and its wholly-owned subsidiaries have been prepared on a consistent basis with the December 31, 2012 audited Consolidated Financial Statements and include all adjustments, consisting of only normal recurring adjustments, necessary to fairly state the information set forth herein. Certain prior year amounts in the financial statements and notes thereto have been reclassified to conform to the current year's presentation. The financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission ("SEC") and, therefore, omit certain information and footnote disclosures necessary to present the statements in accordance with U.S. generally accepted accounting principles ("GAAP"). These financial statements should be read in conjunction with the audited Consolidated Financial Statements and Notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012, which was filed with the SEC on March 15, 2013. The results of operations for the first nine months of fiscal 2013 are not necessarily indicative of the results to be expected for the entire fiscal year or any future periods.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires us 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 financial statements and the reported amounts of revenue and expense during the reporting periods. Our estimates include, but are not limited to, useful lives assigned to long-lived assets, assumptions used to compute stock-based compensation expense and valuing warrants, value the financing derivative and long-term notes, value and recognize revenue elements, determine delivery periods for revenue recognition, and to compute provisions for income taxes, inventory, and contingencies. Actual results could differ from our estimates, and such differences could be material to our financial position and results of operations.

Fair Value of Financial Instruments

Assets and liabilities measured at fair value on a recurring basis

The following table sets forth the fair value of our financial assets and liabilities that were measured on a recurring basis as of September 30, 2013 and December 31, 2012, respectively:

(in thousands)	September 30, 2013				December 31, 2012			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets								
Cash and cash equivalents:								
Cash and money market funds	$ 45,571	$ —	$ —	$ 45,571	$ 11,847	$ —	$ —	$ 11,847
Commercial paper	—	19,196	—	19,196	—	34,693	—	34,693
Total cash and cash equivalents	45,571	19,196	—	64,767	11,847	34,693	—	46,540
Investments:								
Commercial paper	—	53,697	—	53,697	—	28,866	—	28,866
Corporate debt securities	—	1,638	—	1,638	—	13,203	—	13,203
Asset backed securities	—	6,834	—	6,834	—	955	—	955
Certificates of deposits	—	—	—	—	—	2,008	—	2,008
U.S. government and agency securities	—	—	—	—	—	9,008	—	9,008
Total investments	—	62,169	—	62,169	—	54,040	—	54,040
Total assets measured at fair value	$ 45,571	$ 81,365	$ —	$ 126,936	$ 11,847	$ 88,733	$ —	$ 100,580
Liabilities								
Financing derivative	$ —	$ —	$ 894	$ 894	$ —	$ —	$ —	$ —
Total liabilities measured at fair value	$ —	$ —	$ 894	$ 894	$ —	$ —	$ —	$ —

All of our cash deposits and money market funds are classified within Level 1 of the fair value hierarchy because they are valued using bank balances or quoted market prices. Our investments are classified as Level 2 instruments based on market pricing and other observable inputs. None of our investments are classified within Level 3 of the fair value hierarchy.

During the nine-month periods ended September 30, 2013 and 2012, realized gains and losses on the sale of investments were immaterial and there were no material impairments of our investments.

The fair value of the Financing Derivative (as defined in Note 7. Debt Facility) liability resulting from the debt facility we entered into during the first quarter of 2013 was determined using Level 3 inputs, or significant unobservable inputs. Refer to Note 7. Debt Facility for a detailed description and valuation approach. The following table provides the changes in the fair value of the Financial Derivative during the nine-month period ended September 30, 2013 (in thousands):

Financial Derivative	Amount
Balance as of December 31, 2012	$ —
Value at issuance	967
Gain on change in fair value of Financing Derivative	(73)
Balance as of September 30, 2013	$ 894

For the nine-month period ended September 30, 2013 there were no transfers between Level 1, Level 2, or Level 3 assets or liabilities reported at fair value on a recurring basis and valuation techniques did not change compared to the prior quarter.

Financial assets and liabilities not measured at fair value on a recurring basis

The carrying amount of our accounts receivable, prepaid expenses, other current assets, accounts payable, accrued expenses and other current liabilities, are determined to approximate fair value due to their short maturities. The carrying value of our facility financing obligation approximates fair value due to the time to maturity and prevailing market rates.

We determined the fair value of the Notes (as defined in Note 7. Debt Facility) from the debt facility we entered into during the first quarter of 2013 using Level 3 inputs, or significant unobservable inputs. The value of the Notes was determined by comparing the difference between the fair value of the Notes with and without the Financing Derivative by calculating the respective present values from future cash flows using a 20.8% weighted average market yield. Refer to Note 7. Debt Facility for additional details regarding the Notes. The estimated fair value and carrying value of the Notes are as follows (in thousands):

	September 30, 2013		December 31, 2012	
	Fair Value	Carrying Value	Fair Value	Carrying Value
Long-term notes payable	$ 13,686	$ 13,173	$ —	$ —

Net Loss per Share

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

	Three-Months Ended September 30,		Nine-Months Ended September 30,	
	2013	2012	2013	2012
Net loss per share				
Numerator:				
Net loss	$ (20,487)	$ (22,729)	$ (62,062)	$ (72,796)
Denominator:				
Weighted average shares used in computation of basic and diluted net loss per share	65,523	55,877	61,636	55,582
Basic and diluted net loss per share	$ (0.31)	$ (0.41)	$ (1.01)	$ (1.31)

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

	As of September 30,	
(in thousands)	2013	2012
Options outstanding	13,351	10,973
Warrants to purchase common stock	5,504	10

NOTE 3. AGREEMENT WITH ROCHE

On September 24, 2013, we entered into a Development, Commercialization and License Agreement (the “Roche Agreement”) with F. Hoffman-La Roche Ltd (“Roche”), pursuant to which we: (i) will develop diagnostic products for clinical use including sequencing systems and consumables based on our proprietary SMRT technology; (ii) granted to Roche an exclusive right to commercialize, and an exclusive license to sell, the developed diagnostic products for clinical use; and (iii) will manufacture and supply certain products intended for clinical use as the exclusive supplier to Roche. We received a non-refundable up-front payment of $35.0 million and may receive up to an additional $40.0 million based upon the achievement of development milestones. The Roche Agreement has an initial term of thirteen

years and provisions allowing Roche 5-year renewals.

The Roche Agreement contains multiple elements, and the deliverables under the Roche Agreement consist of intellectual property licenses, research and development services, and participation on the joint steering committee (as defined in the Roche Agreement) with Roche. These deliverables are non-contingent in nature. We evaluated whether there is standalone value for each of the non-contingent deliverables and allocated the upfront payment of $35.0 million to each unit of accounting based on our best estimates of selling prices pursuant to Accounting Standard Codification (ASC) Topic 605-25, Revenue Recognition — Multiple Element Arrangements (ASC 605-25). We consider the intellectual property licenses and research and development services to be a combined unit of accounting. The intellectual property licenses do not have standalone value since the diagnostic products to which the license relates are in a very early stage of development. In addition, we believe that the joint steering committee obligation has standalone value and thus, is a separate unit of accounting.

The amount allocated to the intellectual property licenses and research and development services will be recognized as revenue based on the proportional performance method over the expected development period, and the amount allocated to the deliverable of our participation on the joint steering committee will be recognized as revenue based on the proportional performance method over the term of the Roche Agreement, which represents the estimated obligation period of the joint steering committee. Revenue will be recognized on a straight-line basis over the delivery period to the extent that the pattern of performance is not expected to significantly differ from recognition using a proportional performance model. As of September 30, 2013, revenue relating to the $35.0 million upfront cash payment was deferred with $6.8 million and $28.2 million allocated to current and long-term deferred revenue, respectively.

Our process for determining estimates of selling prices involves management’s judgment. Our process considers multiple factors such as estimated headcount, annual research and development budget, estimated length of the research and development period and estimated transfer price on cost, which may vary over time, depending upon the circumstances, and relate to each deliverable. If the estimated obligation period of one or more deliverables should change, the future amortization of the revenue would also change.

In addition to the non-contingent deliverables above, the Roche Agreement includes contingent deliverables relating to the receipt of additional payments totaling $40.0 million upon the achievement of certain development milestones. Based on ASC Topic 605-28, Revenue Recognition — Milestone Method, we evaluate contingent milestones at inception of the agreement, and recognize consideration that is contingent upon the achievement of a milestone in its entirety as revenue in the period in which the milestone is

achieved only if the milestone is considered substantive in its entirety. Milestones are considered substantive if the consideration earned from the achievement of the milestone (i) is consistent with performance required to achieve the milestone or the increase in value to the delivered item, (ii) relates solely to past performance and (iii) is reasonable relative to all of the other deliverables and payments within the arrangement. The milestone payments of $40.0 million will be recognized as revenue in their entirety upon our achievement of each substantive milestone.

NOTE 4. CASH, CASH EQUIVALENTS AND INVESTMENTS

The following table summarizes our investments as of September 30, 2013 and December 31, 2012 (in thousands):

	As of September 30, 2013			
	Amortized Cost	Gross unrealized gains	Gross unrealized losses	Fair Value
Cash and cash equivalents:				
Cash and money market funds	$ 45,571	$ —	$ —	$ 45,571
Commercial paper	19,194	2	—	19,196
Total cash and cash equivalents	64,765	2	—	64,767
Investments:				
Commercial paper	53,689	9	(1)	53,697
Corporate debt securities	1,637	1	—	1,638
Asset backed securities	6,834	2	(2)	6,834
Total investments	62,160	12	(3)	62,169
Total cash, cash equivalents and investments	$ 126,925	$ 14	$ (3)	$ 126,936

	As of December 31, 2012			
	Amortized Cost	Gross unrealized gains	Gross unrealized losses	Fair Value
Cash and cash equivalents:				
Cash and money market funds	$ 11,847	$ —	$ —	$ 11,847
Commercial paper	34,690	3	—	34,693
Total cash and cash equivalents	46,537	3	—	46,540
Investments:				
Commercial paper	28,859	7	—	28,866
Corporate debt securities	13,190	13	—	13,203
Asset backed securities	954	1	—	955
Certificates of deposit	2,005	3	—	2,008
U.S. government and agency securities	9,005	3	—	9,008

Total investments	54,013	27	—	54,040
Total cash, cash equivalents and investments	$ 100,550	$ 30	$ —	$ 100,580

The estimated fair value of marketable debt securities (commercial paper, corporate debt securities, asset backed securities and U.S. government and agency securities) as of September 30, 2013, by contractual maturity, are as follows:

(in thousands)	Fair Value
Due in one year or less	$ 74,530
Due after one year through 5 years	6,835
Total investments in debt securities	$ 81,365

Actual maturities may differ from contractual maturities because issuers may have the right to call or prepay obligations without call or prepayment penalties.

NOTE 5. BALANCE SHEET COMPONENTS

As of September 30, 2013 and December 31, 2012 our inventory, net, consisted of the following components:

(in thousands)	September 30, 2013	December 31, 2012
Purchased materials, net	$ 3,152	$ 3,823
Work in process, net	4,217	3,494
Finished goods, net	2,450	2,275
Inventory, net	$ 9,819	$ 9,592

NOTE 6. CONTINGENCIES

We become subject to claims and assessments from time to time in the ordinary course of business. We accrue liabilities for such matters when it is probable that future expenditures will be made and such expenditures can be reasonably estimated.

During October 2013 the Superior Court of the State of California, County of San Mateo granted final approval of a settlement of four class action lawsuits that had been consolidated as In re Pacific Biosciences of California Inc. S'holder Litig. In addition, the company has reached an agreement in principle to settle the claims of the single individual who opted out of the state court settlement. Upon its becoming final, the settlement of the state court action will have preclusive effect on claims previously asserted in the lawsuit filed in December 2011 in United States District Court for the Northern District of California, captioned Primo v. Pacific Biosciences of California, Inc., et al., Case No. 4:11-CV-06599. All amounts payable to the plaintiffs and plaintiffs' counsel had been previously accrued; therefore, no additional amounts were expensed during the period.

Indemnification

Pursuant to Delaware law and agreements entered into with each of our directors and officers, we may have obligations, under certain circumstances, to hold harmless and indemnify each of our directors and officers against losses suffered or incurred by the indemnified party in connection with their service to the Company, and judgments, fines, settlements and expenses related to claims arising against such directors and officers to the fullest extent permitted under Delaware law, our bylaws and certificate of incorporation. We also enter and have entered into indemnification agreements with our directors and officers that may require us to indemnify them against liabilities that arise by reason of their status or service as directors or officers, except as prohibited by applicable law. In addition, we may have obligations to hold harmless and indemnify third parties involved with our fund raising efforts and their respective affiliates, directors, officers, employees, agents or other representatives against any and all losses, claims, damages and liabilities related to claims arising against such parties pursuant to the terms of agreements entered into between such third parties and the Company in connection with such fund raising efforts. To the extent that any such indemnification obligations apply to the lawsuits described above, any associated expenses incurred are included within the related accrued litigation expense amounts. No additional liability associated with such indemnification obligations has been recorded at September 30, 2013.

NOTE 7. DEBT FACILITY

On February 5, 2013, we entered into a Facility Agreement (the "Facility Agreement") with entities affiliated with Deerfield Management Company, L.P. (collectively, "Deerfield"), pursuant to which Deerfield agreed to provide $20.5 million in funding to us (the "Facility"). Under the terms of the Facility Agreement, we issued to Deerfield promissory notes in the aggregate principal amount of $20.5 million (the "Notes"). The Notes bear simple interest at a rate of 8.75% per annum, payable quarterly in arrears commencing on April 1, 2013 and on the first business day of each January, April, July and October thereafter. We received net proceeds of $20.0 million, representing $20.5 million of gross proceeds, less a $500,000 facility fee, before deducting other expenses of the transaction.

The Facility Agreement has a maximum term of seven years from inception; however it provides for the early repayment of principal in the event we have net sales (as defined in the Facility Agreement) of less than $41.0 million for the twelve-month period from the beginning of the second calendar quarter of 2014 through the first calendar quarter of 2015 (the “Milestone”). If the Milestone is not achieved, at Deerfield’s option, one-third of the original principal balance of the Facility will become due, on each of the third, fourth and fifth anniversaries of the date of the Facility Agreement.

From and after the date of the Facility Agreement, at the election of the holders of Notes representing a majority of the aggregate principal amount of the outstanding Notes, we shall apply 25% of the net proceeds from any financing that includes an equity component, including without limitation, the sale or issuance of our common stock, options, warrants or other securities convertible or exchangeable for shares of our common stock, to the payment of the Notes. This right is subject to certain exceptions set forth in the Facility Agreement, including that the right will not apply until we have issued 15.0 million shares (as adjusted for any stock split or reverse stock split) of our common stock or rights to acquire our capital stock following the date of the Facility Agreement.

Deerfield has the option to require us to repay the Notes if we complete a Major Transaction (as defined in the Facility Agreement), including a change of control or a sale of all or substantially all of our assets. Additionally, the principal balance of the Facility may become immediately due and payable upon an Event of Default (as defined in the Facility Agreement), in which case Deerfield would have the right to require us to repay 100% of the principal amount of the loan, plus any accrued and unpaid interest thereon. The Facility Agreement does not provide for a prepayment of the Notes at our option.

The Facility Agreement also contains various representations and warranties, and affirmative and negative covenants, customary for financings of this type, including restrictions on the ability of the Company and its subsidiaries to incur additional indebtedness or liens on its assets, except as permitted under the Facility Agreement. In addition, we are required to maintain consolidated cash and cash equivalents on the last day of each calendar quarter of not less than $2.0 million. As security for our repayment of our obligations under the Facility Agreement, we granted to Deerfield a security interest in substantially all of our property and interests in property.

Financing Derivative

A number of features embedded in the Notes to the Facility Agreement required accounting for as a derivative, including the indemnification of certain withholding taxes and the acceleration of debt upon (a) a qualified financing, (b) an Event of Default, (c) a Major Transaction, and (d) the exercise of the Warrant via offset to debt principal. These features represent a single derivative (the "Financing Derivative") that was bifurcated from the debt instrument and accounted for as a liability at fair value, with changes in fair value between reporting periods recorded in other income (expense), net. The fair value of the Financing Derivative as of February 5, 2013 and September 30, 2013, was $1.0 million and $0.9 million, respectively.

The value of the Financing Derivative as of February 5, 2013 and September 30, 2013 was determined by comparing the difference between the fair value of the Notes with and without the Financing Derivative by calculating the respective present values from future cash flows using a 20.8% weighted average market yield.

Warrants

In connection with the execution of the Facility Agreement, on February 5, 2013, we issued to Deerfield warrants to purchase an aggregate of 5,500,000 shares of common stock immediately exercisable at an exercise price per share initially equal to $2.63 (the "Warrants"). The number of shares of common stock into which the Warrants are exercisable and the exercise price will be adjusted to reflect any stock splits, payment of stock dividends, recapitalizations, reclassifications or other similar adjustments in the number of outstanding shares of common stock. The exercise price may also be adjusted to reflect certain dividends or other distributions, including distributions of stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or similar transaction.

The Warrants are classified within additional paid-in capital and reported at their grant date fair value on February 5, 2013 of $6.4 million. We estimated the fair value of the Warrants using the Black-Scholes option pricing model using the following assumptions:

Expected term	7 years
Expected volatility	50%
Risk-free interest rate	1.4%
Dividend yield	—

Notes

The Notes and Warrants were initially recorded at a value of $14.1 million and $6.4 million, respectively, based upon the relative fair value allocation of the $20.5 million of proceeds. Additionally, facility fees and other issuance costs were allocated based on the relative fair value of the Facility and the Warrants. The amount allocated to the Notes was then reduced by the $1.0 million fair value of the Financing Derivative, such that the Financing Derivative was recorded at its absolute fair value. As a result, the carrying value of the Notes at the inception of the debt was $12.8 million, resulting in an original issue discount of $7.7 million. The discount is being accreted to the $20.5 million face value of the Notes over the expected maturity period of seven years using the effective interest method, with an effective interest rate of 20.6%.

NOTE 8. STOCKHOLDERS' EQUITY

Stock Offering

During April 2012, we filed a shelf registration statement on Form S-3 with the SEC pursuant to which we may, from time to time, sell up to an aggregate of $150.0 million of our common stock, warrants or debt securities. On May 1, 2012, the registration statement was declared effective by the SEC. On October 5, 2012, we entered into a Controlled Equity Offering Sales Agreement (the "Sales Agreement") with Cantor Fitzgerald & Co. ("Cantor"), pursuant to which we may offer and sell, from time to time, through Cantor, shares of our common stock having an aggregate offering price of up to $30.0 million through an "at-the-market" offering. We are not obligated to make any sales of shares under the Sales Agreement. We pay Cantor a commission equal to 3.0% of the gross proceeds from the sale of shares of our common stock under the Sales Agreement and reimburse up to $50,000 of legal expenses incurred by Cantor. During the quarter ended September 30, 2013, no shares were sold through our "at-the-market" offering. As of September 30, 2013, we have sold a total of 8.3 million shares of our common stock at an average price of $2.51 through our "at-the-market" offering.

NOTE 9. STOCK OPTION PLANS

As of September 30, 2013, we had three active equity compensation plans, the 2010 Equity Incentive Plan, or 2010 Plan, the 2010 Outside Director Equity Incentive Plan, or 2010 Director Plan, and the 2010 Employee Stock Purchase Plan, or "ESPP".

As of September 30, 2013, no shares of our common stock remain available for issuance under our ESPP. The Employee Stock Purchase Plan provides for an annual increase to the shares available for issuance at the beginning of each calendar year equal to two percent of the common shares then outstanding. Our ESPP permits eligible employees to purchase common stock at a discount through payroll deductions during defined offering periods. Each offering period generally consists of four purchase periods, each purchase period being six months. The price at which the stock is purchased is equal to the lower of 85% of the fair market value of the common stock at the beginning of an offering period or at the end of a purchase period. Shares issued under the ESPP totaled 1,519,366 and 832,878 shares during the nine-month periods ended September 30, 2013 and 2012, respectively. We estimate the value of the employee stock purchase rights on the grant date using the Black-Scholes option pricing model.

The following table summarizes stock option activity for all stock option plans (in thousands, except per share amounts):

		Stock Options Outstanding		
	Shares available for grant	Number of shares	Exercise price	Weighted average exercise price
Balances, December 31, 2012	2,872	12,016	$ 0.20 – 16.00	$ 5.37
Additional shares reserved	3,370			
Options granted	(2,122)	2,122	2.11 – 3.65	2.29
Options exercised	—	(144)	0.20 – 3.30	1.15
Options canceled	643	(643)	1.16 – 16.00	6.19
Balances, September 30, 2013	4,763	13,351	$ 0.20 – 16.00	$ 4.88

Stock-based Compensation

Total stock-based compensation expense for employee stock options and stock purchases under the ESPP consists of the following (in thousands):

	Three-Month Periods Ended September 30,		Nine-Month Periods Ended September 30,	
	2013	2012	2013	2012
Cost of revenue	$ 107	$ 84	$ 343	$ 393
Research and development	835	1,181	3,077	3,384
Sales, general and administrative	1,229	1,123	3,941	3,381
Total stock-based compensation expense	$ 2,171	$ 2,388	$ 7,361	$ 7,158

We estimated the fair value of employee stock options using the Black-Scholes option pricing model. The fair value of employee stock options is being amortized on a straight-line basis over the requisite service period of the awards.

The fair value of employee stock options was estimated using the following weighted average assumptions:

	Three-Month Periods Ended September 30,		Nine-Month Periods Ended September 30,	
Stock Option	2013	2012	2013	2012
Expected term in years	6.1	6.1	6.1	6.1
Expected volatility	65%	60%	65%	65%
Risk-free interest rate	1.8%	0.9%	1.1%	1.1%
Dividend yield	—	—	—	—

The fair value of ESPP was estimated using the following assumptions:

	Three-Month Periods Ended September 30,		Nine-Month Periods Ended September 30,	
ESPP	2013	2012	2013	2012
Expected term in years	0.5-2.0	0.5-2.0	0.5-2.0	0.5-2.0
Expected volatility	70%	90%	70%	90%
Risk-free interest rate	0.1%-0.4%	0.1%-0.2%	0.1%-0.4%	0.1%-0.3%
Dividend yield	—	—	—	—

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 that involve risks and uncertainties. Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to them. Such forward looking statements include, but are not limited to, statements related to: our expectations regarding our future losses, our expectations regarding our future sources of revenue and regarding our development, commercialization and license agreement, the timing of the conversion of our backlog, our expectations regarding our operating expenses; our expectations regarding our interest expense, our financial outlook; our expected revenues, gross margin, research and development expenses, and sales, general and administrative expenses, revenue recognition; our ability to fulfill customer orders; our investments and financing obligations; the effect of global market fluctuations; our expected expenses, including research and development expenses and administrative expenses; our beliefs about our ability to finance our operations; the development and marketability of our products; the potential dilution of current stockholders; our use of any funds raised through the sale of securities; as well as statements of belief and statements of assumptions underlying any of the foregoing. In some cases you can identify forward-looking statements by words such as "may," "will," "should," "could," "would," "expect," "plans," "anticipates," "bel "estimates," "projects," "predicts," "potential" and similar expressions intended to identify forward-looking statements. Our actual results could differ materially from those anticipated in these forward-looking statements for many reasons, including the risks faced by us and described under the heading "Risk Factors" in Part II, Item 1A of this Quarterly Report on Form 10-Q and our other filings with the SEC. You should not place undue reliance on these forward-looking statements, which apply only as of the date of this Quarterly Report on Form 10-Q. You should read this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results may be materially different from those we expect. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

Overview

We develop, manufacture and market an integrated platform for high resolution genetic analysis. Combining advances in nanofabrication, biochemistry, molecular biology, surface chemistry and optics, we created a technology platform called single molecule, real-time, or SMRT, technology. Our initial focus is to offer our SMRT technology to the DNA sequencing market where we have developed the PacBio RS High Resolution Genetic Analyzer and the PacBio RS II Sequencing System. The PacBio RS and the PacBio RS II consist of instrument platforms that use our proprietary consumables, including our SMRT Cells and reagent kits.

We have financed our operations primarily through the issuance of common and convertible preferred stock resulting in $609.8 million in net proceeds, in addition to debt financing. Since our inception, we have incurred significant net losses and we expect to continue to experience significant losses as we invest in developing and taking advantage of market opportunities for our products, servicing and supporting customers, development of enhancements and updates to existing products, development of future products, and sales and administrative infrastructure. As of September 30, 2013, we had an accumulated deficit of $598.1 million.

Agreement with Roche

On September 24, 2013 we entered into the Roche Agreement, pursuant to which we: (i) will develop diagnostic products for clinical use including sequencing systems and consumables based on our proprietary SMRT technology; (ii) granted to Roche an exclusive right to commercialize, and an exclusive license to sell, the developed diagnostic products for clinical use; and (iii) will manufacture and supply certain products intended for clinical use as the

exclusive supplier to Roche. We received a non-refundable up-front payment of $35.0 million and may receive up to an additional $40.0 million based upon the achievement of development milestones. The Roche Agreement has an initial term of thirteen years and provisions allowing Roche 5-year renewals.

As of September 30, 2013, revenue relating to the $35.0 million upfront cash payment was deferred with $6.8 million and $28.2 million allocated to current and long-term deferred revenue, respectively.

Basis of Presentation

While the trends below are important to understanding and evaluating our financial results, the other transactions, events and trends discussed in “Risk Factors” in this report may also materially impact our business operations and financial results.

Revenue

During the three- and nine-month periods ended September 30, 2012, the majority of our revenue related to the sale of PacBio RS instruments and associated consumables and services, and during the three- and nine-month periods ended September 30, 2013, the majority of our revenue related to the sale of PacBio RS and PacBio RS II instruments and associated consumables and services. Service and other revenue primarily consists of product maintenance agreements, while grant revenue represents amounts earned under research agreements with government entities which are recognized in the period during which the related costs are incurred. In

addition to existing revenue sources, during future periods we expect to recognize revenue from development and services relating to the Roche Agreement.

As of September 30, 2013, our backlog was comprised of nine instruments. We define backlog as purchase orders or signed contracts for systems from customers which we believe are firm and for which we have not yet recognized revenue.

Cost of Revenue

Cost of revenue reflects the direct cost of product components, third party manufacturing services and our internal manufacturing overhead and customer service infrastructure costs incurred to produce, deliver, maintain and support our instruments, consumables, and services.

Product costs include the direct costs incurred to manufacture products and install instruments combined with allocated manufacturing overhead. Manufacturing overhead is determined and capitalized into inventory based on management's estimate of normal manufacturing capacity. Normal capacity is the production level expected to be achieved over a number of periods under normal circumstances with available resources. Our current manufacturing volumes are below expected normal capacities, therefore manufacturing overhead incurred exceeds the amounts absorbed into inventory and included in cost of revenue. During the nine-month periods ended September 30, 2013 and 2012, $5.4 million and $6.5 million, respectively, of manufacturing overhead were capitalized into inventory. As we engage excess manufacturing resources in product research and development, production of product used internally for research and development, and other research and development support activities, manufacturing costs in excess of amounts reflected in inventory and cost of revenue are expensed as a component of research and development expense during the period in which the expenses are incurred.

Service costs include the direct costs of components used in support, repair and maintenance of customer instruments as well as the cost of personnel and support infrastructure necessary to support the installed customer base. As we have been in the early stages of the commercial launch of our products, the capacity of our service infrastructure has exceeded the demand for installing and servicing customer instruments. Management has estimated the capacity of the existing service infrastructure and has recognized service related cost of revenue based on the installed base. From our initial commercial launch, total service infrastructure costs have generally exceeded the costs associated with the support of customer instruments and such excess costs have been included as a component of sales, general and administrative expense.

Operating Expense

Research and Development Expense. Research and development expense consists primarily of expenses for personnel engaged in the development of our SMRT technology, the design and development of our products, including the PacBio RS and PacBio RS II, SMRT Cells and reagent kits and the scientific research necessary to produce commercially viable applications of our technology. These expenses also include prototype-related expenditures, development equipment, supplies, facilities costs and other related overhead.

Sales, General and Administrative Expense. Sales, general and administrative expense consists primarily of personnel-related expense related to our executive, legal, finance, sales, marketing, field service, customer support, and human resource functions, as well as fees for professional services and facility costs. Professional services consist principally of external legal, accounting and other consulting services.

Interest Expense

Interest expense is primarily related to the debt facility entered into during the first quarter of 2013 and includes the amortization of debt discount and other related costs. To a lesser extent, amounts also include interest expense relating to our facility financing obligations resulting from a lease agreement entered into in 2010. We expect interest expense to increase during future periods as a result of the debt issued during the first quarter of 2013 and subsequently as a result of the accounting treatment of the debt as the recorded value accretes to the amount due at maturity.

Other Income (Expense), Net

Other income (expense), net consists primarily of interest income earned on cash and investments, accretion of discounts and amortization of premiums related to investments, net gains or losses on foreign currency transactions, net gains or losses from disposal of fixed assets, net gains or losses resulting from changes in fair value of the Financing Derivative, and foreign income taxes.

Income Taxes

Since inception, we have incurred net losses and have not recorded any U.S. federal or state income tax benefits for such losses as they have been offset by valuation allowances.

Critical Accounting Policies and Estimates

Management's Discussion and Analysis of Financial Condition and Results of Operations is based upon our Condensed Consolidated Financial Statements, which we have prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, cost of revenue, and operating expenses, and related disclosure of contingent assets and liabilities. Management bases its estimates on historical experience and on various other assumptions that it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

An accounting policy is deemed to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, if different estimates reasonably could have been used, or if changes in the estimate that are reasonably likely to occur could materially impact the financial statements.

In conjunction with the Facility Agreement with Deerfield various assumptions were used to value the Notes, Warrant and Financing Derivative. These assumptions are described above in "Part I, Item 1. Financial Statements - Note 7. Debt Facility" of the condensed consolidated financial statements.

The Roche Agreement includes contingent event-based payments relating to the achievement of certain milestones and were evaluated based on Accounting Standard Codification (ASC) Topic 605-28, Revenue Recognition — Milestone Method (ASC 605-28). We evaluated the contingent event-based payments, including milestones, at inception of the Roche Agreement and determined that we should recognize consideration that is contingent upon the achievement of substantive milestones as revenue in the period in which the milestone is achieved. Milestones are considered substantive if the consideration earned from the achievement of the milestone (i) is consistent with performance required to achieve the milestone or the increase in value to the delivered item, (ii) relates solely to past performance and (iii) is reasonable relative to all of the other deliverables and payments within the arrangement. The Roche Agreement included contingent deliverables relating to the receipt of additional payments totaling $40.0 million upon the achievement of certain development milestones. The milestone payments will be recognized as revenue in their entirety upon our achievement of each substantive milestone. Please refer to "Part I, Item 1. Financial Statements - Note 3. Agreement with Roche" for additional details.

During the three-month period ended September 30, 2013, there have been no other significant changes in our critical accounting policies and estimates during the nine months ended September 30, 2013, as compared to the disclosures in Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2012

Results of Operations

Comparison of the Three-month Periods Ended September 30, 2013 and 2012

(in thousands, except percentages)	Three Months Ended September 30, 2013	2012	Increase/ (Decrease)	% Increase/ (Decrease)
	(unaudited)			
Revenue:				
Product revenue	$ 5,814	$ 1,268	$ 4,546	359%
Service and other revenue	1,607	1,283	324	25%
Grant revenue	—	225	(225)	(100%)
Total revenue	7,421	2,776	4,645	167%
Cost of Revenue:				
Cost of product revenue	4,616	960	3,656	381%
Cost of service and other revenue	1,564	1,626	(62)	(4%)
Total cost of revenue	6,180	2,586	3,594	139%
Gross profit	1,241	190	1,051	553%
Operating Expense:				
Research and development	10,419	12,626	(2,207)	(17%)
Sales, general and administrative	10,757	10,143	614	6%
Total operating expense	21,176	22,769	(1,593)	(7%)
Operating loss	(19,935)	(22,579)	2,644	12%
Interest expense	(686)	(68)	(618)	(909%)
Other income (expense), net	134	(82)	216	263%
Net loss	$ (20,487)	$ (22,729)	$ 2,242	10%

Revenue

Our total revenue for the third quarter of 2013 was $7.4 million compared to $2.8 million during the third quarter of 2012. Product revenue in the third quarter of 2013 consisted of $3.7 million from sales of our PacBio RS II instruments and instrument upgrades and $2.1 million from sales of consumables compared to no sales of our PacBio RS instruments and $1.3 million from sales of consumables during the third quarter of 2012. Instrument revenue in the third quarter of 2013 reflects revenue from six PacBio RS II instruments as compared to no PacBio RS instruments during the third quarter of 2012. Service and other revenue of $1.6 million and $1.3 million for the third quarters of 2013 and 2012, respectively, was primarily derived from product maintenance agreements sold on our installed instruments.

Gross Profit

Gross profit for the third quarter of 2013 increased to $1.2 million compared to $0.2 million for the third quarter of 2012. The higher third quarter 2013 gross profit was driven by higher revenue. Cost of product revenue of $4.6 million for the third quarter of 2013 reflects the costs relating to the sale of six instruments, instrument upgrades installed, and consumables shipped during the period while cost of product revenue of $1.0 million for the third quarter of 2012 reflects the costs relating to the consumables shipped during the period. Cost of service and other revenue of $1.6 million for the third quarter of both 2013 and 2012, reflect the costs of personnel, materials and support infrastructure necessary to support the installed base of our instruments.

Research and Development Expense

During the third quarter of 2013, research and development expense decreased $2.2 million, or 17%, compared to the third quarter of 2012. The decrease in research and development expense was primarily attributed to a decrease of $0.6 million in personnel related expense, including stock-based compensation, a decrease of $0.5 million in manufacturing resources allocated to research and development as a result of increased commercial production volumes, a decrease of $0.5 million in equipment and supplies, and a decrease of $0.6 million in other net expenses. Research and development expense included stock-based compensation expense of $0.8 million and $1.2 million during the third quarters of 2013 and 2012, respectively.

Sales, General and Administrative Expense

For the third quarter of 2013, selling, general and administrative expense increased $0.6 million, or 6%, compared to the third quarter of 2012. The increase was largely due to $2.0 million of expenses incurred in relation to the Roche Agreement, partially offset by a decrease of $0.4 million in marketing and travel related costs and a decrease of $1.0 million in other net expense. Sales, general and administrative expense included stock-based compensation expense of $1.2 million and $1.1 million during the third quarters of 2013 and 2012, respectively.

Interest Expense

Interest expense increased $0.6 million from $0.1 million in the third quarter of 2012 to $0.7 million in the third quarter of 2013, primarily as a result of the debt facility entered into during the first quarter of 2013.

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Comparison of the Nine-month Periods Ended September 30, 2013 and 2012

(in thousands, except percentages)	Nine Months Ended September 30, 2013 (unaudited)	2012	Increase/ (Decrease)	% Increase/ (Decrease)
Revenue:				
Product revenue	$ 14,248	$ 15,810	$ (1,562)	(10%)
Service and other revenue	4,528	3,620	908	25%
Grant revenue	272	675	(403)	(60%)
Total revenue	19,048	20,105	(1,057)	(5%)
Cost of Revenue:				
Cost of product revenue	11,138	14,949	(3,811)	(25%)
Cost of service and other revenue	4,680	4,843	(163)	(3%)
Total cost of revenue	15,818	19,792	(3,974)	(20%)
Gross profit	3,230	313	2,917	932%
Operating Expense:				
Research and development	34,084	35,971	(1,887)	(5%)
Sales, general and administrative	29,685	36,986	(7,301)	(20%)
Total operating expense	63,769	72,957	(9,188)	(13%)
Operating loss	(60,539)	(72,644)	12,105	17%
Interest expense	(1,785)	(207)	(1,578)	(762%)
Other income (expense), net	262	55	207	376%
Net loss	$ (62,062)	$ (72,796)	$ 10,734	15%

Revenue

Our total revenue for the nine-month period ended September 30, 2013 was $19.0 million compared to $20.1 million in the nine-month period ended September 30, 2012. Product revenue in the nine-month period ended September 30, 2013 consisted of $8.3 million from sales of our instruments and instrument upgrades and $5.9 million from sales of consumables compared to $12.5 million from sales of our instruments and $3.3 million from sales of consumables in the nine-month period ended September 30, 2012. Instrument revenue in the nine-month periods ended September 30, 2013 and 2012 reflects revenue from 12 and 18 instruments during the periods, respectively, and upgrades during the third quarter of 2013. Service and other revenue of $4.5 million and $3.6 million, for the nine-month periods ended September 30, 2013 and 2012, respectively, was derived from product maintenance agreements sold on our installed instruments.

Gross Profit

Gross profit for the nine-month period ended September 30, 2013 increased to $3.2 million compared to $0.3 million for the nine-month period ended September 30, 2012. The higher year-to-date 2013 gross profit resulted from lower product and service costs. Cost of product revenue of $11.1 million for the nine-month period ended September 30, 2013 reflects the costs relating to the sale of 12 instruments and consumables shipped during the period compared with $14.9 million for the nine-month period ended September 30, 2012 relating to the sale of 18 instruments and consumables shipped during the period. Cost of revenue for the nine-month period ended September 30, 2012 also includes $0.7 million of expense associated with a new product release in the first quarter of 2012 and a $0.9 million charge associated with provision for excess and obsolete inventory based on a review of on hand inventory and future demand. Cost of service and other revenue of $4.7 million and $4.8 million for the nine-month periods ended September 30, 2013 and 2012, respectively, reflects the costs of personnel, materials and support infrastructure necessary to support the installed base of our instruments.

Research and Development Expense

During the nine-month period ended September 30, 2013, research and development expenses decreased $1.9 million, or 5%, compared to the same period ended September 30, 2012. The decrease was driven primarily by a decrease of $0.7 million in facility costs, a decrease of $0.6 million in depreciation, a decrease of $0.5 million in personnel related expense and a decrease of $1.2 million in other net expenses, partially offset by an increase of $1.1 million in amounts allocated to research and development as a result of decreased commercial production volumes. Research and development expense included stock-based compensation expense of $3.1 million and $3.4 million d during the nine-month periods ended September 30, 2013 and 2012, respectively.

Sales, General and Administrative Expense

For the nine-month period ended September 30, 2013, selling, general and administrative expenses decreased $7.3 million, or 20%, compared to the same period ended September 30, 2012. The decrease was driven primarily by a decrease of $5.7 million decrease in legal, professional and consulting expenses primarily as a result of decreased class action litigation related expenses and other legal expenses, including settlement charges of $1.8 million recorded in 2012 relating to the resolution of two intellectual property matters, a decrease of $1.9 million in marketing and travel related costs due partly to lower expenses incurred for trade show and conference expenses, a decrease of $0.8 million in equipment and supplies and a decrease of $0.9 million in other net expenses, partially offset by $2.0 million of expenses relating to the agreement with Roche. Sales, general and administrative expense included stock-based compensation expense of $3.9 million and $3.4 million during the nine-month periods ended September 30, 2013 and 2012, respectively.

Interest Expense

Interest expense increased $1.6 million from $0.2 million in the nine months ended September 30, 2012 to $1.8 million in the nine months ended September 30, 2013, primarily as a result of the debt facility entered into during the first quarter of 2013.

Liquidity and Capital Resources

Since our inception we have financed our operations primarily through the issuance of common stock and convertible preferred stock, in addition to the debt financing. Cash and investments at September 30, 2013 totaled $126.9 million, compared to $100.6 million at December 31, 2012. During the nine-month period ended September 30, 2013 we received a $35.0 million upfront payment from Roche upon execution of the Roche Agreement, $19.8 million through the debt facility entered into with Deerfield and $20.0 million through the sale of common stock under our current “at-the-market” offering program. Excluding proceeds from these three transactions, cash and investments decreased by $48.5 million compared to December 31, 2012, primarily reflecting $50.3 million of cash used in operating activities and $0.8 million of fixed asset purchases partially offset by $2.7 million of proceeds received from equity sales through our employee stock plans.

We believe that existing cash, cash equivalents and investments will be sufficient to fund our projected operating requirements for at least 12 months; however, we plan to raise additional capital in the future including, but not limited to, the financing arrangements as detailed under “Financing Activities” below. These expectations are based on our current operating and financing plans, which are subject to change. Factors that may affect our capital needs include, but are not limited to, slower than expected adoption of our products resulting in lower sales of our products and services; future acquisitions; our ability to maintain new collaboration and customer arrangements; the progress of our research and development programs; initiation or expansion of research programs and collaborations; the costs involved in preparing, filing, prosecuting, defending and enforcing intellectual property rights; the purchase of patent licenses; and other factors.

To the extent we raise additional funds through the sale of equity or convertible debt securities, the issuance of such securities will result in dilution to our stockholders. There can be no assurance that such funds will be available on favorable terms, or at all. If adequate funds are not available, we may be required to curtail operations significantly or to obtain funds by entering into collaboration agreements on unattractive terms. Our inability to raise capital could have a material adverse effect on our business, financial condition and results of operations.

Operating Activities

Our primary uses of cash in operating activities are for the manufacturing and sale of PacBio RS and the PacBio RS II instruments and consumables, development of ongoing product enhancements and future product releases, and support functions related to our selling, general and administrative activities. The net cash used for the nine-month periods ended September 30, 2013 and 2012 primarily reflects the net loss for those periods, offset by non-cash operating expenses including depreciation, stock-based compensation, and changes in operating assets and liabilities.

Net cash used in operating activities was $15.3 million for the nine-month period ended September 30, 2013, compared to $58.6 million for the nine-month period ended September 30, 2012, due primarily to net losses of $62.1 million and $72.8 million, respectively, partially offset by $35.1 million of deferred revenue associated with the Roche Agreement for the nine-month period ended September 30, 2013 and depreciation and stock-based compensation of $11.6 million and $12.2 million, for the nine-month periods ended September 30, 2013 and September 30, 2012, respectively.

Investing Activities

Our investing activities consist primarily of investment purchases, maturities and sales and capital expenditures. Net cash used in investing activities was $9.0 million for the nine-month period ended September 30, 2013, comprised of net purchases and maturities of investments of $8.2 million and purchases of property and equipment of $0.8 million. Net cash provided by investing activities during the same period in 2012 was $29.6 million, comprised of net maturities, sales and purchases of investments of $30.9 million, partially offset by purchases of property and equipment of $1.3million.

Financing Activities

For the nine-month period ended September 30, 2013, we received net proceeds of $19.8 million from the debt facility, net proceeds of $20.0 million from our common stock “at-the-market” offering, and $2.7 million from the issuance of our common stock through the sale of shares under our ESPP and stock option exercises. Our “at-the-market” offering program allows us to offer and sell shares of our common stock having an aggregate offering price of up to $30.0 million. As of September 30, 2013 we have sold shares with an aggregate offering price of $20.8 million. Additional details relating to the debt facility and common stock “at-the-market” offering are described above in “Part I, Item 1. Financial Statements—Note 7. Debt Facility and Note 8. Stockholders’ Equity” to the consolidated financial statements. For the nine-month period ended September 30, 2012, we received $2.7 million from the issuance of our common stock through the sale of shares under our ESPP and stock option exercises.

Off-Balance Sheet Arrangements

As of September 30, 2013 we did not have any off-balance sheet arrangements.

In the ordinary course of business, we enter into standard indemnification arrangements. Pursuant to these arrangements, we indemnify, hold harmless, and agree to reimburse the indemnified parties for losses suffered or incurred by the indemnified party in connection with any trade secret, copyright, patent or other intellectual property infringement claim by any third party with respect to its technology, or from claims relating to our performance or non-performance under a contract, any defective products supplied by us, or any negligent acts or omissions, or willful misconduct, committed by us or any of our employees, agents or representatives. The term of these indemnification agreements is generally perpetual after the execution of the agreement. The maximum potential amount of future payments we could be required to make under these agreements is not determinable because it involves claims that may be made against us in future periods, but have not yet been made. To date, we have not incurred costs to defend lawsuits or settle claims related to these indemnification agreements.

We also enter and have entered into indemnification agreements with our directors and officers that may require us to indemnify them against liabilities that arise by reason of their status or service as directors or officers, except as prohibited by applicable law. In addition, we may have obligations to hold harmless and indemnify third parties involved with our fund raising efforts and their respective affiliates, directors, officers, employees, agents or other representatives against any and all losses, claims, damages and liabilities related to claims arising against such parties pursuant to the terms of agreements entered into between such third parties and the Company in connection with such fund raising efforts. To the extent that such indemnification obligations apply to the lawsuits described above in "Part I, Item 1. Financial Statements—Note 6. Contingencies" to the condensed consolidated financial statements, any associated expenses incurred are included within the related accrued litigation expense amounts. No additional liability associated with such indemnification agreements has been recorded at September 30, 2013.

Item 3.Quantitative and Qualitative Disclosures About Market Risk

Interest rate and Market Risk

Our exposure to market risk is confined to our cash, cash equivalents and our investments, all of which have maturities of less than three years. The goals of our investment policy are preservation of capital, fulfillment of liquidity needs and fiduciary control of cash and investments. We also seek to maximize income from our investments without assuming significant risk. To achieve our goals, we maintain a portfolio of cash equivalents and investments in a variety of high credit quality securities. The securities in our investment portfolio are not leveraged, are classified as available-for-sale, and are, due to their relatively short-term nature, subject to minimal interest rate risk. We currently do not hedge interest rate exposure. Because of the short-term maturities of our investments, we do not believe that an increase in market rates would have any material negative impact on the value of our investment portfolio.

FForeign Exchange Risk

The majority of our expense, and capital purchasing activities are transacted in U.S. dollars. However, a portion of our operations consists of sales activities outside of the United States; therefore we have foreign exchange exposures relating to non-U.S. dollar revenues, operating expenses, accounts receivable, accounts payable, and currency balances. Our primary exposure is with the Euro. We designed a hedging policy to mitigate the impact of changes in currency exchange rates on our net cash flow from foreign currency denominated sales.

Our international operations are subject to risks typical of international operations, including, but not limited to, differing economic conditions, changes in political climate, differing tax structures, other regulations and restrictions and foreign exchange rate volatility.

Item 4.Controls and Procedures.

(a) Disclosure controls and procedures.

Our management, with the participation of our chief executive officer and our chief financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on this evaluation, our chief executive officer and our chief financial officer concluded that our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms and that such information is accumulated and communicated to our management, including our chief executive officer and our chief financial officer, as appropriate, to allow timely decisions regarding required disclosure.

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

(b) Changes in internal control over financial reporting.

There were no changes in our internal control over financial reporting that occurred during the quarter ended September 30, 2013 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1.Legal Proceedings.

Information pertaining to legal proceedings can be found in “Part I, Item 1. Financial Statements—Note 6. Contingencies” to the consolidated financial statements, and is incorporated by reference herein.

Item 1A. Risk Factors

You should consider carefully the risks and uncertainties described below, together with all of the other information in this Quarterly Report on Form 10-Q and in our Annual Report on Form 10-K that was filed with the SEC on March 15, 2013, which could materially affect our business, financial condition, results of operations and prospects. The risks described below are not the only risks facing us. Risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially affect our business, financial condition, results of operations and prospects.

Risks Related to Our Business

We are an early stage commercial company.

Our first commercial product, the PacBio RS, was launched in 2011 and our new product, PacBio RS II, was launched in 2013 and, as such, we have limited historical financial data upon which to base our projected revenue, planned operating expense or upon which to evaluate us and our commercial prospects. Based on our limited experience in developing and marketing new products, we may not be able to effectively:

•drive adoption of our products;

•attract and retain customers for our products;

•provide appropriate levels of customer training and support for our products;

•implement an effective marketing strategy to promote awareness of our products;

•focus our research and development efforts in areas that generate returns on these efforts;

•comply with evolving regulatory requirements applicable to our products;

•anticipate and adapt to changes in our market;

•maintain and develop strategic relationships with vendors and manufacturers to acquire necessary materials for the production of our products;

•scale our manufacturing activities to meet potential demand at a reasonable cost;

•avoid infringement and misappropriation of third-party intellectual property;

•obtain licenses on commercially reasonable terms to third-party intellectual property;

•obtain valid and enforceable patents that give us a competitive advantage;

•protect our proprietary technology;

•protect our products from any equipment or software-related system failures; and

•attract, retain and motivate qualified personnel.

In addition, a high percentage of our expenses is and will continue to be fixed. Accordingly, if we do not generate revenue as and when anticipated, our losses may be greater than expected and our operating results will suffer.

We have incurred losses to date, and we expect to continue to incur significant losses as we develop our business and may never achieve profitability.

We have incurred net losses since inception and we cannot be certain if or when we will produce sufficient revenue from our operations to support our costs. Even if profitability is achieved, we may not be able to sustain profitability. We expect to incur substantial losses and negative cash flow for the foreseeable future.

If our products fail to achieve and sustain sufficient market acceptance, we will not generate expected revenue and our business may not succeed.

Although we have now commercialized the PacBio RS and launched the PacBio RS II, we cannot be sure that they will gain acceptance in the marketplace at levels sufficient to support our costs. Our success depends, in part, on our ability to expand the market for genetic analysis to include new applications that are not practical with other current technologies. To accomplish this, we must successfully commercialize, and continue development of, our SMRT technology for use in a variety of life science applications. There can be no assurance that we will be successful in securing additional customers for our products, in particular, our first product which is focused on DNA sequencing. Furthermore, we cannot guarantee that the design of our products, including the initial and subsequent specifications and any enhancements or improvements to those specifications, will be satisfactory to potential customers in the markets we seek to reach. These markets are dynamic, and there can be no assurance that they will develop as quickly as we expect or that they will reach their full potential. As a result, we may be required to refocus our marketing efforts, and we may have to make changes to the specifications of our products to enhance our ability to enter particular markets more quickly. Even if we are able to implement our technology successfully, we may fail to achieve or sustain market acceptance of our products by academic and government research laboratories and pharmaceutical, biotechnology and agriculture companies, among others, across the full range of our intended life science applications. If the market for our products grows more slowly than anticipated, if competitors develop better or more cost-effective products or if we are unable to develop a significant customer base, our future sales and revenue would be materially harmed and our business may not succeed. For example, in September 2011, we implemented a reduction in our workforce due in part to our infrastructure being staffed to support a faster adoption rate for our products. If the adoption rate for our products continues to be slow or does not grow, our business may be adversely affected.

Our development, commercialization and license arrangement with Roche may not result in the benefits we anticipate, and could have a material adverse effect on our business, financial condition and results of operations.

In September 2013, we entered into the Roche Agreement, pursuant to which we: (i) will develop diagnostic products for clinical use including sequencing systems and consumables based on our proprietary Single Molecule, Real-Time (SMRT®) technology; (ii) granted to Roche an exclusive right to commercialize, and an exclusive license to sell, the developed diagnostic products for clinical use, the exclusivity of which is contingent on achieving sales minimums to be established in the future and contingent on Roche not selling for clinical use any new sequencing instrument that competes with any diagnostic instrument system developed under the Roche Agreement; and (iii) will manufacture and supply certain products intended for clinical use as the exclusive supplier to Roche. Under the Roche Agreement, we received from Roche a non-refundable up-front payment of $35 million and may receive up to an additional $40 million based upon the achievement of development milestones. The Roche Agreement has an initial term of thirteen years and provisions allowing Roche 5-year renewals, contingent on Roche meeting sales minimums. There can be no assurance that we will be able to develop and manufacture products as provided by the terms of the Roche Agreement or that Roche will be able to commercialize and sell the developed diagnostic products. We may also be unable to meet the development milestones required for the payment of the additional $40 million from Roche. We could also be involved in disputes with Roche, which could lead to delays in or termination of our development and manufacture of diagnostic products and result in time consuming and expensive litigation or arbitration. In addition, any such dispute could diminish Roche's commitment to us and reduce the resources they devote to commercializing the developed diagnostic products. If Roche terminates or breaches the Roche Agreement, the successful commercialization of diagnostic products for clinical use would be materially and adversely affected. If we are not able to realize the expected benefits from the Roche Agreement, it could have a material adverse effect on our business, financial condition and results of operations.

Furthermore, the Roche Agreement could make an acquisition of us, which may be beneficial to our stockholders, less likely, whether or not we realize the expected benefits from the Roche Agreement. For example, the exclusive rights and licenses granted to Roche pursuant to the Roche Agreement, or our development, manufacturing and supply obligations pursuant to the Roche Agreement, may make an acquisition of us less appealing to third parties that compete with Roche.

If Roche pursues diagnostic products for clinical use that compete with products we develop, there could be a conflict of interest and we may not receive expected milestone or other payments.

Roche is developing a variety of products, some with other partners. Roche may pursue existing or alternative technologies to develop and commercialize diagnostic products for clinical use instead of using products developed in collaboration with us. If Roche pursues these other products instead of products we develop, we may not receive milestone or other payments, which could have a material adverse effect on our business, financial condition and results of operations.

Our indebtedness could adversely affect our financial condition and prevent us from fulfilling our obligations.

On February 5, 2013, we entered into the Facility Agreement with Deerfield, pursuant to which Deerfield provided $20.0 million in funding to us net of the facility fee. Our net losses since inception and our expectation of incurring substantial losses and negative cash flow for the foreseeable future, combined with indebtedness under our Facility Agreement could:

· make it more difficult for us to satisfy our obligations, including under the Facility Agreement;

- increase our vulnerability to general adverse economic and industry conditions;
- limit our ability to fund future working capital, capital expenditures, research and development and other business opportunities;
- require us to dedicate a substantial portion of our cash flow from operations to service payments on our indebtedness;
- increase the volatility of the price of our common stock;
- limit our flexibility to react to changes in our business and the industry in which we operate;
- place us at a competitive disadvantage to any of our competitors that have less or no indebtedness; and
- limit, along with the financial and other restrictive covenants in our indebtedness, among other things, our ability to borrow additional funds.

Our Facility Agreement contains covenants which may adversely impact our business and the failure to comply with such covenants could cause our outstanding indebtedness to become immediately payable.

Our Facility Agreement contains various affirmative and negative covenants, including restrictions on the ability of us and our subsidiaries to incur additional indebtedness or liens on our assets, except as permitted under the Facility Agreement, that impose significant operating and financial restrictions on us, including restrictions on our ability to take actions that may be in our best interests. In addition, we are required to maintain consolidated cash and cash equivalents on the last day of each calendar quarter of not less than $2.0 million. The Facility Agreement provides for an early repayment of principal in the event we have net sales (as defined in the Facility Agreement) of less than $41.0 million for the twelve-month period from the beginning of the second calendar

quarter of 2014 through the first calendar quarter of 2015, or the "Milestone," which may be affected by events beyond our control. If the Milestone is not achieved, at Deerfield's option, one-third of the original principal balance of the Facility will become due, on each of the third, fourth and fifth anniversaries of the date of the Facility Agreement. Deerfield has the option to require us to repay the Notes if we complete a Major Transaction (as defined in the Facility Agreement), including a change of control of us or a sale of all or substantially all of our assets. Additionally, the principal balance of the Facility may become immediately due and payable upon an "Event of Default" (as defined in the Facility Agreement), in which case Deerfield would have the right to require us to repay 100% of the principal amount of the loan, plus any accrued and unpaid interest thereon.

A breach of any of the covenants contained in our Facility Agreement could result in a default under such agreement. If an event of default exists, Deerfield could elect to declare all amounts outstanding under the Facility Agreement to be immediately due and payable. If we were unable to repay amounts payable under our Facility Agreement when due and payable, Deerfield could proceed against the collateral granted to them to secure such indebtedness. We have pledged substantially all of our property and interests in property, including intellectual property, as collateral under the Facility Agreement. If Deerfield accelerates the repayment of borrowings, we may not have sufficient funds to repay our existing indebtedness, which could have a material adverse effect on our liquidity and ability to conduct our business.

Our products are highly complex, with significant support requirements.

In light of the highly complex technology involved in our products, there can be no assurance that we will be able to successfully provide adequate support for our products. Our customers have experienced reliability issues with our PacBio RS instruments that we believe are consistent with the introduction of similar new, highly complex products. While we believe that our customers, particularly those who were early adopters of other new DNA sequencing technologies in the past, understand that such issues can be common with novel, highly complex products like the PacBio RS, if our products continue to have reliability or other quality issues or require unexpected levels of support, or if our newly introduced PacBio RS II has similar issues, the market acceptance and utilization of our products may not grow to levels sufficient to support our costs and our reputation and business could be harmed. We deliver our PacBio RS and PacBio RS II instruments with one year of service included in the purchase price with an option to purchase one or more additional years of service. Since launching our PacBio RS instrument during 2011, we have incurred significant service and support costs. If service and support costs increase our business and operations may be adversely affected.

We may not be able to produce instruments that consistently achieve the specifications and quality that our customers expect.

We have established performance standards for our commercial products that we may not consistently achieve using our current design and manufacturing processes. If we do not consistently achieve the specifications and quality that our customers expect, including pursuant to the Roche Agreement, customer demand may be negatively affected. Customers may refuse to accept our products in a timely manner or at all, which would adversely affect our revenue. Any inability to meet performance standards may materially impact the commercial viability of our products and harm our business.

We may be unable to consistently manufacture our consumable kits, including SMRT Cells, to the specifications required by our customers or in quantities necessary to meet demand at an acceptable cost.

In order to successfully derive revenue from our products, we need to supply our customers with consumable kits to be used with our instruments and we have limited experience manufacturing these consumable kits. Our customers have experienced variability in the performance of our SMRT Cells. There is no assurance that we will be able to manufacture our consumable kits or SMRT Cells so that they consistently achieve the product specifications and quality that our customers expect, including pursuant to the Roche Agreement. There is also no assurance that we will be able to increase manufacturing yields and decrease costs. Furthermore, we may not be able to increase manufacturing capacity for our consumable kits or SMRT Cells to meet anticipated demand. An inability to manufacture consumable kits and SMRT Cells that consistently meet specifications, in necessary quantities and at commercially acceptable costs, will have a negative material impact on our business.

We may not be able to convert our orders in backlog into revenue.

Our backlog represents product orders from our customers that we have confirmed and for which we have not yet recognized revenue. We may not receive revenue from these orders, and the order backlog we report may not be indicative of our future revenue.

Many events can cause an order to be delayed or not completed at all, some of which may be out of our control. If we delay fulfilling customer orders, those customers may seek to cancel their orders with us. In addition, customers may otherwise seek to cancel or delay their orders even if we are prepared to fulfill them. If our orders in backlog do not result in sales, our operating results may suffer.

Rapidly changing technology in life sciences could make the products we are developing obsolete unless we continue to develop and manufacture new and improved products and pursue new market opportunities.

Our industry is characterized by rapid and significant technological changes, frequent new product introductions and enhancements and evolving industry standards. Our future success will depend on our ability to continually improve our products, to

develop and introduce new products that address the evolving needs of our customers on a timely and cost-effective basis and to pursue new market opportunities. These new market opportunities may be outside the scope of our proven expertise or in areas which have unproven market demand, and new products and services developed by us, including products we develop pursuant to the Roche Agreement, may not gain market acceptance. Our inability to gain market acceptance of new products could harm our future operating results. Our future success also depends on our ability to manufacture new and improved products to meet customer demand in a timely and cost-effective manner, including our ability to resolve manufacturing issues that may arise as we commence production of these complex products. Unanticipated difficulties or delays in replacing existing products with new products or in manufacturing improved or new products in sufficient quantities to meet customer demand could diminish future demand for our products and harm our future operating results.

We may be unable to develop our future commercial applications.

Our future business depends on our ability to execute on our plans to develop and market additional commercial applications of our SMRT technology. Future commercial applications will require significant investments of cash and resources and we may experience unexpected delays or difficulties that could postpone our ability to commercially launch these future applications, which could have a material adverse effect on our business, prospects, operating results and financial condition.

A significant portion of our potential sales depends on customers' capital spending budgets that may be subject to significant and unexpected variation which could have a negative effect on the demand for our products.

We have based our business model on our belief that the market for sequencing products is large and expected to grow significantly. The market is still developing and we cannot quantify the size of the market with certainty. Growth in the market is dependent on increases in the demand for sequencing products from both research institutions and commercial companies. A substantial portion of our potential product sales represent significant capital purchases by customers. Our potential customers include academic and government institutions, genome centers, medical research institutions, pharmaceutical, agricultural, biotechnology and chemical companies. Their capital spending budgets can have a significant effect on the demand for our products. These budgets are based on a wide variety of factors, including the allocation of available resources to make purchases, funding from government sources which is highly uncertain, particularly in light of concerns regarding the federal government budget sequestration and potential future shutdown, the spending priorities among various types of research equipment and policies regarding capital expenditures during economically uncertain periods. Any decrease in capital spending or change in spending priorities of our potential customers could significantly reduce the demand for our products. Moreover, we have no control over the timing and amount of purchases by these potential customers, and as a result, revenue from these sources may vary significantly due to factors that can be difficult to forecast. We may also have to write off excess or obsolete inventory if sales of our products are not consistent with our expectations or the market requirements for our products change due to technical innovations in the marketplace. Any delay or reduction in purchases by potential customers or our inability to forecast fluctuations in demand could harm our future operating results. In addition, if the market for our products is not as large as we expected and if the market does not grow as rapidly as we expected, demand for our products could be adversely affected.

We may be unable to successfully increase sales of our products.

We have limited experience in sales and marketing of our products. Our ability to achieve profitability depends on our ability to attract customers for our products. We may be unable to effectively market our products. To perform sales, marketing, distribution and customer support successfully, we face a number of risks, including:

•our ability to attract, retain and manage the sales, marketing and service personnel necessary to expand market acceptance for our technology;

•the time and cost of maintaining and growing a specialized sales, marketing and service force for a particular application, which may be difficult to justify in light of the revenue generated; and

•our sales, marketing and service force may be unable to execute successful commercial activities.

We may enlist and have enlisted third parties to assist with sales, distribution and customer support globally or in certain regions of the world. There is no guarantee, when we enter into such arrangements, that we will be successful in attracting desirable sales and distribution partners; there is also no guarantee that we will be able to enter into such arrangements on favorable terms. If our sales and marketing efforts, or those of any third-party sales and distribution partners, are not successful, our technologies and products may not gain market acceptance, which could materially impact our business operations.

If we are unable to manufacture sufficient quantities of our products with sufficient quality by ourselves or with partners in a timely manner, our ability to sell our products may be harmed.

In order to manufacture our products in volume, we need to maintain sufficient internal manufacturing capacity or contract with manufacturing partners, or both. Our technology and the manufacturing process for our products are highly complex, involving a large number of unique parts, and we may encounter difficulties in manufacturing our products. There is no assurance that we will be able

to consistently meet the volume and quality requirements necessary to be successful in the market or pursuant to our obligations under the Roche Agreement. Manufacturing and product quality issues may arise as we adjust the scale of our production. If our products do not consistently meet our customers' performance expectations, our reputation may be harmed, and we may be unable to generate sufficient revenue to become profitable. Any delay or inability in maintaining or expanding our manufacturing capacity to meet customer demand could diminish our ability to sell our products, which could result in lost revenue and seriously harm our business, financial condition and results of operations.

We rely on other companies for the manufacture of certain components and sub-assemblies and intend to outsource additional sub-assemblies in the future. We may not be able to successfully scale the manufacturing process necessary to build and test multiple products on a full commercial basis, in which event our business would be materially harmed.

Our products are complex and involve a large number of unique components, many of which require precision manufacturing. The nature of the products requires customized components that are currently available only from a limited number of sources, and in some cases, single sources. We have chosen to source certain critical components from a single source, including suppliers for our SMRT Cells, reagents and instruments. If we were required to purchase these components from an alternative source, it could take several months or longer to qualify the alternative sources. If we are unable to secure a sufficient supply of these product components, we will be unable to manufacture and sell our products in a timely fashion or in sufficient quantities or under acceptable terms. Additionally, for some of those components that are currently purchased from a sole or single source supplier, we have not yet arranged for alternative suppliers.

The operations of our third-party manufacturing partners and suppliers could be disrupted by conditions unrelated to our business or operations, including the bankruptcy of the manufacturer or supplier. Certain of our suppliers and logistics centers are located in regions that have been or may be affected by earthquake and tsunami activity, which could disrupt the flow of components and sub-assemblies. A significant natural disaster, such as an earthquake, a hurricane, volcano, or a flood, could have a material adverse impact on our business, operating results, and financial condition. If our manufacturing partners or suppliers are unable or fail to fulfill their obligations to us, we might not be able to manufacture our products and satisfy customer demand or our obligations under the Roche Agreement in a timely manner, and our business could be harmed as a result. Our current manufacturing process is characterized by long lead times between the ordering and delivery of our products. We will need to take steps to scale the manufacturing process, including lowering the manufacturing costs of our products as well as improvements to our manufacturing yields and cycle times, manufacturing documentation, and quality assurance and quality control procedures. If we are unable to reduce our manufacturing costs and establish and maintain reliable high volume manufacturing as we scale our operations, our business could be materially harmed.

Delivery of our products could be delayed or disrupted by factors beyond our control, and we could lose customers as a result.

We rely on third-party carriers for the timely delivery of our products. As a result, we are subject to carrier disruptions and increased costs that are beyond our control, including worker strikes, inclement weather and increased fuel costs. Any failure to deliver products to our customers in a timely and accurate manner may damage our reputation and brand and could cause us to lose customers. If our relationship with any of these third-party carriers is terminated or impaired or if any of these third parties is unable to deliver our products, the delivery and acceptance of our products by our customers may be delayed which could harm our business and financial results. In addition, some of our consumable products need to be kept at a constant temperature. If our third-party carriers are not able to maintain

those temperatures during shipment, our products may be rendered unusable by our customers. The failure to deliver our products in a timely manner may harm our relationship with our customers, increase our costs and otherwise disrupt our operations.

We may encounter difficulties in managing future growth, and these difficulties could impair our profitability.

We expect to experience growth in the future, which may place a strain on our human and capital resources. If we are unable to manage future growth effectively, our business and operating results could suffer. Our ability to manage our operations and costs, including research and development, costs of components, manufacturing, sales and marketing, requires us to continue 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 scale up and implement improvements to our manufacturing process, develop reliable third-party manufacturers of sub-assemblies and control systems in an efficient or timely manner, or if we encounter deficiencies in existing systems and controls, we will not be able to make available the products required to meet future customer demand for our products. Failure to attract and retain sufficient numbers of talented employees will further strain our human resources and could impede our growth.

We depend on the continuing efforts of our senior management team and other key personnel. If we lose members of our senior management team or other key personnel or are unable to successfully retain, recruit and train qualified scientists, engineering and other personnel, our ability to develop our products could be harmed, and we may be unable to achieve our goals.

Our future success depends upon the continuing services of members of our senior management team and scientific and engineering personnel. In particular, our scientists and engineers are critical to our future technological and product innovations, and

we will need to hire additional qualified personnel. Our industry, particularly in the San Francisco Bay Area, is characterized by high demand and intense competition for talent, and the turnover rate can be high. We compete for qualified management and scientific personnel with other life science companies, academic institutions and research institutions, particularly those focusing on genomics. These employees could leave our company with little or no prior notice and would be free to work for a competitor. If one or more of our senior executives or other key personnel were unable or unwilling to continue in their present positions, we may not be able to replace them easily or at all, and other senior management may be required to divert attention from other aspects of the business. In addition, we do not have "key person" life insurance policies covering any member of our management team or other key personnel. The loss of any of these individuals or our ability to attract or retain qualified personnel, including scientists, engineers and others, could prevent us from pursuing collaborations and adversely affect our product development and introductions, business growth prospects, results of operations and financial condition.

Adverse conditions in the global economy and disruption of financial markets may significantly harm our revenue, profitability and results of operations.

The global economy and credit and capital markets have experienced volatility and disruption. Volatility and disruption of financial markets could limit our customers' ability to obtain adequate financing or credit to purchase and pay for our products in a timely manner or to maintain operations, which could result in a decrease in sales volume that could harm our results of operations. General concerns about the fundamental soundness of domestic and international economies may also cause our customers to reduce their purchases. Changes in governmental banking, monetary and fiscal policies to address liquidity and increase credit availability may not be effective. We may experience changes in other income as a result of volatility in the global economy, including interest rates and expenses. Significant government investment and allocation of resources to assist the economic recovery of sectors which do not include our customers may reduce the resources available for government grants and related funding for life sciences research and development. Continuation or further deterioration of these financial and macroeconomic conditions could significantly harm our sales, profitability and results of operations.

We have raised, and intend to raise, additional financing to fund our existing operations. Equity securities we issue to fund our operations will dilute your ownership and debt securities will have rights senior to common stockholders.

We have raised, and intend to raise, additional funds through public or private debt or equity financing. Additional funds may not be available on terms acceptable to us or at all, particularly in light of restrictions under our Facility Agreement. We have incurred and may further incur additional debt. Debtholders have rights senior to common stockholders to make claims on our assets and the terms of our existing debt restrict our operations, including our ability to pay dividends on our common stock. Equity securities issued in financings have diluted and will dilute stockholders' ownership in the Company and new equity securities may have priority rights over current investors. For example, shares of common stock issued pursuant to our "at-the-market" offering, that commenced during the first quarter of 2013, have resulted in dilution to our stockholders. Additionally, Warrants to purchase 5,500,000 shares of our common stock issued to Deerfield in connection with the Facility Agreement could result in additional dilution to our stockholders, and the Facility Agreement contains covenants that restrict our business. We intend to raise additional funds beyond the transactions completed to date, which will result in additional dilution to our stockholders.

We operate in a highly competitive industry and if we are not able to compete effectively, our business and operating results will likely be harmed.

Some of our current competitors, as well as many of our potential competitors, have greater name recognition, more substantial intellectual property portfolios, longer operating histories, significantly greater resources to invest in new technologies, more substantial experience in new product development and manufacturing capabilities and more established distribution channels to deliver products to customers than we do. These competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards or customer requirements. In light of these advantages, even if our technology is more effective than the products or service offerings of our competitors, current or potential customers might accept competitive products and services in lieu of purchasing our technology. Increased competition may result in pricing pressures, which could harm our sales, profitability or market share. Our failure to compete effectively could materially and adversely affect our business, financial condition or results of operations.

Our sales cycle is lengthy and unpredictable, which makes it difficult to forecast revenue and may increase the magnitude of quarterly fluctuations in our operating results.

Our PacBio RS and RS II instruments have a lengthy sales and purchase order cycle because they are major capital items and generally require the approval of our customers' senior management. This may contribute to substantial fluctuations in our quarterly operating results, particularly during the periods in which our sales volume is low. Because of these fluctuations, it is likely that in some future quarters our operating results will fall below the expectations of securities analysts or investors. If that happens, the market price of our stock would likely decrease. Past fluctuations in our quarterly operating results have resulted in decreases in our stock price. Such fluctuations also mean that investors may not be able to rely upon our operating results in any particular period as an indication of future performance.

Our products could have unknown defects or errors, which may give rise to claims against us or divert application of our resources from other purposes.

Any product using our SMRT technology will be complex and may develop or contain undetected defects or errors. We cannot provide assurance that material performance problems will not arise. Despite testing, defects or errors may arise in our products, which could result in a failure to achieve increased market acceptance, diversion of development resources, injury to our reputation and increased warranty, service and maintenance costs. We ship our PacBio RS and PacBio RS II instruments with one year of service included in the purchase price with an option to purchase one or more additional years of service. We provide a twelve-month warranty period for the PacBio RS and PacBio RS II. The warranty is limited to replacing, repairing or giving credit for, at our option, any instrument for which a warranty claim is provided to us within the warranty period. We also provide a warranty for our consumables, but claims must be made within 30 days from the shelf life date or "use by" date. The warranty is limited to replacing, or at our option, giving credit for, any consumable with defects in material or workmanship. Defects or errors in our products might also discourage customers from purchasing our products. The costs incurred in correcting any defects or errors may be substantial and could adversely affect our operating margins. In addition, such defects or errors could lead to the filing of product liability claims against us or against third parties who we may have an obligation to indemnify against such claims, including pursuant to the Roche Agreement, which could be costly and time-consuming to defend and result in substantial damages. Although we have product liability insurance, any product liability insurance that we have or procure in the future may not protect our assets from the financial impact of a product liability claim. Moreover, we may not be able to obtain adequate insurance coverage on acceptable terms. Any insurance that we have or obtain will be subject to deductibles and coverage limits. A product liability claim could have a serious adverse effect on our business, financial condition and results of operations.

Increased market adoption of our products by customers may depend on the availability of sample preparation and informatics tools, some of which may be developed by third parties.

Our commercial success may depend in part upon the development of sample preparation and software and informatics tools by third parties for use with our products. We cannot guarantee that third parties will develop tools that will be useful with our products or be viewed as useful by our customers or potential customers. A lack of additional available complementary sample preparation and informatics tools may impede the adoption of our products and may adversely impact our business.

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

Conducting and launching operations on an international scale requires close coordination of activities across multiple jurisdictions and time zones and consumes significant management resources. If we fail to coordinate and manage these activities effectively, our business, financial condition or results of operations could be adversely affected. International sales entail a variety of risks, including longer payment cycles and difficulties in collecting accounts receivable outside of the United States, currency exchange fluctuations, challenges in staffing and managing foreign operations, tariffs and other trade barriers, unexpected changes in legislative or regulatory requirements of foreign countries into which we sell our products, difficulties in obtaining export licenses or in overcoming other trade barriers and restrictions resulting in delivery delays and significant taxes or other burdens of complying with a variety of foreign laws. In conducting our international operations, we will be subject to U.S. laws relating to our international activities, as well as foreign laws relating to our activities in other countries. Failure to comply with these laws may subject us to financial and other penalties in the U.S. and foreign countries that could impact our operations or financial condition.

Changes in the value of the relevant currencies may affect the cost of certain items required in our operations. Changes in currency exchange rates may also affect the relative prices at which we are able sell products in the same market. Our revenue from international customers may be negatively impacted as increases in the U.S. dollar relative to our international customers local currency could make our products more expensive, impacting our ability to compete. Our costs of materials from international suppliers may increase if in order to continue doing business with us they raise their prices as the value of the U.S. dollar decreases relative to their local currency. Foreign policies and actions regarding currency valuation could result in actions by the United States and other countries to offset the effects of such fluctuations. The recent global financial downturn has led to a high level of volatility in foreign currency exchange rates and that level of volatility may continue, which could adversely affect our business, financial condition or results of operations.

Ethical, legal, privacy and social concerns surrounding the use of genetic information could reduce demand for our technology.

Our products may be used to provide genetic information about humans, agricultural crops and other living organisms. The information obtained from our products could be used in a variety of applications which may have underlying ethical, legal, privacy and social concerns, including the genetic engineering or modification of agricultural products or testing for genetic predisposition for certain medical conditions. Governmental authorities could, for safety, social or other purposes, call for limits on or regulation of the use of genetic testing. Such concerns or governmental restrictions could limit the use of our products, which could have a material adverse effect on our business, financial condition and results of operations.

Our products could in the future be subject to regulation by the U.S. Food and Drug Administration or other domestic and international regulatory agencies, which could increase our costs and delay our commercialization efforts, thereby materially and adversely affecting our business and results of operations.

Our products are not currently subject to U.S. Food and Drug Administration, or FDA, clearance or approval since they are not intended for use in the diagnosis or treatment of disease. However, in the future, certain of our products or related applications, including products we develop or supply pursuant to the Roche Agreement, could be subject to FDA regulation, or the FDA's regulatory jurisdiction could be expanded to include our products. Even where a product is exempted from FDA clearance or approval, the FDA may impose restrictions as to the types of customers to which we can market and sell our products or to which Roche can market and sell products we develop or supply pursuant to the Roche Agreement. Such regulation and restrictions may materially and adversely affect our business, financial condition and results of operations.

Many countries have laws and regulations that could affect our products. The number and scope of these requirements are increasing. Unlike many of our competitors, this is an area where we do not have expertise. We, Roche or our other third-party sales and distribution partners, as applicable, may not be able to obtain regulatory approvals in such countries or may incur significant costs in obtaining or maintaining our foreign regulatory approvals. In addition, the export by us of certain of our products, including products we develop or supply pursuant to the Roche Agreement, which have not yet been cleared for domestic commercial distribution may be subject to FDA or other export restrictions.

Our operations involve the use of hazardous materials, and we must comply with environmental, health and safety laws, which can be expensive and may adversely affect our business, operating results and financial condition.

Our research and development and manufacturing activities involve the use of hazardous materials, including chemicals and biological materials, and some of our products include hazardous materials. Accordingly, we are subject to federal, state, local and foreign laws, regulations and permits relating to environmental, health and safety matters, including, among others, those governing the use, storage, handling, exposure to and disposal of hazardous materials and wastes, the health and safety of our employees, and the shipment, labeling, collection, recycling, treatment and disposal of products containing hazardous materials. Liability under environmental laws and regulations can be joint and several and without regard to fault or negligence. For example, under certain circumstances and under certain environmental laws, we could be held liable for costs relating to contamination at our or our predecessors' past or present facilities and at third-party waste disposal sites. We could also be held liable for damages arising out of human exposure to hazardous materials. There can be no assurance that violations of environmental, health and safety laws will not occur as a result of human error, accident, equipment failure or other causes. The failure to comply with past, present or future laws could result in the imposition of substantial fines and penalties, remediation costs, property damage and personal injury claims, investigations, the suspension of production or product sales, loss of permits or a cessation of operations. Any of these events could harm our business, operating results and financial condition. We also expect that our operations will be affected by new environmental, health and safety laws and regulations on an ongoing basis, or more stringent enforcement of existing laws and regulations. Although we cannot predict the ultimate impact of any such new laws and regulations, or such more stringent enforcement, they will likely result in additional costs and may increase penalties associated with violations or require us to change the content of our products or how we manufacture them, which could have a material adverse effect on our business, operating results and financial condition.

Our facilities in California are located near known earthquake faults, and the occurrence of an earthquake or other catastrophic disaster could cause damage to our facilities and equipment, which could require us to cease or curtail

operations.

Our facilities in the San Francisco Bay Area are located near known earthquake fault zones and are vulnerable to damage from earthquakes. We are also vulnerable to damage from other types of disasters, including fire, floods, power loss, communications failures and similar events. If any disaster were to occur, our ability to operate our business at our facilities would be seriously, or potentially completely, impaired. In addition, the nature of our activities could cause significant delays in our research programs and commercial activities and make it difficult for us to recover from a disaster. The insurance we maintain may not be adequate to cover our losses resulting from disasters or other business interruptions. Accordingly, an earthquake or other disaster could materially and adversely harm our ability to conduct business.

We are subject to existing and potential additional governmental regulation that may impose burdens on our operations, and the markets for our products may be narrowed.

We are subject, both directly and indirectly, to the adverse impact of existing and potential future government regulation of our operations and markets. For example, export of our instruments may be subject to strict regulatory control in a number of jurisdictions. The failure to satisfy export control criteria or to obtain necessary clearances could delay or prevent shipment of products, which could adversely affect our revenue and profitability. Moreover, the life sciences industry, which is expected to be one of the primary markets for our technology, has historically been heavily regulated. There are, for example, laws in several jurisdictions restricting research in genetic engineering, which may narrow our markets. Given the evolving nature of this industry, legislative bodies or regulatory authorities may adopt additional regulation that adversely affects our market opportunities. Additionally, if ethical and other concerns surrounding the use of genetic information, diagnostics or therapies become widespread, there may be less demand for

our products. See also our risk factor above titled “Ethical, legal and social concerns surrounding the use of genetic information could reduce demand for our technology.” Our business is also directly affected by a wide variety of government regulations applicable to business enterprises generally and to companies operating in the life science industry in particular. See also our risk factors above titled “Our products could in the future be subject to regulation by the U.S. Food and Drug Administration or other domestic and international regulatory agencies, which could increase our cost and delay our commercialization efforts, thereby materially and adversely affecting our business and results of operations” and “Our operations involve the use of hazardous materials, and we must comply with environmental, health and safety laws, which can be expensive and may adversely affect our business, operating results and financial condition.” Failure to comply with these regulations or obtain or maintain necessary permits and licenses could result in a variety of fines or other censures or an interruption in our business operations which may have a negative impact on our ability to generate revenue and could increase the cost of operating our business.

Regulations related to conflict minerals may cause us to incur additional expenses and could limit the supply and increase the costs of certain materials used in the manufacture of our products.

We are subject to requirements under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd-Frank Act, that require us to conduct diligence, disclose and report whether or not our products contain conflict minerals. The implementation of these new requirements could adversely affect the sourcing, availability and pricing of the materials used in the manufacture of components used in our products. Furthermore, the complex nature of our products requires components and materials that may be available only from a limited number of sources and, in some cases, from only a single source. We may incur additional costs to comply with the disclosure requirements, including costs related to conducting diligence procedures to determine the sources of conflict minerals that may be used or necessary to the production of our products and, if applicable, potential changes to components, processes or sources of supply as a consequence of such verification activities. We may need to enter into relationships with new suppliers for our products, and there can be no assurance that we will be able to do so on a timely basis, in sufficient quantities, or on commercially reasonable terms. As a result, the manufacture or shipment of our products may be delayed or interrupted. It is also possible that we may face reputational harm if we determine that certain of our instruments contain minerals not determined to be conflict free or if we are unable to alter our appliances, processes or sources of supply to avoid such materials. Any delays or interruptions to our manufacturing process or in shipping our products, as well as any reputational harm that we may face, could adversely affect our business, financial condition or results of operations.

If we fail to maintain proper and effective internal control, our ability to produce accurate financial statements on a timely basis could be impaired, which would adversely affect our business and our stock price.

Ensuring that we have adequate internal financial and accounting controls and procedures in place to produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. We may in the future discover areas of our internal financial and accounting controls and procedures that need improvement. Operating as a public company requires sufficient resources within the accounting and finance functions in order to produce timely financial information, ensure the level of segregation of duties, and maintain adequate internal control over financial reporting customary for a U.S. public company.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Our management does not expect that our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that

the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within our company will have been detected.

Pursuant to Section 404 of the Sarbanes-Oxley Act, we were required to perform an evaluation of our internal control over financial reporting. While we performed this evaluation and concluded that our internal control over financial reporting was operating effectively as of December 31, 2011 and December 31, 2012, there can be no assurance that in the future material weaknesses or significant deficiencies will not exist or otherwise be discovered. In addition, if we are unable to produce accurate financial statements on a timely basis, investors could lose confidence in the reliability of our financial statements, which could cause the market price of our common stock to decline and make it more difficult for us to finance our operations and growth.

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

Under Section 382 of the Internal Revenue Code, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change net operating losses, or NOLs, to offset future taxable income. We believe that we have had one or more ownership changes, as a result of which our existing NOLs are currently subject to limitation. Future changes in our stock ownership, including pursuant to any sales of equity securities we may make under our Form S-3 Registration Statement, could result in additional ownership changes under Section 382. We may not be able to utilize a material portion of our NOLs, even if we attain profitability.

Risks Related to Our Intellectual Property

Failure to secure patent or other intellectual property protection for our products and improvements to our products may reduce our ability to maintain any technological or competitive advantage over our competitors and potential competitors.

Our ability to protect and enforce our intellectual property rights is uncertain and depends on complex legal and factual questions. Our ability to establish or maintain a technological or competitive advantage over our competitors may be diminished because of these uncertainties. For example:

•we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications or issued patents;

•we or our licensors might not have been the first to file patent applications for these inventions;

•it is possible that neither our pending patent applications nor the pending patent applications of our licensors will result in issued patents;

•our patents or the patents of our licensors may not be of sufficient scope to prevent others from practicing our technologies, developing competing products, designing around our patented technologies or independently developing similar or alternative technologies;

•our and our licensors' patent applications or patents have been, and may in the future be, subject to interference, opposition or similar administrative proceedings, which could result in those patent applications failing to issue as patents, those patents being held invalid or the scope of those patents being substantially reduced;

•we may not adequately protect our trade secrets;

•we may not develop additional proprietary technologies that are patentable; or

•the patents of others may limit our freedom to operate and prevent us from commercializing our technology in accordance with our plans.

The occurrence of any of these events could impair our ability to operate without infringing upon the proprietary rights of others or prevent us from establishing or maintaining a competitive advantage over our competitors.

Variability in intellectual property laws may adversely affect our intellectual property position.

Intellectual property laws, and patent laws and regulations in particular, have been subject to significant variability either through administrative or legislative changes to such laws or regulations or changes or differences in judicial interpretation, and it is expected that such variability will continue to occur. Additionally, intellectual property laws and regulations differ among countries. Variations in the patent laws and regulations or in interpretations of patent laws and regulations in the United States and other countries may diminish the value of our intellectual property and may change the impact of third-party intellectual property on us. Accordingly, we cannot predict the scope of patents that may be granted to us, the extent to which we will be able to enforce our patents against third parties or the extent to which third parties may be able to enforce their patents against us.

Some of the intellectual property that is important to our business is owned by other companies or institutions and licensed to us, and changes to the rights we have licensed may adversely impact our business.

We license from third parties some of the intellectual property that is important to our business, including patent licenses from Cornell Research Foundation, Indiana University Research and Technology Corporation and GE Healthcare Bio-Sciences Corp. If we fail to meet our obligations under these licenses, these third parties could terminate the licenses. If the third parties who license intellectual property to us fail to maintain the intellectual property that we have licensed, or lose rights to that intellectual property, the rights we have licensed may be reduced or eliminated, which could subject us to claims of intellectual property infringement. Termination of these licenses or reduction or elimination of our licensed rights may result in our having to negotiate new or reinstated licenses with less favorable terms, or could subject us to claims of intellectual property infringement in litigation or other administrative proceedings that could result in damage awards against us and injunctions that could prohibit us from selling our products. In addition, some of our licenses from third parties limit the field in which we can use the licensed technology. Therefore, in order for us to use such licensed technology in potential future applications that are outside the licensed field of use, we may be required to negotiate new licenses with our licensors or expand our rights under our existing licenses. We cannot assure you that we will be able to obtain such licenses or expanded rights on reasonable terms or at all. In addition, we have limited rights to participate in the prosecution and enforcement of the patents and patent applications that we have licensed. As a result, we cannot be certain that these patents and applications will be prosecuted and enforced in a manner consistent with the best interests of our business. Further, because of the rapid pace of technological change in our industry, we may need to rely on key technologies developed or licensed by third parties, and we may not be able to obtain licenses and technologies from these third parties at all or on reasonable terms. The occurrence of these events may have a material adverse effect on our business, financial condition or results of operations.

The measures that we use to protect the security of our intellectual property and other proprietary rights may not be adequate, which could result in the loss of legal protection for, and thereby diminish the value of, such intellectual property and other rights.

In addition to patents, we also rely upon trademarks, trade secrets, copyrights and unfair competition laws, as well as license agreements and other contractual provisions, to protect our intellectual property and other proprietary rights. Despite these measures, any of our intellectual property rights could be challenged, invalidated, circumvented or misappropriated. In addition, we attempt to protect our intellectual property and proprietary information by requiring our employees, consultants and certain academic collaborators to enter into confidentiality and assignment of inventions agreements, and by requiring our third-party manufacturing partners to enter into confidentiality agreements. There can be no assurance, however, that such measures will provide adequate protection for our intellectual property and proprietary information. These agreements may be breached, and we may not have adequate remedies for any such breach. In addition, our trade secrets and other proprietary information may be disclosed to others, or others may gain access to or disclose our trade secrets and other proprietary information. Enforcing a claim that a third party illegally obtained and is using our trade secrets is expensive and time consuming, and the outcome is unpredictable. Additionally, others may independently develop proprietary information and techniques that are substantially equivalent to ours. The occurrence of these events may have a material adverse effect on our business, financial condition or results of operations.

Our intellectual property may be subject to challenges in the United States or foreign jurisdictions that could adversely affect our intellectual property position.

Our pending, issued and granted U.S. and foreign patents and patent applications have been, and may in the future be, subject to challenges by third parties asserting prior invention by others or invalidity on various grounds, through proceedings, such as interferences, reexamination or opposition proceedings. Addressing these challenges to our intellectual property can be costly and distract management’s attention and resources. For example, we incurred significant legal expenses in the first half of 2012 to litigate and settle a complaint filed by Life Technologies Corporation seeking review of a patent interference decision of the U.S. Patent and Trademark Office. Additionally, as a result of these challenges, our patents or pending patent applications may be determined to be unpatentable to us, invalid or unenforceable, in whole or in part. Accordingly, adverse rulings from the relevant patent offices in these proceedings may negatively impact the scope of our intellectual property protection for our products and technology and may adversely affect our business.

Some of our technology is subject to “march-in” rights by the U.S. government.

Some of our patented technology was developed with U.S. federal government funding. When new technologies are developed with U.S. government funding, the government obtains certain rights in any resulting patents, including a nonexclusive license authorizing the government to use the invention for non-commercial purposes. These rights may permit the government to disclose our confidential information to third parties and to exercise “march-in” rights to use or allow third parties to use our patented technology. The government can exercise its march-in rights if it determines that action is necessary because we fail to achieve practical application of the U.S. government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, U.S. government-funded inventions must be reported to the government and U.S. government funding must be disclosed in any resulting patent applications. In addition, our rights in such inventions are subject to government license rights and foreign manufacturing restrictions.

We may become involved in legal proceedings to enforce our intellectual property rights.

Our intellectual property rights involve complex factual, scientific and legal questions. We operate in an industry characterized by significant intellectual property litigation. Even though we may believe that we have a valid patent on a particular technology, other companies may have from time to time taken, and may in the future take, actions that we believe violate our patent rights. Legal actions to enforce these patent rights can be expensive and may involve the diversion of significant management time and resources. Our enforcement actions may not be successful, could give rise to legal claims against us and could result in some of our intellectual property rights being determined to be invalid or not enforceable.

We could in the future be subject to legal proceedings with third parties who may claim that our products infringe or misappropriate their intellectual property rights.

Our products are based on complex, rapidly developing technologies. We may not be aware of issued or previously filed patent applications belonging to third parties that mature into issued patents that cover some aspect of our products or their use. In addition, because patent litigation is complex and the outcome inherently uncertain, our belief that our products do not infringe third-party patents of which we are aware or that such third-party patents are invalid and unenforceable may be determined to be incorrect. As a result, third parties may claim that we infringe their patent rights and may file lawsuits or engage in other proceedings against us to enforce their patent rights. For example, we incurred significant legal expenses in the first half of 2012 to litigate and settle a complaint filed by Helicos Biosciences Corporation alleging that our products infringe patents owned and in-licensed by Helicos. In addition, as we enter new markets, our competitors and other third parties may claim that our products infringe their intellectual property rights as part of a business strategy to impede our successful entry into those markets. Patent litigation between competitors in our industry is common. Additionally, we have certain obligations to many of our customers to indemnify and defend them against

claims by third parties that our products or their use infringe any intellectual property of these third parties. In defending ourselves against any of these claims, we could incur substantial costs, and the attention of our management and technical personnel could be diverted. Even if we have an agreement to indemnify us against such costs, the indemnifying party may be unable to uphold its contractual obligations. To avoid or settle legal claims, it may be necessary or desirable in the future to obtain licenses relating to one or more products or relating to current or future technologies, which could negatively affect our gross margins. We may not be able to obtain these licenses on commercially reasonable terms, or at all. We may be unable to modify our products so that they do not infringe the intellectual property rights of third parties. In some situations the results of litigation or settlement of claims may require that we cease allegedly infringing activities which could prevent us from selling some or all of our products. The occurrence of these events may have a material adverse effect on our business, financial condition or results of operations.

In addition, in the course of our business we may from time to time have access or be alleged to have access to confidential or proprietary information of others, which though not patented, may be protected as trade secrets. Others could bring claims against us asserting that we improperly used their confidential or proprietary information, or misappropriated their technologies and incorporated those technologies into our products. A determination that we illegally used the confidential or proprietary information or misappropriated technologies of others in our products could result in our having to pay substantial damage awards or be prevented from selling some or all of our products, which could adversely affect our business.

We have not yet registered some of our trademarks in all of our potential markets, and failure to secure those registrations could adversely affect our business.

Some of our trademark applications may not be allowed for registration, and our registered trademarks may not be maintained or enforced. In addition, in the U.S. Patent and Trademark Office and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings.

Our use of “open source” software could adversely affect our ability to sell our products and subject us to possible litigation.

A portion of our products or technologies developed and/or distributed by us incorporate “open source” software and we may incorporate open source software into other products or technologies in the future. Some open source software licenses require that we disclose the source code for any modifications to such open source software that we make and distribute to one or more third parties, and that we license the source code for such modifications to third parties, including our competitors, at no cost. We monitor the use of open source software in our products to avoid uses in a manner that would require us to disclose or grant licenses under our source code that we wish to maintain as proprietary, however there can be no assurance that such efforts have been or will be successful. In some circumstances, distribution of our software that includes or is linked with open source software could require that we disclose and license some or all of our proprietary source code in that software, which could include permitting the use of such software and source code at no cost to the user. Open source license terms are often ambiguous, and there is little legal precedent governing the interpretation of these licenses. Successful claims made by the licensors of open source software that we have violated the terms of these licenses could result in unanticipated obligations including being subject to significant damages, being enjoined from distributing products that incorporate open source software, and being required to make available our proprietary source code pursuant to an open source license, which could substantially help our competitors develop products that are similar to or better than ours and otherwise adversely

affect our business.

Risks Related to Owning Our Common Stock

The price of our common stock has been, and may continue to be, highly volatile, and you may be unable to sell your shares at or above the price you paid to acquire it.

The market price of our common stock is highly volatile, and we expect it to continue to be volatile for the foreseeable future in response to many risk factors listed in this section, and others beyond our control, including:

•actual or anticipated fluctuations in our bookings, financial condition and operating results;

•announcements of technological innovations by us or our competitors;

•announcements by Roche relating directly or indirectly to the Roche Agreement;

•overall conditions in our industry and market;

•addition or loss of significant customers;

•changes in laws or regulations applicable to our products;

•actual or anticipated changes in our growth rate relative to our competitors;

•announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;

•additions or departures of key personnel;

•competition from existing products or new products that may emerge;

•issuance of new or updated research or reports by securities analysts;

•fluctuations in the valuation of companies perceived by investors to be comparable to us;

•disputes or other developments related to proprietary rights, including patents, litigation matters and our ability to obtain intellectual property protection for our technologies;

•announcement or expectation of additional financing efforts;

•sales of our common stock by us or our stockholders;

•share price and volume fluctuations attributable to inconsistent trading volume levels of our shares; and

•general economic and market conditions.

Furthermore, in the past and recently, stock markets in general and the market for companies in our industry in particular have experienced price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of our common stock. You may not realize any return on your investment in us and may lose some or all of your investment. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We are currently a party to this type of litigation (see "Part I, Item 1. Financial Statements—Note 6. Contingencies" to the consolidated financial statements) and may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

If securities or industry analysts publish negative reports about our business, our share price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that securities or industry analysts publish about us or our business. If one or more of the analysts who cover us downgrade our shares or change their opinion of our shares, our share price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

Future sales of our common stock could cause our share price to fall.

In April 2012, we filed a shelf registration statement on Form S-3 with the SEC pursuant to which we may, from time to time, sell up to an aggregate of $150 million of our common stock, warrants or debt securities. On May 1, 2012, the registration statement was declared effective by the SEC, which will allow us to access the capital markets for the three year period following this effective date. On October 5, 2012, we entered into the Sales Agreement with Cantor,

pursuant to which we may offer and sell, from time to time, through Cantor shares of our common stock having an aggregate offering price of up to $30.0 million through an "at-the-market" offering. We are not obligated to make or continue to make any sales of shares of our common stock under the Sales Agreement. The sale of securities under the Form S-3 registration statement, including pursuant to the Sales Agreement, has resulted and will result in dilution of our stockholders and could cause our share price to fall. In addition, the holders of a significant number of shares of our common stock are entitled to rights with respect to registration of such shares under the Securities Act pursuant to an investor rights agreement between such holders and us. If such holders, by exercising their registration rights, sell a large number of shares, they could adversely affect the market price for our common stock. If we file a registration statement for the purpose of selling additional shares to raise capital and are required to include shares held by these holders pursuant to the exercise of their registration rights, our ability to raise capital may be impaired. Such holders have waived their registration rights with respect to the sale of shares of our common stock pursuant to the Sales Agreement through December 2013. We have also filed a registration statement on Form S-8 under the Securities Act to register shares for issuance under our 2004 Equity Incentive Plan, 2005 Stock Plan, 2010 Equity Incentive Plan, ESPP and 2010 Outside Director Equity Incentive Plan. Each of our 2010 Equity Incentive Plan, ESPP and 2010 Outside Director Equity Incentive Plan provides for automatic increases in the shares reserved for issuance under the plan which could result in additional dilution to our stockholders. Additionally, the Warrants to purchase 5,500,000 shares of our common stock issued to Deerfield in connection with the Facility Agreement could result in additional dilution to our stockholders. Refer to "Part I, Item 1. Financial Statements—Note 7. Debt Facility and Note 8. Stockholders' Equity" to the consolidated financial statements, for additional details regarding these financing transactions.

Concentration of ownership by our principal stockholders may result in control by such stockholders of the composition of our board of directors.

Our existing significant stockholders, executive officers, directors and their affiliates beneficially own a significant number of our outstanding shares of common stock. As a result, these stockholders will be able to exercise a significant level of control over all matters requiring stockholder approval, including the election of directors. This control could have the effect of delaying or preventing

a change of control of our company or changes in management and will make the approval of certain transactions difficult or impossible without the support of these stockholders.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management and limit the market price of our common stock.

Provisions in our certificate of incorporation and bylaws, as amended and restated, may have the effect of delaying or preventing a change of control or changes in our management. Our amended and restated certificate of incorporation and bylaws include provisions that:

•authorize our board of directors to issue, without further action by the stockholders, up to 50,000,000 shares of undesignated preferred stock and up to approximately 1,000,000,000 shares of authorized but unissued shares of common stock;

•require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;

•specify that special meetings of our stockholders can be called only by our board of directors, the Chairman of the Board, the Chief Executive Officer or the President;

•establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;

•establish that our board of directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered terms;

•provide that our directors may be removed only for cause; and

•provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to merge or combine with us.

Our large number of authorized but unissued shares of common stock may potentially dilute your stockholdings.

We have a significant number of authorized but unissued shares of common stock. Our board of directors may issue shares of common stock from this authorized but unissued pool from time to time without stockholder approval, resulting in the dilution of our existing stockholders.

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

We have never declared or paid any cash dividends on our common stock and do not intend to pay any cash dividends in the foreseeable future. We anticipate that we will retain all of our future earnings for use in the operation of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our board of directors. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

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

Not applicable.

Item 4.Mine Safety Disclosures

Not applicable.

Item 6.Exhibits

The exhibits listed in the Exhibit Index immediately preceding the exhibits are filed (other than exhibits 32.1 and 32.2) as part of this Quarterly Report on Form 10-Q and such Exhibit Index is incorporated herein by reference.

Signatures

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

PACIFIC BIOSCIENCES OF CALIFORNIA, INC.

Date: November 8, 2013 By: /s/ SUSAN K. BARNES

Susan K. Barnes
Executive Vice President

And

Chief Financial Officer

Date: November 8, 2013 By: /s/ BRIAN B. DOW

Brian B. Dow
Vice President

And

Principal Accounting Officer

Exhibit Index

Exhibit Number	Exhibit Description
10.1*	Development, Commercialization and License Agreement by and between Pacific Biosciences of California, Inc. and F. Hoffman-La Roche Ltd. Dated September 24, 2013.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of the Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350).
32.2	Certification of the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350).
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Confidential treatment has been requested for portions of this exhibit. These portions have been omitted from the exhibit filed herewith and have been provided separately to the Securities and Exchange Commission.

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