

PACIFIC BIOSCIENCES OF CALIFORNIA, INC.

Form 424B5

September 10, 2018

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**Filed Pursuant to Rule 424(b)(5)
Registration No. 333-219642**

This preliminary prospectus supplement and accompanying prospectus relate to an effective registration statement under the Securities Act of 1933, as amended, but the information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell the securities, and we are not soliciting an offer to buy these securities, in any jurisdiction where the offer or sale is not permitted.

PROSPECTUS SUPPLEMENT

(To Prospectus dated August 18, 2017)

Subject to Completion, Dated September 10, 2018

Shares

Pacific Biosciences of California, Inc.

Common Stock

We are offering _____ shares of our common stock. Our common stock is listed on The NASDAQ Global Select Market under the symbol PACB. On September 7, 2018, the last reported sale price for our common stock on The NASDAQ Global Select Market was \$4.61 per share.

Our business and an investment in our common stock involve significant risks. These risks are described under the caption Risk Factors beginning on page S-4 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	<i>Per Share</i>	<i>Total</i>
Public Offering Price	\$	\$
Underwriting Discounts and Commissions⁽¹⁾	\$	\$
Proceeds to Pacific Biosciences of California, Inc. (before expenses)	\$	\$

(1) See "Underwriting" beginning in page S-18 of this prospectus supplement for additional information regarding the compensation payable to the underwriters.

The underwriters may also purchase up to an additional _____ shares from us at the public offering price, less the underwriting discount, within 30 days from the date of this prospectus.

The underwriters expect to deliver the shares against payment in New York, New York on September _____, 2018.

Joint Book-running Managers

Cowen
September _____, 2018

Cantor

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus relate to the offering of our common stock. Before buying any of the common stock that we are offering, we urge you to carefully read this prospectus supplement, the accompanying prospectus, any free writing prospectus that we have authorized for use in connection with this offering, and the information incorporated by reference as described under the headings **Where You Can Find More Information** and **Information Incorporated by Reference** in this prospectus supplement. These documents contain important information that you should consider when making your investment decision.

This document is comprised of two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also adds to, and updates information contained in, the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus, including the documents incorporated by reference into the accompanying prospectus, provides more general information, some of which may not apply to this offering. Generally, when we refer to this prospectus, we are referring to the combined document consisting of this prospectus supplement and the accompanying prospectus. In this prospectus supplement, as permitted by law, we incorporate by reference information from other documents that we file with the Securities and Exchange Commission, or the SEC. This means that we can disclose important information to you by referring to those documents. The information incorporated by reference is considered to be a part of this prospectus supplement and the accompanying prospectus and should be read with the same care. When we make future filings with the SEC to update the information contained in documents that have been incorporated by reference, the information included or incorporated by reference in this prospectus supplement is considered to be automatically updated and superseded. In other words, in case of a conflict or inconsistency between information contained in this prospectus supplement and information in the accompanying prospectus or incorporated by reference into this prospectus supplement, you should rely on the information contained in the document that was filed later.

You should rely only on the information contained in, or incorporated by reference into, this prospectus supplement, the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering. We have not authorized any other person to provide you with different information. We are not making an offer to sell or soliciting an offer to buy our securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations, and prospects may have changed since those dates.

Unless the context otherwise requires, as used in this prospectus supplement, **we**, **us**, **Pacific Biosciences**, **PacBio**, **Company** and **our** refer to Pacific Biosciences of California, Inc., a Delaware corporation. The names **Pacific Biosciences**, **PacBio**, **Sequel**, **SMRT**, **SMRTbell** and our logo are our trademarks.

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SUMMARY

This summary highlights selected information contained elsewhere or incorporated by reference in this prospectus supplement and does not contain all the information that you need to consider in making your investment decision. This summary sets forth the material terms of this offering, but does not contain all of the information you should consider before investing in our common stock. You should carefully read this entire prospectus supplement, the accompanying prospectus and any free writing prospectus, as well as the information to which we refer you and the information incorporated by reference herein, before deciding whether to invest in shares of our common stock. You should pay special attention to the Risk Factors section of this prospectus supplement to determine whether an investment in the shares of our common stock is appropriate for you.

Our Company

We design, develop and manufacture sequencing systems to help scientists resolve genetically complex problems. Based on our novel Single Molecule, Real-Time (SMRT[®]) sequencing technology, our products enable: de novo genome assembly to finish genomes in order to more fully identify, annotate and decipher genomic structures; full-length transcript analysis to improve annotations in reference genomes, characterize alternatively spliced isoforms in important gene families, and find novel genes; targeted sequencing to more comprehensively characterize genetic variations; and real-time kinetic information for epigenome characterization. Our technology provides high accuracy, ultra-long reads, uniform coverage and the ability to simultaneously detect epigenetic changes. PacBio[®] sequencing systems, including consumables and software, provide a simple and fast end-to-end workflow for SMRT sequencing.

Our most advanced products offered today include the Sequel instrument and the Sequel SMRT Cell 1M, which together are capable of sequencing up to approximately one million DNA molecules simultaneously. We are continuously developing new products including what we refer to as the SMRT Cell 8M, which is designed to have up to eight times as much throughput capability as the current Sequel SMRT Cell 1M. We anticipate starting beta testing of the SMRT Cell 8M in early 2019 and launching this new product more broadly some months thereafter.

Recent Developments

As previously disclosed in our Quarterly Report on Form 10-Q, sales in China for the three-month period ended June 30, 2018 accounted for approximately 33% of our total revenue, as compared to 26% of our total revenue for the three-month period ended June 30, 2017. To capitalize upon our increasing opportunities in China, we have engaged in ongoing discussions regarding, but have not committed to, entering into strategic transactions with diagnostic and financing partners in China.

Corporate Information

Pacific Biosciences of California, Inc., formerly Nanofluidics, Inc., was incorporated in the State of Delaware in 2000. Our executive offices are located at 1305 O'Brien Drive, Menlo Park, California 94025, and our telephone number is (650) 521-8000. We maintain a website at www.pacb.com where general information about us is available. Our website, and the information on or that can be accessed through our website, is not a part of this prospectus supplement, and the inclusion of our website address is an inactive textual reference only.

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THE OFFERING

Common stock offered by us _____ shares.

Common stock to be outstanding immediately after this offering _____ shares (or _____ shares if the underwriters exercise their option to purchase additional shares in full).

Option to purchase additional shares _____ shares.

Use of Proceeds We currently intend to use the net proceeds from this offering, if any, for general corporate purposes, including capital expenditures and working capital. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. See Use of Proceeds on page S-10 of this prospectus supplement.

Risk Factors Before deciding to invest in shares of our common stock, you should read carefully the risks set forth under the caption Risk Factors beginning on page S-4 of this prospectus supplement and the risks described in our annual and periodic reports incorporated by reference into this prospectus supplement and the accompanying prospectus.

NASDAQ Global Select Market symbol PACB

The number of shares of our common stock to be outstanding immediately after this offering is based upon 131,888,389 shares outstanding as of June 30, 2018. The number of shares does not include the shares subject to the underwriters' option to purchase additional shares and also excludes the following:

28,601,054 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2018, with a weighted average exercise price of \$5.61 per share;

355,000 shares of our common stock issuable upon the vesting of time-based restricted stock units, or RSUs, outstanding as of June 30, 2018;

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651,930 shares of our common stock issuable upon the vesting of performance-based restricted stock units, or PSUs, outstanding as of June 30, 2018;

42,500 shares of our common stock issuable upon the exercise of stock options granted subsequent to June 30, 2018 with a weighted average exercise price of \$3.77 per share;

561,170 shares of our common stock issued subsequent to June 30, 2018 under our Employee Stock Purchase Plan;

2,513,677 shares of our common stock reserved for future issuance as of June 30, 2018 under our Employee Stock Purchase Plan, inclusive of later issued shares; and

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an aggregate of 10,451,363 shares of our common stock reserved for future issuance as of June 30, 2018 under our 2010 Equity Incentive Plan and our 2010 Outside Director Equity Incentive Plan, inclusive of later granted awards and unvested restricted stock units.

Except as otherwise indicated, all information in this prospectus supplement assumes no exercise or settlement of the outstanding stock options, RSUs, PSUs or other equity awards described above, no issuance of shares under the Employee Stock Purchase Plan, no grant of additional awards under our 2010 Equity Incentive Plan and our 2010 Outside Director Equity Incentive Plan, and no repurchase of shares of our common stock subsequent to June 30, 2018 and no exercise of the underwriters' option to purchase additional shares of common stock.

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RISK FACTORS

An investment in the shares of our common stock involves a high degree of risk. In addition to the other information contained in this prospectus supplement, the accompanying prospectus and the documents that we incorporate by reference, you should carefully consider the risks discussed below and under the section entitled Risk Factors contained in our Annual Report on Form 10-K for the year ended December 31, 2017 and in our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018 before making a decision about investing in our securities. The risks and uncertainties discussed below, in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, and in our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018 are not the only ones facing us. Additional risks and uncertainties not presently known to us, or that we currently see as immaterial, may also harm our business. If any of these risks occur, our business, financial condition and operating results could be harmed, the trading price of our common stock could decline and you could lose part or all of your investment. This prospectus supplement also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks faced by us described below and elsewhere in this prospectus supplement and the accompanying prospectus.

The price of our common stock has been, is, 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 them.

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 financial condition and operating results;

announcements of new products, technological innovations or strategic partnerships by us or our competitors;

announcements by us, our customers, partners or suppliers relating directly or indirectly to our current and future products, services or technologies;

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, capital commitments or achievement of significant milestones;

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 or 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;

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

reports, guidance and ratings issued by securities or industry analysts; and

general economic and market conditions.

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If any of the forgoing occurs, it would cause our stock price or trading volume to decline. 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 have been a party to this type of litigation in the past and may be the target of this type of litigation again 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 our operating results and financial performance do not meet the guidance that we have provided to the public, our stock price may decline.

We provide public guidance on our expected operating and financial results. Although we believe that this guidance provides our stockholders, investors and analysts with a better understanding of our expectations for the future, such guidance is comprised of forward-looking statements which are subject to the risks and uncertainties described in this report and in our other public filings and public statements. Our actual results may not meet the guidance we have provided. If our operating or financial results do not meet our guidance or the expectations of investment analysts, our stock price may decline.

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

We maintain 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 (less the gross proceeds of our prior sales of securities thereunder) of our common stock, preferred stock, depositary shares, warrants, debt securities or units. We have sold, and plan in the future to sell, shares of our common stock in underwritten offerings and have established, and may in the future establish, at-the-market offering programs pursuant to which we may offer and sell shares of our common stock. Sales of securities have resulted and will continue to result in dilution of our existing stockholders, and such sales could cause our stock price to fall.

In addition, if our existing stockholders sell, or indicate an intent to sell, a large number of shares of our common stock in the public market, it could cause our stock price to fall. We may also issue shares of common stock or securities convertible into our common stock from time to time in connection with financings, acquisitions, investments or otherwise. Any such issuance would result in dilution to our existing stockholders and could cause our stock price to fall.

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

Our existing principal stockholders, executive officers, directors and their affiliates beneficially own a significant number of our outstanding shares of common stock. In addition, such parties may acquire additional control by purchasing stock that we issue in connection with our future fundraising efforts. As a result, these stockholders may now and in the future 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.

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Our large number of authorized but unissued shares of common stock may potentially dilute existing stockholders' 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.

You may experience immediate dilution.

Given effect to the issuance of common stock in this offering, the receipt of the expected net proceeds and the use of those proceeds, this offering may have a dilutive effect on our expected net income available to our common stockholders per share and funds from operations per share. The actual amount of dilution cannot be determined at this time and will be based on a number of factors. See "Dilution" on page S-13 of this prospectus supplement for additional information regarding potential dilution.

You may experience future dilution as a result of future equity offerings.

To the extent that we raise additional funds through the sale of equity or securities that are convertible into or exchangeable for, or that represent the right to receive, common stock or substantially similar securities, the issuance of such securities will result in dilution to our stockholders. We may sell shares or other securities in any other offering at a price per share that is less than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock, or securities that are convertible into or exchangeable for, or that represent the right to receive, common stock or substantially similar securities, in future transactions may be higher or lower than the price per share paid by investors in this offering.

Management will have broad discretion as to the use of the proceeds from this offering and may not use the proceeds effectively.

Because we have not designated the amount of net proceeds from this offering to be used for any particular purpose, our management will have broad discretion as to the application of the net proceeds from this offering and could use them for purposes other than those contemplated at the time of the offering. Our management may use the net proceeds for corporate purposes that may not improve our financial condition or market value.

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

We have never declared or paid any dividends on our common stock and do not intend to pay any dividends in the foreseeable future. In addition, the terms of our existing debt agreement restrict our ability to pay dividends on our common stock. 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.

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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.

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FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, that involve risks and uncertainties, as well as assumptions, that, if they never materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. Forward-looking statements generally are identified by the words may, will, project, might, expects, anticipates, believes, intends, estimates, should, strategy, goal, seek, potential, predict, plan, continue, pursue, or the negative of these words or other words or expressions of similar meaning. All statements other than statements of historical fact are statements that could be deemed forward-looking statements. For example, forward-looking statements include statements about the attributes and sequencing advantages of SMRT[®] technology and the Sequel[®] System, including the Sequel SMRT Cell 1M and the SMRT Cell 8M, market opportunities, strategic and commercial plans, including strategy for our business and related financing, expectations regarding the conversion of backlog to revenue and the pricing and gross margin for products, manufacturing plans including developing and scaling of manufacturing and delivery of our products, research and development plans, product releases, product development including, among other things, statements relating to future uses, quality or performance of, or benefits of using, products or technologies, updates or improvements of our products, intentions regarding seeking regulatory approval for our products, competition, expectations regarding unrecognized income tax benefits, expectations regarding the impact of an increase in market rates on the value of our investment portfolio, the sufficiency of cash, cash equivalents and investments to fund projected operating requirements, the effects of recent accounting pronouncements on our financial statements and other future events, statements of belief and any statement of assumptions underlying any of the foregoing. We discuss in greater detail, and incorporate by reference into this prospectus supplement and the accompanying prospectus in their entirety, many of these risks and uncertainties under the heading Risk Factors beginning on page S-4 of this prospectus supplement. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Except as required by law, we assume no obligation to update 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.

If any of these risks or uncertainties materializes or any of these assumptions proves incorrect, our results could differ materially from the expectations in these statements.

The forward-looking statements included in this prospectus supplement are made only as of the date of this prospectus supplement, and we are not under any obligation to update our respective forward-looking statements and do not intend to do so. You should not assume that the information contained in this prospectus supplement or the accompanying prospectus is accurate as of any date other than the date on the front of this prospectus supplement or the accompanying prospectus, as applicable, or that any information incorporated by reference into this prospectus supplement or the accompanying prospectus is accurate as of any date other than the date of the document so incorporated by reference.

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You should read this prospectus supplement, the accompanying prospectus, the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

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USE OF PROCEEDS

We estimate the net proceeds from the sale of common stock by us in this offering will be approximately \$ million (or approximately \$ million if the underwriters' option to purchase additional shares is exercised in full) after deducting the underwriting discount and estimated offering expenses payable by us.

We currently intend to use the net proceeds from this offering, if any, for general corporate purposes, including capital expenditures and working capital. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so.

As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. As a result, our management will have broad discretion regarding the timing and application of the net proceeds from this offering. Pending the uses described above, we intend to invest the net proceeds in interest-bearing, investment-grade securities.

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Our common stock trades on The Nasdaq Global Select Market under the symbol PACB. The following table sets forth the range of high and low prices for our common stock as reported on The Nasdaq Global Select Market for the periods indicated.

	High	Low
Year Ended December 31, 2016		
First quarter	\$ 13.98	\$ 7.50
Second quarter	10.75	6.79
Third quarter	9.50	6.76
Fourth quarter	9.28	3.76
Year Ended December 31, 2017:		
First quarter	\$ 5.74	\$ 3.78
Second quarter	5.43	3.11
Third quarter	5.70	3.08
Fourth quarter	5.58	2.51
Year Ending December 31, 2018:		
First quarter	\$ 3.43	\$ 2.03
Second quarter	4.09	2.02
Third quarter (through September 7, 2018)	5.04	3.33

The last reported sale price of our common stock on The NASDAQ Global Select Market on September 7, 2018 was \$4.61 per share. Past price performance is not indicative of future price performance.

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DIVIDEND POLICY

We have never paid or declared any cash dividends on our common stock and do not anticipate paying cash dividends in the foreseeable future. In addition, the terms of our existing debt agreement restrict our ability to pay dividends on our common stock. 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.

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The net tangible book value of our common stock on June 30, 2018 was approximately \$85.5 million, or approximately \$0.65 per share. Net tangible book value per share is equal to the amount of our total tangible assets, less total liabilities, divided by the number of shares of common stock outstanding. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately afterwards. After giving effect to the sale by us of _____ shares of common stock in this offering at the public offering price of \$ _____ per share and after deducting the underwriting discount and estimated offering expenses payable by us, our as adjusted net tangible book value at June 30, 2018 would have been approximately \$ _____ million, or \$ _____ per share. This represents an immediate increase in net tangible book value of \$ _____ per share to existing stockholders and an immediate dilution of \$ _____ per share to new investors purchasing shares of common stock in this offering. The following table illustrates this dilution:

Public offering price per share	\$
Net tangible book value per share as of June 30, 2018	\$ 0.65
Increase per share attributable to new investors after giving effect to the offering	

Net tangible book value per share after giving effect to the offering

Dilution in net tangible book value per share to new investors	\$
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If the underwriters' option to purchase additional shares is exercised in full to purchase additional shares of common stock in this offering, based upon the public offering price of \$ _____, the as adjusted net tangible book value per share after giving effect to the offering would be \$ _____ per share, the increase in the net tangible book value per share to existing stockholders would be \$ _____ per share and the dilution to the new investors would be \$ _____ per share.

The foregoing table does not take into effect further dilution to new investors that could occur upon the exercise of outstanding stock options having a per share exercise price less than the offering price per share in this offering or the release of restricted stock units. The foregoing table is based upon 131,888,389 shares outstanding as of June 30, 2018. The number of shares does not include the shares subject to the underwriters' option to purchase additional shares and also excludes the following:

28,601,054 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2018, with a weighted average exercise price of \$5.61 per share;

355,000 shares of our common stock issuable upon the vesting of time-based restricted stock units, or RSUs, outstanding as of June 30, 2018;

651,930 shares of our common stock issuable upon the vesting of performance-based restricted stock units, or PSUs, outstanding as of June 30, 2018;

42,500 shares of our common stock issuable upon the exercise of stock options granted subsequent to June 30, 2018 with a weighted average exercise price of \$3.77 per share;

561,170 shares of our common stock issued subsequent to June 30, 2018 under our Employee Stock Purchase Plan;

2,513,677 shares of our common stock reserved for future issuance as of June 30, 2018 under our Employee Stock Purchase Plan, inclusive of later issued shares; and

an aggregate of 10,451,363 shares of our common stock reserved for future issuance as of June 30, 2018 under our 2010 Equity Incentive Plan and our 2010 Outside Director Equity Incentive Plan, inclusive of later granted awards and unvested restricted stock units.

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MATERIAL U.S. FEDERAL INCOME AND ESTATE TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following is a summary of the material U.S. federal income and estate tax consequences of the ownership and disposition of our common stock to non-U.S. holders, but does not purport to be a complete analysis of all the potential tax considerations relating thereto. This summary is based upon the provisions of the Internal Revenue Code of 1986, as amended, or the Code, Treasury regulations promulgated thereunder, administrative rulings and judicial decisions, all as of the date hereof. These authorities may be changed, possibly retroactively, so as to result in U.S. federal income tax or estate tax consequences different from those set forth below. We have not sought any ruling from the Internal Revenue Service, or the IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions.

This summary also does not address the tax considerations arising under the laws of any state of the United States or any local, non-U.S. or other taxing jurisdiction or under U.S. federal non-income tax laws, such as gift and estate tax laws, except to the limited extent set forth below, or under any applicable tax treaty. In addition, this discussion does not address any potential application of the Medicare contribution tax on net investment income or any tax considerations applicable to an investor's particular circumstances or to investors that may be subject to special tax rules, including, without limitation:

banks, insurance companies or other financial institutions;

persons subject to the alternative minimum tax;

tax-exempt organizations or accounts;

controlled foreign corporations, passive foreign investment companies or corporations that accumulate earnings to avoid U.S. federal income tax;

dealers in securities or currencies;

traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;

persons that own, or are deemed to own, more than five percent of our capital stock;

certain former citizens or long-term residents of the United States;

persons who hold our common stock as a position in a hedging transaction, straddle, conversion transaction or other risk reduction transaction;

persons who do not hold our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, for investment purposes);

entities or arrangements treated as partnerships for U.S. federal income tax purposes and other pass-through entities (and investors therein);

persons subject to special tax accounting rules as a result of any item of gross income with respect to our common stock being taken into account in an applicable financial statement;

persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation; or

persons deemed to sell our common stock under the constructive sale provisions of the Code.

In addition, if a partnership, including any entity or arrangement, domestic or foreign, classified as a partnership for U.S. federal income tax purposes, holds our common stock, the tax treatment of a partner generally will depend on the status of the partner and the activities of the partnership. Accordingly, partnerships that hold our common stock, and partners in such partnerships, should consult their tax advisors.

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You are urged to consult your tax advisor with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the purchase, ownership and disposition of our common stock arising under the U.S. federal estate or gift tax rules or under the laws of any state of the United States or any local, non-U.S. or other taxing jurisdiction, or under any applicable tax treaty.

Non-U.S. Holder Defined

For purposes of this discussion, you are a non-U.S. holder if you are a beneficial owner of our common stock that is not, for U.S. federal income tax purposes, any of the following:

an individual who is a citizen or resident of the United States;

a corporation or other entity taxable as a corporation created or organized in the United States or under the laws of the United States, any state thereof or the District of Columbia;

an estate whose income is subject to U.S. federal income tax regardless of its source;

a trust (x) the administration of which is subject to the primary supervision of a U.S. court and that has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (y) that has made an election to be treated as a U.S. person; or

an entity or arrangement, domestic or foreign, classified as a partnership for U.S. federal income tax purposes.

Distributions

As described under *Dividend Policy*, above, we have not and do not anticipate paying dividends. However, if we make distributions on our common stock, those payments will constitute dividends for U.S. tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed both our current and our accumulated earnings and profits, they will constitute a return of capital and will first reduce your basis in our common stock (determined separately with respect to each share of our common stock), but not below zero, and then will be treated as gain from the sale of that stock (subject to tax as described below under *Gain on Sale or Other Disposition of Common Stock*).

Subject to the discussion below on effectively connected income, any dividend paid to you generally will be subject to U.S. withholding tax either at a rate of 30% of the gross amount of the dividend or such lower rate as may be specified by an applicable income tax treaty. In order to receive a reduced treaty rate, you must provide us or our paying agent with an IRS Form W-8BEN or IRS Form W-8BEN-E (including, if required, a foreign or U.S. taxpayer identification number) or other appropriate version of IRS Form W-8 certifying qualification for the reduced rate. If you hold our common stock through a financial institution or other agent acting on your behalf, you will be required to provide appropriate documentation to the agent, who then will be required to provide the required certification to us or our paying agent, either directly or through other intermediaries. You should consult your tax advisor regarding your entitlement to benefits under any applicable income tax treaty. If you are eligible for a reduced rate of withholding tax pursuant to a tax treaty, you may be able to obtain a refund of any excess amounts currently withheld if you timely file

an appropriate claim for refund with the IRS.

Dividends received by you that are effectively connected with your conduct of a U.S. trade or business (and, if an income tax treaty applies, are attributable to a permanent establishment or fixed base maintained by you in the United States) generally are exempt from such withholding tax. In order to obtain this exemption, you must provide us or our paying agent with an IRS Form W-8ECI properly certifying such exemption. Such effectively connected dividends, although not subject to withholding tax, are taxed at the same graduated rates applicable to U.S. persons, net of certain deductions and credits, subject to an applicable income tax treaty providing otherwise. In addition, if you are a

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corporate non-U.S. holder, dividends you receive that are effectively connected with your conduct of a U.S. trade or business (and, if an income tax treaty applies, are attributable to a permanent establishment or fixed base maintained by you in the United States) may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty.

Gain on Sale or Other Disposition of Common Stock

Subject to the discussions of backup withholding and FATCA below, you generally will not be required to pay U.S. federal income tax on any gain realized upon the sale or other disposition of our common stock unless:

the gain is effectively connected with your conduct of a U.S. trade or business (and, if an income tax treaty applies, the gain is attributable to a permanent establishment or fixed base maintained by you in the United States), in which case you will be required to pay tax on the net gain derived from the sale under regular graduated U.S. federal income tax rates, and for a non-U.S. holder that is a corporation, such non-U.S. holder may be subject to the branch profits tax at a 30% rate on such effectively connected gain or such lower rate as may be specified by an applicable income tax treaty;

you are an individual who is present in the United States for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs and certain other conditions are met, in which case you will be required to pay a flat 30% tax on the gain derived from the sale, which gain may be offset by certain U.S. source capital losses (even though you are not considered a resident of the United States); provided that you have timely filed U.S. federal income tax returns with respect to such losses; or

our common stock constitutes a United States real property interest by reason of our status as a United States real property holding corporation for U.S. federal income tax purposes, a USRPHC, at any time within the shorter of the five-year period preceding the disposition of, or your holding period for, our common stock. We believe that we are not currently and will not become a USRPHC. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property relative to the fair market value of our other business assets, there can be no assurance that we will not become a USRPHC in the future. Even if we become a USRPHC, however, as long as our common stock is regularly traded on an established securities market, such common stock will be treated as United States real property interests only if you actually or constructively hold more than five percent of such regularly traded common stock at any time during the applicable period that is specified in the Code. If we are a USRPHC and either our common stock is not regularly traded on an established securities market or you hold, or are treated as holding, more than five percent of our outstanding common stock, directly or indirectly, during the applicable testing period, you will generally be taxed on any gain in the same manner as gain that is effectively connected with the conduct of a U.S. trade or business, except that the branch profits tax generally will not apply. If we are a USRPHC and our common stock is not regularly traded on an established securities market, your proceeds received on the disposition of shares will also generally be subject to withholding at a rate of 15%. You are encouraged to consult your own tax advisor regarding the possible consequences to you if we are, or were to become, a USRPHC.

U.S. Federal Estate Tax

Our common stock held (or treated as held) by an individual who is neither a U.S. citizen nor a U.S. resident (as defined for estate tax purposes) at the time of death will be included in such holder's gross estate for U.S. federal estate tax purposes, unless an applicable estate tax treaty provides otherwise, and therefore may be subject to U.S. federal estate tax.

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Backup Withholding and Information Reporting

Generally, we must report annually to the IRS the amount of any distributions (whether or not they constitute dividends for U.S. federal income tax purposes) paid to you, your name and address, and the amount of tax withheld, if any. A similar report will be sent to you. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in your country of residence.

Payments of dividends or of proceeds on the disposition of stock made to you may be subject to additional information reporting and backup withholding at a current rate of 24% unless you establish an exemption, for example by properly certifying your non-U.S. status on an IRS Form W-8BEN, IRS Form W-8BEN-E or another appropriate version of IRS Form W-8. Notwithstanding the foregoing, backup withholding and information reporting may apply if either we or our paying agent has actual knowledge, or reason to know, that you are a U.S. person.

Backup withholding is not an additional tax; rather, the U.S. income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may generally be obtained from the IRS, provided that the required information is furnished to the IRS in a timely manner.

Foreign Account Tax Compliance Act

Legislation and administrative guidance (referred to as the Foreign Account Tax Compliance Act or FATCA) generally imposes a U.S. federal withholding tax of 30% on any dividends paid and, after December 31, 2018, the gross proceeds of a sale or other disposition of our common stock paid to (i) a foreign financial institution (as specially defined under these rules), whether such foreign financial institution is the beneficial owner or an intermediary, unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or (ii) a non-financial foreign entity, (as specially defined under these rules) whether such non-financial foreign entity is the beneficial owner or an intermediary, unless such entity provides a certification that the beneficial owner of the payment does not have any substantial U.S. owners or provides the withholding agent with a certification identifying the direct and indirect U.S. owners of the entity. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes from the IRS, provided that the required information is furnished to the IRS in a timely manner. In certain cases, the relevant foreign financial institution or non-financial foreign entity may qualify for an exemption from, or be deemed to be in compliance with, these rules. If the country in which the payee is resident has entered into an intergovernmental agreement with the United States regarding FATCA, the payee may be permitted to report to that country instead of the United States, and the intergovernmental agreement may otherwise modify the requirements described in this paragraph. Prospective investors are encouraged to consult with their own tax advisors regarding the possible implications of this legislation on their investment in our common stock.

The preceding discussion of U.S. federal tax considerations is for general information only. It is not tax advice. Each prospective investor should consult its own tax advisor regarding the particular U.S. federal, state, local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed change in applicable laws.

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We and the underwriters for the offering named below have entered into an underwriting agreement with respect to the common stock being offered. Subject to the terms and conditions of the underwriting agreement, each underwriter has severally agreed to purchase from us the number of shares of our common stock set forth opposite its name below. Cowen and Company, LLC and Cantor Fitzgerald & Co. are the representatives of the underwriters.

Underwriter	Number of Shares
Cowen and Company, LLC	
Cantor Fitzgerald & Co.	
Total	

The underwriting agreement provides that the obligations of the underwriters are subject to certain conditions precedent and that the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased, other than those shares covered by the option described below. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against specified liabilities, including liabilities under the Securities Act of 1933, and to contribute to payments the underwriters may be required to make in respect thereof.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel and other conditions specified in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Option to Purchase Additional Shares. We have granted to the underwriters an option to purchase up to additional shares of common stock at the public offering price, less the underwriting discount. This option is exercisable for a period of 30 days. To the extent that the underwriters exercise this option, the underwriters will purchase additional shares from us in approximately the same proportion as shown in the table above.

Discounts and Commissions. The following table shows the public offering price, underwriting discount and proceeds, before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

We estimate that the total expenses of the offering, excluding underwriting discount, will be approximately \$ and are payable by us. We have also agreed to reimburse the underwriters for up to \$15,000 for their FINRA counsel fees and expenses, which reimbursed fee is deemed underwriting compensation for this offering by FINRA.

Per Share	Total Without Over- Allotment	With Over Allotment
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Public offering price

Underwriting discount

Proceeds, before expenses, to Pacific Biosciences of California, Inc.

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The underwriters propose to offer the shares of common stock to the public at the public offering price set forth on the cover of this prospectus. The underwriters may offer the shares of common stock to securities dealers at the public offering price less a concession not in excess of \$ per share. If all of the shares are not sold at the public offering price, the underwriters may change the offering price and other selling terms.

Stabilization. In connection with this offering, the underwriters may engage in stabilizing transactions, overallotment transactions, syndicate covering transactions, penalty bids and purchases to cover positions created by short sales.

Stabilizing transactions permit bids to purchase shares of common stock so long as the stabilizing bids do not exceed a specified maximum, and are engaged in for the purpose of preventing or retarding a decline in the market price of the common stock while the offering is in progress.

Overallotment transactions involve sales by the underwriters of shares of common stock in excess of the number of shares the underwriters are obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater than the number of shares that they may purchase in the overallotment option. In a naked short position, the number of shares involved is greater than the number of shares in the overallotment option. The underwriters may close out any short position by exercising their overallotment option and/or purchasing shares in the open market.

Syndicate covering transactions involve purchases of common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared with the price at which they may purchase shares through exercise of the overallotment option. If the underwriters sell more shares than could be covered by exercise of the overallotment option and, therefore, have a naked short position, the position can be closed out only by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that after pricing there could be downward pressure on the price of the shares in the open market that could adversely affect investors who purchase in the offering.

Penalty bids permit the representatives to reclaim a selling concession from a syndicate member when the common stock originally sold by that syndicate member is purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may be effected on the Nasdaq Stock Market, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

Passive Market Making. In connection with this offering, underwriters and selling group members may engage in passive market making transactions in our common stock on the Nasdaq Stock Market in accordance with Rule 103 of Regulation M under the Exchange Act during a period before the commencement of offers or sales of common stock and extending through the completion of the distribution. A passive market maker must display its bid at a price not in excess of the highest

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independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, such bid must then be lowered when specified purchase limits are exceeded.

Lock-Up Agreements. Pursuant to certain lock-up agreements, we and our executive officers and directors, have agreed, subject to certain exceptions, not to, for a period of 90 days, sell, offer to sell, contract to sell or lend, effect any short sale or establish or increase a Put Equivalent Position (as defined in Rule 16a-1(h) under the Exchange Act), liquidate or decrease any Call Equivalent Position (as defined in Rule 16a-1(b) under the Exchange Act), pledge, hypothecate or grant any security interest in, or in any other way transfer or dispose of, any common stock or any securities convertible into or exchangeable or exercisable for common stock, or enter into any swap, hedge or any other agreement or any transaction that transfers, in whole or in part, the economic consequence of ownership of the common stock or any securities convertible into or exchangeable or exercisable for common stock.

In addition, we and each such person agrees that, without the prior written consent of Cowen and Company, LLC and Cantor Fitzgerald & Co., we or such other person will not make any demand for, or exercise any right with respect to the registration of any of the common stock or any securities convertible into or exchangeable or exercisable for common stock, or the filing of any registration statement under the Securities Act relating to, any common stock or securities convertible into or exchangeable or exercisable for any common stock for a period of 90 days after the date of the pricing of the offering.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for common stock. The exceptions permit us, among other things and subject to restrictions, to: (a) issue common stock, options or restricted stock units pursuant to employee benefit plans, (b) issue common stock upon exercise of outstanding options or warrants, (c) issue securities in connection with acquisitions or similar transactions, or (d) file registration statements on Form S-8. The exceptions permit parties to the lock-up agreements, among other things and subject to restrictions, to: (a) make certain gifts, (b) transfer common stock acquired in open market transactions after this offering, (c) transfers of common stock pursuant to a written plan meeting the requirements of Rule 10b5-1 under the Exchange Act, and (d) participate in tenders involving the acquisition of a majority of our stock. In addition, the lock-up provision will not restrict broker-dealers from engaging in market making and similar activities conducted in the ordinary course of their business.

Cowen and Company, LLC and Cantor Fitzgerald & Co., in their sole discretion, may release our common stock and other securities subject to the lock-up agreements described above in whole or in part at any time before the termination of the 90-day period. When determining whether or not to release our common stock and other securities from lock-up agreements, Cowen and Company, LLC and Cantor Fitzgerald & Co. will consider, among other factors, the holder's reasons for requesting the release, the number of shares for which the release is being requested and market conditions at the time of the request.

Canada. The common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto)

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contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

United Kingdom. Each of the underwriters has represented and agreed that:

it has not made or will not make an offer of the securities to the public in the United Kingdom within the meaning of section 102B of the Financial Services and Markets Act 2000 (as amended) (FSMA) except to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities or otherwise in circumstances which do not require the publication by us of a prospectus pursuant to the Prospectus Rules of the Financial Services Authority (FSA);

it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of section 21 of FSMA) to persons who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 or in circumstances in which section 21 of FSMA does not apply to us; and

it has complied with and will comply with all applicable provisions of FSMA with respect to anything done by it in relation to the securities in, from or otherwise involving the United Kingdom.

Switzerland. The securities will not be offered, directly or indirectly, to the public in Switzerland and this prospectus does not constitute a public offering prospectus as that term is understood pursuant to article 652a or 1156 of the Swiss Federal Code of Obligations.

European Economic Area. In relation to each Member State of the European Economic Area (the "EEA") which has implemented the European Prospectus Directive (each, a "Relevant Member State"), an offer of our shares may not be made to the public in a Relevant Member State other than:

to any legal entity which is a qualified investor, as defined in the European Prospectus Directive;

to fewer than 150 natural or legal persons (other than qualified investors as defined in the European Prospectus Directive), subject to obtaining the prior consent of the relevant dealer or dealers nominated by us for any such offer, or;

in any other circumstances falling within Article 3(2) of the European Prospectus Directive, provided that no such offer of our shares shall require us or any underwriter to publish a prospectus pursuant to Article 3 of the European Prospectus Directive or supplement prospectus pursuant to Article 16 of the European Prospectus Directive and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the underwriters and with us that it is a qualified investor within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the European Prospectus Directive.

In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the European Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their

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offer or resale to, persons in circumstances which may give rise to an offer or any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

For the purposes of this description, the expression an offer to the public in relation to the securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe for the securities, as the expression may be varied in that Relevant Member State by any measure implementing the European Prospectus Directive in that member state, and the expression European Prospectus Directive means Directive 2003/71/EC (and amendments hereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State) and includes any relevant implementing measure in each Relevant Member State. The expression 2010 PD Amending Directive means Directive 2010/73/EU.

Israel. In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728 1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728 1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions (the Addressed Investors); or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728 1968, subject to certain conditions (the Qualified Investors). The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728 1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728 1968. In particular, we may request, as a condition to be offered common stock, that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (i) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728 1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728 1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728 1968 and the regulations promulgated thereunder in connection with the offer to be issued common stock; (iv) that the shares of common stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728 1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728 1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor s name, address and passport number or Israeli identification number.

We have not authorized and do not authorize the making of any offer of securities through any financial intermediary on our behalf, other than offers made by the underwriters and their respective affiliates, with a view to the final placement of the securities as contemplated in this document. Accordingly, no purchaser of the shares, other than the underwriters, is authorized to make any further offer of shares on our behalf or on behalf of the underwriters.

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Electronic Offer, Sale and Distribution of Shares. A prospectus in electronic format may be made available on the websites maintained by one or more of the underwriters or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representatives may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on these websites is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved or endorsed by us or any underwriter in its capacity as underwriter, and should not be relied upon by investors.

Other Relationships. Certain of the underwriters and their affiliates have provided, and may in the future provide, various investment banking, commercial banking and other financial services for us and our affiliates for which they have received, and may in the future receive, customary fees.

Cantor Fitzgerald & Co. is the agent under that certain Controlled Equity OfferingSM Sales Agreement, dated October 5, 2012, as amended on November 8, 2013, as further amended on February 3, 2015 (as amended, the Sales Agreement), by and between us and Cantor Fitzgerald & Co. Under the Sales Agreement, we may offer and sell, from time to time, shares of our common stock through Cantor Fitzgerald & Co. through an at the market offering as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended.

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LEGAL MATTERS

Certain legal matters with respect to the validity of our shares of common stock offered by this prospectus supplement will be passed upon for us by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California. Certain legal matters will be passed upon for the underwriters by Cooley LLP, New York, New York.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2017, and the effectiveness of our internal control over financial reporting as of December 31, 2017, as set forth in their reports, which are incorporated by reference in this prospectus supplement and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's reports, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the common stock offered by this prospectus supplement and the accompanying prospectus. This prospectus supplement and the accompanying prospectus, filed as part of the registration statement, do not contain all the information set forth in the registration statement and its exhibits and schedules, portions of which have been omitted as permitted by the rules and regulations of the SEC. For further information about us, we refer you to the registration statement and to its exhibits and schedules.

We file annual, quarterly and other reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at www.sec.gov. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act can also be accessed free of charge through the Internet. These filings will be available as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

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INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus supplement and the accompanying prospectus certain information we file with it, which means that we can disclose important information by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus supplement and the accompanying prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus supplement and the accompanying prospectus. We incorporate by reference the documents listed below that we have previously filed with the SEC (excluding any portions of any Form 8-K that are not deemed filed pursuant to the General Instructions of Form 8-K):

our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, including the information specifically incorporated by reference into the Form 10-K from our definitive proxy statement for our 2018 Annual Meeting of Stockholders;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018;

our Current Reports on Form 8-K filed with SEC on February 1, 2018, February 12, 2018, February 15, 2018, February 20, 2018, May 8, 2018, May 23, 2018, and July 31, 2018 (in each case, not including any information furnished under Items 2.02 or 7.01 of Form 8-K, including the related exhibits, which information is not incorporated by reference herein, unless such information under Item 2.02 is explicitly deemed filed for purposes of the Exchange Act); and

the description of our common stock contained in our Registration Statement on Form 8-A as filed with the SEC on October 6, 2010, including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference into this prospectus supplement and the accompanying prospectus additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the completion or termination of the offering, but excluding any information deemed furnished and not filed with the SEC. Any statements contained in a previously filed document incorporated by reference into this prospectus supplement and the accompanying prospectus is deemed to be modified or superseded for purposes of this prospectus supplement and the accompanying prospectus to the extent that a statement contained in this prospectus supplement and the accompanying prospectus, or in a subsequently filed document also incorporated by reference herein and therein, modifies or supersedes that statement.

We will provide to each person to whom this prospectus supplement and the accompanying prospectus is delivered, upon written or oral request, at no cost to the requester, a copy of any and all of the information that is incorporated by reference in this prospectus supplement and the accompanying prospectus. Requests for such documents should be directed to:

Pacific Biosciences of California, Inc.

1305 O'Brien Drive

Edgar Filing: PACIFIC BIOSCIENCES OF CALIFORNIA, INC. - Form 424B5

Menlo Park, California 94025

(650) 521-8000

Attn: Investor Relations

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PROSPECTUS

\$150,000,000

Pacific Biosciences of California, Inc.

By this prospectus, Pacific Biosciences may offer, from time to time:

Common stock

Preferred stock

Depositary Shares

Warrants

Debt securities

Units

Pacific Biosciences of California, Inc. a Delaware corporation (Pacific Biosciences or PacBio) may offer and sell from time to time, in one or more series or issuances and on terms that Pacific Biosciences will determine at the time of the offering, any combination of the securities described in this prospectus, up to an aggregate amount of \$150,000,000.

We will provide specific terms of any offering in a supplement to this prospectus. Any prospectus supplement may also add, update, or change information contained in this prospectus. You should carefully read this prospectus and the applicable prospectus supplement as well as the documents incorporated or deemed to be incorporated by reference in this prospectus before you purchase any of the securities offered hereby.

These securities may be offered and sold in the same offering or in separate offerings; to or through underwriters, dealers, and agents; or directly to purchasers. The names of any underwriters, dealers, or agents involved in the sale of

our securities, their compensation and any over-allotment options held by them will be described in the applicable prospectus supplement. For a more complete description of the plan of distribution of these securities, see the section entitled "Plan of Distribution" beginning on page 28 of this prospectus.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "PACB". We will provide information in any applicable prospectus supplement regarding any listing of securities other than shares of our common stock on any securities exchange.

INVESTING IN OUR SECURITIES INVOLVES SIGNIFICANT RISKS. SEE RISK FACTORS BEGINNING ON PAGE 4 OF THIS PROSPECTUS AND IN THE APPLICABLE PROSPECTUS SUPPLEMENT BEFORE INVESTING IN ANY SECURITIES.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is August 18 , 2017

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the United States Securities and Exchange Commission, or the SEC, using a shelf registration process. Under this shelf process, we may, from time to time, sell any combination of the securities described in this prospectus in one or more offerings up to a total amount of \$150,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add to, update or change information contained in the prospectus and, accordingly, to the extent inconsistent, information in this prospectus is superseded by the information in the prospectus supplement.

The prospectus supplement to be attached to the front of this prospectus may describe, as applicable: the terms of the securities offered; the initial public offering price; the price paid for the securities; net proceeds; and the other specific terms related to the offering of the securities.

You should only rely on the information contained or incorporated by reference in this prospectus and any prospectus supplement or issuer free writing prospectus relating to a particular offering. No person has been authorized to give any information or make any representations in connection with this offering other than those contained or incorporated by reference in this prospectus, any accompanying prospectus supplement and any related issuer free writing prospectus in connection with the offering described herein and therein, and, if given or made, such information or representations must not be relied upon as having been authorized by us. Neither this prospectus nor any prospectus supplement nor any related issuer free writing prospectus shall constitute an offer to sell or a solicitation of an offer to buy offered securities in any jurisdiction in which it is unlawful for such person to make such an offering or solicitation. This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits.

You should read the entire prospectus and any prospectus supplement and any related issuer free writing prospectus, as well as the documents incorporated by reference into this prospectus or any prospectus supplement or any related issuer free writing prospectus, before making an investment decision. Neither the delivery of this prospectus or any prospectus supplement or any issuer free writing prospectus nor any sale made hereunder shall under any circumstances imply that the information contained or incorporated by reference herein or in any prospectus supplement or issuer free writing prospectus is correct as of any date subsequent to the date hereof or of such prospectus supplement or issuer free writing prospectus, as applicable. You should assume that the information appearing in this prospectus, any prospectus supplement or any document incorporated by reference is accurate only as of the date of the applicable documents, regardless of the time of delivery of this prospectus or any sale of securities. Our business, financial condition, results of operations and prospects may have changed since that date.

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

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Prospectus Summary

This summary description about us and our business highlights selected information contained elsewhere in this prospectus or incorporated in this prospectus by reference. This summary does not contain all of the information you should consider before buying securities in this offering. You should carefully read this entire prospectus and any applicable prospectus supplement, including each of the documents incorporated herein or therein by reference, before making an investment decision. As used in this prospectus, we, us, Pacific Biosciences, PacBio, the Company and our refer to Pacific Biosciences of California, Inc., a Delaware corporation.

Pacific Biosciences of California, Inc.

Overview

We design, develop and manufacture sequencing systems to help scientists resolve genetically complex problems. Based on our novel Single Molecule, Real-Time (SMRT[®]) Sequencing technology, our products enable: de novo genome assembly to finish genomes in order to more fully identify, annotate and decipher genomic structures; full-length transcript analysis to improve annotations in reference genomes, characterize alternatively spliced isoforms and find novel genes; targeted sequencing to more comprehensively characterize genetic variations; and DNA base modification identification to help characterize epigenetic regulation and DNA damage. Our technology combines very high consensus accuracy and long read lengths with the ability to detect real-time kinetic information.

In September 2015, we announced that we had launched a new nucleic acid sequencing platform, the PacBio Sequel[®] System (the Sequel System), which will provide higher throughput, more scalability, a reduced footprint and lower sequencing project costs compared to the PacBio[®] RS II System, while maintaining the existing benefits of our SMRT Technology.

Corporate Information

Pacific Biosciences of California, Inc., formerly Nanofluidics, Inc. was incorporated in the State of Delaware in 2000. Our executive offices are located at 1305 O'Brien Drive, Menlo Park, California 94025, and our telephone number is (650) 521-8000. We maintain a website at www.pacb.com where general information about us is available. Our website, and the information contained therein, is not a part of this prospectus.

The Securities We May Offer

We may offer up to \$150,000,000 of common stock, preferred stock, depositary shares, warrants, debt securities and/or units in one or more offerings and in any combination. This prospectus provides you with a general description of the securities we may offer. A prospectus supplement, which we will provide each time we offer securities, will describe the specific amounts, prices and terms of the securities we determine to offer.

Common Stock

We may offer shares of our common stock, par value \$0.001 per share, either alone or underlying other registered securities convertible or exercisable into our common stock. Each holder of our common stock is entitled to one vote for each share on all matters to be voted upon by the stockholders. Holders of our common stock are entitled to receive ratably the dividends, if any, as may be declared from time to time by our board of directors out of funds legally available therefor. If there is a liquidation, dissolution or winding up of our company, holders of our common stock would be entitled to share in our assets remaining after the payment

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of liabilities and any preferential rights of any outstanding preferred stock. The holders of common stock have no preemptive rights. Currently, we do not pay a dividend and do not anticipate paying cash dividends in the foreseeable future.

Preferred Stock and Depositary Shares

Under the terms of our amended and restated certificate of incorporation, our board of directors is authorized to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock.

We may also issue fractional shares of preferred stock that will be represented by depositary shares and depositary receipts.

Each series of preferred stock, depositary shares or depositary receipts, if issued, will be more fully described in the particular prospectus supplement that will accompany this prospectus, including redemption provisions, rights in the event of our liquidation, dissolution or winding up, voting rights and rights to convert into common stock. We do not have any shares of our preferred stock, depositary shares or depositary receipts presently outstanding.

Warrants

We may issue warrants for the purchase of common stock, preferred stock or debt securities. We may issue warrants independently or together with other securities.

Debt Securities

We may offer secured or unsecured obligations in the form of one or more series of senior or subordinated debt. The senior debt securities and the subordinated debt securities are together referred to in this prospectus as the debt securities. The subordinated debt securities generally will be entitled to payment only after payment of our senior debt. Senior debt generally includes all debt for money borrowed by us, except debt that is stated in the instrument governing the terms of that debt to be not senior to, or to have the same rank in right of payment as, or to be expressly junior to, the subordinated debt securities. We may issue debt securities that are convertible into shares of our common stock.

The senior and subordinated debt securities will be issued under separate indentures between us and a trustee. We have summarized the general features of the debt securities to be governed by the indentures. These indentures have been filed as exhibits to the registration statement of which this prospectus forms a part. We encourage you to read these indentures. Instructions on how you can get copies of these documents are provided under the heading **Where You Can Find More Information**.

Units

We may issue units comprised of one or more of the other classes of securities issued by us as described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit.

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RISK FACTORS

An investment in our securities involves a high degree of risk. The prospectus supplement applicable to each offering of our securities will contain a discussion of the risks applicable to an investment in our securities. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading **Risk Factors** in the applicable prospectus supplement, together with all of the other information contained or incorporated by reference in the prospectus supplement or appearing or incorporated by reference in this prospectus. You should also consider the risks, uncertainties and assumptions discussed under Item 1A, **Risk Factors**, in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 and any updates described in our Quarterly Reports on Form 10-Q, all of which are incorporated herein by reference, and may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future and any prospectus supplement related to a particular offering. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations. The occurrence of any of these known or unknown risks might cause you to lose all or part of your investment in the offered securities.

FORWARD-LOOKING STATEMENTS

This prospectus, each prospectus supplement and the information incorporated by reference in this prospectus and each prospectus supplement contain certain statements that constitute **forward-looking statements** within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. The words **anticipate, could, expect, believe, goal, plan, intend, estimate, may, seek, potential, predict, will,** and similar expressions and variations thereof are intended to identify forward-looking statements, but are not the exclusive means of identifying such statements. Those statements appear in this prospectus, any accompanying prospectus supplement and the documents incorporated herein and therein by reference, particularly in the sections entitled **Prospectus Summary, Risk Factors, Management's Discussion and Analysis of Financial Condition and Results of Operations** and **Business**, and include statements regarding the intent, belief or current expectations of the company and management that are subject to known and unknown risks, uncertainties and assumptions and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to those discussed in the section titled **Risk Factors** set forth above.

This prospectus, any prospectus supplement and the information incorporated by reference in this prospectus and any prospectus supplement also contain statements that are based on management's current expectations and beliefs, including estimates and projections about our company, industry, financial condition, results of operations and other matters. These statements are not guarantees of future performance and are subject to numerous risks, uncertainties, and assumptions that are difficult to predict.

Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely upon forward-looking statements as predictions of future events. The events and circumstances reflected in the forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, including the securities laws of the United States and the rules and regulations of the SEC, we do not plan to publicly update or revise any forward-looking statements contained herein after we distribute this prospectus, whether as a result of any new information, future events or otherwise.

Table of Contents**RATIO OF EARNINGS TO FIXED CHARGES**

Our earnings are inadequate to cover fixed charges. The following table sets forth the ratio of earnings to fixed charges for each of the years ended December 31, 2016, 2015, 2014, 2013 and 2012 and for the three months ended June 30, 2017 and June 30, 2016. The following should be read in conjunction with our consolidated financial statements, including the notes thereto, and the other financial information included or incorporated by reference herein. See Exhibit 12.1 hereto for additional detail regarding the computation of the deficiency of earnings to cover fixed charges.

	Three Months Ended		Fiscal Year Ended December 31,				
	June 30,		2016	2015	2014	2013	2012
	2017	2016	2016	2015	2014	2013	2012
<i>(dollars in thousands)</i>							
Ratio of earnings to fixed charges(1)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

- (1) For the purpose of calculating such ratios, earnings consist of income from continuing operations before income taxes plus fixed charges and fixed charges consist of interest expense (net of capitalized portion), capitalized interest, amortization of debt discount and the portion of rental expense representative of interest expense. Earnings were inadequate to cover the fixed charges by approximately \$74,375, \$31,696, \$66,160, \$79,293, and \$94,465 for the years ended December 31, 2016, 2015, 2014, 2013 and 2012 and by approximately \$25,507 and \$18,499 for the three months ended June 30, 2017 and June 30, 2016, respectively.

USE OF PROCEEDS

Unless otherwise indicated in the prospectus supplement, we will use the net proceeds from the sale of securities offered by this prospectus for general corporate purposes, which may include working capital, capital expenditures, other corporate expenses and acquisitions of complementary products, technologies or businesses. However, we have no present agreements or commitments for any such acquisitions. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business. As a result, unless otherwise indicated in the prospectus supplement, our management will have broad discretion to allocate the net proceeds of the offerings. Pending their ultimate use, we intend to invest the net proceeds in short-term, investment-grade, interest-bearing instruments.

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DESCRIPTION OF CAPITAL STOCK

The following information describes our common stock and preferred stock, as well as certain provisions of our amended and restated certificate of incorporation and bylaws. This description is only a summary. You should also refer to our certificate of incorporation and bylaws, which have been filed with the SEC as exhibits to our registration statement, of which this prospectus forms a part.

General

Our authorized capital stock consists of 1,000,000,000 shares of common stock with a \$0.001 par value per share, and 50,000,000 shares of undesignated preferred stock with a \$0.001 par value per share. Our board of directors may establish the rights and preferences of the preferred stock from time to time. As of June 30, 2017, there were 115,561,642 shares of common stock issued and outstanding.

The following is a summary of the material provisions of the common stock and preferred stock provided for in our amended and restated certificate of incorporation and bylaws. For additional detail about our capital stock, please refer to our certificate of incorporation and bylaws, each as amended.

Common Stock

Each holder of our common stock is entitled to one vote for each share on all matters to be voted upon by the stockholders. Subject to any preferential rights of any outstanding preferred stock, holders of our common stock are entitled to receive ratably the dividends, if any, as may be declared from time to time by the board of directors out of funds legally available therefor. We have never declared or paid any cash dividend on our capital stock and do not anticipate paying any cash dividends in the foreseeable future. In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in our assets remaining after the payment of liabilities and any preferential rights of any outstanding preferred stock.

Holders of our common stock have no preemptive or conversion rights or other subscription rights, and there are no redemption or sinking fund provisions applicable to the common stock. The outstanding shares of common stock are fully paid and non-assessable. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Our common stock is listed on the NASDAQ Global Select Market under the symbol PACB. The transfer agent and registrar for the common stock is Computershare Trust Company, N.A. Its address is 211 Quality Circle Suite 210, College Station, TX 77845, and its telephone number is 1-866-401-4874.

Preferred Stock

The following description of preferred stock and the description of the terms of any particular series of preferred stock that we choose to issue hereunder and that will be set forth in the related prospectus supplement are not complete. These descriptions are qualified in their entirety by reference to our amended and restated certificate of incorporation and the certificate of designation relating to any series of preferred stock. The rights, preferences, privileges and restrictions of the preferred stock of each series will be fixed by the certificate of designation relating to that series. The prospectus supplement also will contain a description of certain United States federal income tax consequences relating to the purchase and ownership of the series of preferred stock that is described in the prospectus supplement.

Under the terms of our amended and restated certificate of incorporation, our board of directors is authorized to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting

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rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock. There are no restrictions presently on the repurchase or redemption of any shares of our preferred stock.

The prospectus supplement for a series of preferred stock will specify:

the maximum number of shares;

the designation of the shares;

the annual dividend rate, if any, whether the dividend rate is fixed or variable, the date or dates on which dividends will accrue, the dividend payment dates, and whether dividends will be cumulative;

the price and the terms and conditions for redemption, if any, including redemption at our option or at the option of the holders, including the time period for redemption, and any accumulated dividends or premiums;

the liquidation preference, if any, and any accumulated dividends upon the liquidation, dissolution or winding up of our affairs;

any sinking fund or similar provision, and, if so, the terms and provisions relating to the purpose and operation of the fund;

the terms and conditions, if any, for conversion or exchange of shares of any other class or classes of our capital stock or any series of any other class or classes, or of any other series of the same class, or any other securities or assets, including the price or the rate of conversion or exchange and the method, if any, of adjustment;

the voting rights; and

any or all other preferences and relative, participating, optional or other special rights, privileges or qualifications, limitations or restrictions.

The issuance of shares of preferred stock will affect, and may adversely affect, the rights of holders of common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock on the rights of holders of common stock until our board of directors determines the specific rights attached to that preferred stock. The effects of issuing additional preferred stock could include one or more of the following:

restricting dividends on the common stock;

diluting the voting power of the common stock;

impairing the liquidation rights of the common stock; or

delaying or preventing changes in control or management of our company.

Preferred stock will be fully paid and nonassessable upon issuance.

Effect of Certain Provisions of our Amended and Restated Certificate of Incorporation and Bylaws and the Delaware Anti-Takeover Statute

Some provisions of Delaware law and our amended and restated certificate of incorporation and bylaws contain provisions that could make the following transactions more difficult:

acquisition of us by means of a tender offer;

acquisition of us by means of a proxy contest or otherwise; or

removal of our incumbent officers and directors.

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Those provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids and to promote stability in our management. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors.

Amended and Restated Certificate of Incorporation and Bylaws

Our amended and restated certificate of incorporation and our bylaws provide for the following:

Undesignated Preferred Stock. The ability to authorize undesignated preferred stock makes it possible for our board of directors to issue one or more series of preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of our company. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Stockholder Meetings. Our bylaws provide that in general a special meeting of stockholders may be called only by our board of directors, its chairman or our president.

Requirements for Advance Notification of Stockholder Nominations and Proposals. Our bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of our board of directors or a committee of the board of directors.

Board Classification. Our board of directors is divided into three classes. The directors in each class are elected to serve for a three-year term, one class being elected each year by our stockholders. This system of electing and removing directors may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Limits on Ability of Stockholders to Act by Written Consent. We have provided in our bylaws that our stockholders may not act by written consent. This limit on the ability of our stockholders to act by written consent may lengthen the amount of time required to take stockholder actions. As a result, a holder controlling a majority of our capital stock would not be able to amend our bylaws or remove directors without holding a meeting of our stockholders called in accordance with our bylaws.

Amendment of Certificate of Incorporation and Bylaws. The amendment of the above provisions of our amended and restated certificate of incorporation and bylaws requires approval by holders of at least two-thirds of our outstanding capital stock entitled to vote generally in the election of directors.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging, under certain

circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not for determining the outstanding voting stock owned by the interested stockholder, (i) shares owned by persons who are directors and also officers, and (ii) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

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at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock.

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DESCRIPTION OF THE DEPOSITARY SHARES

General

At our option, we may elect to offer fractional shares of preferred stock, rather than full shares of preferred stock. If we do elect to offer fractional shares of preferred stock, we will issue receipts for depositary shares and each of these depositary shares will represent a fraction of a share of a particular series of preferred stock, as specified in the applicable prospectus supplement. Each owner of a depositary share will be entitled, in proportion to the applicable fractional interest in shares of preferred stock underlying that depositary share, to all rights and preferences of the preferred stock underlying that depositary share. These rights may include dividend, voting, redemption and liquidation rights.

The shares of preferred stock underlying the depositary shares will be deposited with a bank or trust company selected by us to act as depositary, under a deposit agreement by and among us, the depositary and the holders of the depositary receipts. The depositary will be the transfer agent, registrar and dividend disbursing agent for the depositary shares.

The depositary shares will be evidenced by depositary receipts issued pursuant to the depositary agreement. Holders of depositary receipts agree to be bound by the deposit agreement, which requires holders to take certain actions such as filing proof of residence and paying certain charges.

The summary of terms of the depositary shares contained in this prospectus is not complete, and is subject to modification in any prospectus supplement for any issuance of depositary shares. You should refer to the forms of the deposit agreement, our amended and restated certificate of incorporation and the certificate of designation that are, or will be, filed with the SEC for the applicable series of preferred stock.

Dividends

The depositary will distribute cash dividends or other cash distributions, if any, received in respect of the series of preferred stock underlying the depositary shares to the record holders of depositary receipts in proportion to the number of depositary shares owned by those holders on the relevant record date. The relevant record date for depositary shares will be the same date as the record date for the preferred stock.

In the event of a distribution other than in cash, the depositary will distribute property received by it to the record holders of depositary receipts that are entitled to receive the distribution, unless the depositary determines that it is not feasible to make the distribution. If this occurs, the depositary, with our approval, may adopt another method for the distribution, including selling the property and distributing the net proceeds to the holders.

Liquidation preference

If a series of preferred stock underlying the depositary shares has a liquidation preference, in the event of our voluntary or involuntary liquidation, dissolution or winding up, holders of depositary shares will be entitled to receive the fraction of the liquidation preference accorded each share of the applicable series of preferred stock, as set forth in the applicable prospectus supplement.

Redemption

If a series of preferred stock underlying the depositary shares is subject to redemption, the depositary shares will be redeemed from the proceeds received by the depositary resulting from the redemption, in whole or in part, of the preferred stock held by the depositary. Whenever we redeem any preferred stock held by the depositary, the depositary will redeem, as of the same redemption date, the number of depositary shares representing the preferred stock so redeemed. The depositary will mail the notice of redemption to the record holders of the

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depository receipts promptly upon receiving the notice from us and not fewer than 20 or more than 60 days, unless otherwise provided in the applicable prospectus supplement, prior to the date fixed for redemption of the preferred stock.

Voting

Upon receipt of notice of any meeting at which the holders of preferred stock are entitled to vote, the depository will mail the information contained in the notice of meeting to the record holders of the depository receipts underlying the preferred stock. Each record holder of those depository receipts on the record date will be entitled to instruct the depository as to the exercise of the voting rights pertaining to the amount of preferred stock underlying that holder's depository shares. The record date for the depository will be the same date as the record date for the preferred stock. The depository will, to the extent practicable, vote the preferred stock underlying the depository shares in accordance with these instructions. We will agree to take all action that may be deemed necessary by the depository in order to enable the depository to vote the preferred stock in accordance with these instructions. The depository will not vote the preferred stock to the extent that it does not receive specific instructions from the holders of depository receipts.

Withdrawal of preferred stock

Owners of depository shares will be entitled to receive upon surrender of depository receipts at the principal office of the depository and payment of any unpaid amount due to the depository, the number of whole shares of preferred stock underlying their depository shares.

Partial shares of preferred stock will not be issued. Holders of preferred stock will not be entitled to deposit the shares under the deposit agreement or to receive depository receipts evidencing depository shares for the preferred stock.

Amendment and termination of the deposit agreement

The form of depository receipt evidencing the depository shares and any provision of the deposit agreement may be amended by agreement between the depository and us. However, any amendment which materially and adversely alters the rights of the holders of depository shares, other than fee changes, will not be effective unless the amendment has been approved by at least a majority of the outstanding depository shares. The deposit agreement may be terminated by the depository or us only if:

all outstanding depository shares have been redeemed; or

there has been a final distribution of the preferred stock in connection with our dissolution and such distribution has been made to all the holders of depository shares.

Charges of depository

We will pay all transfer and other taxes and governmental charges arising solely from the existence of the depository arrangement. We will also pay charges of the depository in connection with:

the initial deposit of the preferred stock;

the initial issuance of the depositary shares;

any redemption of the preferred stock; and

all withdrawals of preferred stock by owners of depositary shares.

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Holders of depositary receipts will pay transfer, income and other taxes and governmental charges and other specified charges as provided in the deposit agreement for their accounts. If these charges have not been paid, the depositary may:

refuse to transfer depositary shares;

withhold dividends and distributions; and

sell the depositary shares evidenced by the depositary receipt.

Miscellaneous

The depositary will forward to the holders of depositary receipts all reports and communications we deliver to the depositary that we are required to furnish to the holders of the preferred stock. In addition, the depositary will make available for inspection by holders of depositary receipts at the principal office of the depositary, and at such other places as it may from time to time deem advisable, any reports and communications we deliver to the depositary as the holder of preferred stock.

Neither the depositary nor we will be liable if either the depositary or we are prevented or delayed by law or any circumstance beyond the control of either the depositary or us in performing our respective obligations under the deposit agreement. Our obligations and the depositary's obligations will be limited to the performance in good faith of our or the depositary's respective duties under the deposit agreement. Neither the depositary nor we will be obligated to prosecute or defend any legal proceeding in respect of any depositary shares or preferred stock unless satisfactory indemnity is furnished. The depositary and we may rely on:

written advice of counsel or accountants;

information provided by holders of depositary receipts or other persons believed in good faith to be competent to give such information; and

documents believed to be genuine and to have been signed or presented by the proper party or parties.

Resignation and removal of depositary

The depositary may resign at any time by delivering a notice to us. We may remove the depositary at any time. Any such resignation or removal will take effect upon the appointment of a successor depositary and its acceptance of such appointment. The successor depositary must be appointed within 60 days after delivery of the notice for resignation or removal. The successor depositary must be a bank and trust company having its principal office in the United States of America and having a combined capital and surplus of at least \$50,000,000.

Federal income tax consequences

Owners of the depositary shares will be treated for U.S. federal income tax purposes as if they were owners of the preferred stock underlying the depositary shares. As a result, owners will be entitled to take into account for U.S. federal income tax purposes and deductions to which they would be entitled if they were holders of such preferred stock. No gain or loss will be recognized for U.S. federal income tax purposes upon the withdrawal of preferred stock in exchange for depositary shares. The tax basis of each share of preferred stock to an exchanging owner of depositary shares will, upon such exchange, be the same as the aggregate tax basis of the depositary shares exchanged. The holding period for preferred stock in the hands of an exchanging owner of depositary shares will include the period during which such person owned such depositary shares.

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DESCRIPTION OF THE WARRANTS

General

We may issue warrants for the purchase of our debt securities, preferred stock or common stock, or any combination thereof. Warrants may be issued independently or together with our debt securities, preferred stock or common stock and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the warrants. The warrant agent will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. This summary of certain provisions of the warrants is not complete. For the terms of a particular series of warrants, you should refer to the prospectus supplement for that series of warrants and the warrant agreement for that particular series.

Debt warrants

The prospectus supplement relating to a particular issue of warrants to purchase debt securities will describe the terms of the debt warrants, including the following:

the title of the debt warrants;

the offering price for the debt warrants, if any;

the aggregate number of the debt warrants;

the designation and terms of the debt securities, including any conversion rights, purchasable upon exercise of the debt warrants;

if applicable, the date from and after which the debt warrants and any debt securities issued with them will be separately transferable;

the principal amount of debt securities that may be purchased upon exercise of a debt warrant and the exercise price for the warrants, which may be payable in cash, securities or other property;

the dates on which the right to exercise the debt warrants will commence and expire;

if applicable, the minimum or maximum amount of the debt warrants that may be exercised at any one time;

whether the debt warrants represented by the debt warrant certificates or debt securities that may be issued upon exercise of the debt warrants will be issued in registered or bearer form;

information with respect to book-entry procedures, if any; the currency or currency units in which the offering price, if any, and the exercise price are payable;

if applicable, a discussion of material U.S. federal income tax considerations;

the antidilution provisions of the debt warrants, if any;

the redemption or call provisions, if any, applicable to the debt warrants;

any provisions with respect to the holder's right to require us to repurchase the debt warrants upon a change in control or similar event; and

any additional terms of the debt warrants, including procedures, and limitations relating to the exchange, exercise and settlement of the debt warrants.

Debt warrant certificates will be exchangeable for new debt warrant certificates of different denominations. Debt warrants may be exercised at the corporate trust office of the warrant agent or any other office indicated in

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the prospectus supplement. Prior to the exercise of their debt warrants, holders of debt warrants will not have any of the rights of holders of the debt securities purchasable upon exercise and will not be entitled to payment of principal or any premium, if any, or interest on the debt securities purchasable upon exercise.

Equity warrants

The prospectus supplement relating to a particular series of warrants to purchase our common stock or preferred stock will describe the terms of the warrants, including the following:

the title of the warrants;

the offering price for the warrants, if any;

the aggregate number of warrants;

the designation and terms of the common stock or preferred stock that may be purchased upon exercise of the warrants;

if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each security;

if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;

the number of shares of common stock or preferred stock that may be purchased upon exercise of a warrant and the exercise price for the warrants;

the dates on which the right to exercise the warrants shall commence and expire;

if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;

the currency or currency units in which the offering price, if any, and the exercise price are payable;

if applicable, a discussion of material U.S. federal income tax considerations;

the antidilution provisions of the warrants, if any;

the redemption or call provisions, if any, applicable to the warrants;

any provisions with respect to the holder's right to require us to repurchase the warrants upon a change in control or similar event; and

any additional terms of the warrants, including procedures, and limitations relating to the exchange, exercise and settlement of the warrants.

Holders of equity warrants will not be entitled:

to vote, consent or receive dividends;

receive notice as stockholders with respect to any meeting of stockholders for the election of our directors or any other matter; or

exercise any rights as stockholders of us.

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DESCRIPTION OF THE DEBT SECURITIES

The debt securities may be either secured or unsecured and will either be our senior debt securities or our subordinated debt securities. The debt securities will be issued under one or more separate indentures between us and a trustee to be specified in an accompanying prospectus supplement. Senior debt securities will be issued under a senior indenture and subordinated debt securities will be issued under a subordinated indenture. Together, the senior indenture and the subordinated indenture are called indentures in this description. This prospectus, together with the applicable prospectus supplement, will describe the terms of a particular series of debt securities.

The following is a summary of selected provisions and definitions of the indentures and debt securities to which any prospectus supplement may relate. The summary of selected provisions of the indentures and the debt securities appearing below is not complete and is subject to, and qualified entirely by reference to, all of the provisions of the applicable indenture and certificates evidencing the applicable debt securities. For additional information, you should look at the applicable indenture and the certificate evidencing the applicable debt security that is filed as an exhibit to the registration statement that includes the prospectus. In this description of the debt securities, the words we, us, or our refer only to Pacific Biosciences of California, Inc. and not to any of our subsidiaries, unless we expressly state or the context otherwise requires.

The following description sets forth selected general terms and provisions of the applicable indenture and debt securities to which any prospectus supplement may relate. Other specific terms of the applicable indenture and debt securities will be described in the applicable prospectus supplement. If any particular terms of the indenture or debt securities described in a prospectus supplement differ from any of the terms described below, then the terms described below will be deemed to have been superseded by that prospectus supplement.

General

Debt securities may be issued in separate series without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the debt securities of any series.

We are not limited as to the amount of debt securities we may issue under the indentures. Unless otherwise provided in a prospectus supplement, a series of debt securities may be reopened to issue additional debt securities of such series.

The prospectus supplement relating to a particular series of debt securities will set forth:

whether the debt securities are senior or subordinated;

the offering price;

the title;

any limit on the aggregate principal amount;

the person who shall be entitled to receive interest, if other than the record holder on the record date;

the date or dates the principal will be payable;

the interest rate or rates, which may be fixed or variable, if any, the date from which interest will accrue, the interest payment dates and the regular record dates, or the method for calculating the dates and rates;

the place where payments may be made;

any mandatory or optional redemption provisions or sinking fund provisions and any applicable redemption or purchase prices associated with these provisions;

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if issued other than in denominations of U.S. \$1,000 or any multiple of U.S. \$1,000, the denominations in which the debt securities shall be issuable;

if applicable, the method for determining how the principal, premium, if any, or interest will be calculated by reference to an index or formula;

if other than U.S. currency, the currency or currency units in which principal, premium, if any, or interest will be payable and whether we or a holder may elect payment to be made in a different currency;

the portion of the principal amount that will be payable upon acceleration of maturity, if other than the entire principal amount;

if the principal amount payable at stated maturity will not be determinable as of any date prior to stated maturity, the amount or method for determining the amount which will be deemed to be the principal amount;

if applicable, whether the debt securities shall be subject to the defeasance provisions described below under Satisfaction and discharge; defeasance or such other defeasance provisions specified in the applicable prospectus supplement for the debt securities;

any conversion or exchange provisions;

whether the debt securities will be issuable in the form of a global security;

the deletion, addition or change in any event of default;

any change or modification to the subordination provisions applicable to the subordinated debt securities if different from those described below under Subordinated debt securities ;

any deletion, addition or change in the covenants set forth in the indenture;

any paying agents, authenticating agents, security registrars or other agents for the debt securities, if other than the trustee;

any provisions relating to any security provided for the debt securities, including any provisions regarding the circumstances under which collateral may be released or substituted;

any provisions relating to guaranties for the securities and any circumstances under which there may be additional obligors;

any provisions granting special rights to holders when a specified event occurs;

any special tax provisions that apply to the debt securities;

with respect to any debt securities that do not bear interest, the dates for certain required reports to the applicable trustee;

any and all additional, eliminated or changed terms that will apply to the debt securities; and

any other terms of such debt securities.

Unless otherwise specified in the prospectus supplement, the debt securities will be registered debt securities. Debt securities may be sold at a substantial discount below their stated principal amount, bearing no interest or interest at a rate which at time of issuance is below market rates. The U.S. federal income tax considerations applicable to debt securities sold at a discount will be described in the applicable prospectus supplement.

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Exchange and transfer

Debt securities may be transferred or exchanged at the office of the security registrar or at the office of any transfer agent designated by us.

We will not impose a service charge for any transfer or exchange, but we may require holders to pay any tax or other governmental charges associated with any transfer or exchange.

In the event of any partial redemption of debt securities of any series, we will not be required to:

issue, register the transfer of, or exchange, any debt security of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption and ending at the close of business on the day of the mailing; or

register the transfer of or exchange any debt security of that series selected for redemption, in whole or in part, except the unredeemed portion being redeemed in part.

We will appoint the trustee as the initial security registrar. Any transfer agent, in addition to the security registrar initially designated by us, will be named in the prospectus supplement. We may designate additional transfer agents or change transfer agents or change the office of the transfer agent. However, we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

Global securities

The debt securities of any series may be represented, in whole or in part, by one or more global securities. Each global security will:

be registered in the name of a depository, or its nominee, that we will identify in a prospectus supplement;

be deposited with the depository or nominee or custodian; and

bear any required legends.

No global security may be exchanged in whole or in part for debt securities registered in the name of any person other than the depository or any nominee unless:

the depository has notified us that it is unwilling or unable to continue as depository or has ceased to be qualified to act as depository;

an event of default is continuing with respect to the debt securities of the applicable series; or

any other circumstance described in a prospectus supplement has occurred permitting or requiring the issuance of any such security.

As long as the depositary, or its nominee, is the registered owner of a global security, the depositary or nominee will be considered the sole owner and holder of the debt securities represented by the global security for all purposes under the indentures. Except in the above limited circumstances, owners of beneficial interests in a global security will not be:

entitled to have the debt securities registered in their names;

entitled to physical delivery of certificated debt securities; or

considered to be holders of those debt securities under the indenture.

Payments on a global security will be made to the depositary or its nominee as the holder of the global security. Some jurisdictions have laws that require that certain purchasers of securities take physical delivery of

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such securities in definitive form. These laws may impair the ability to transfer beneficial interests in a global security.

Institutions that have accounts with the depositary or its nominee are referred to as participants. Ownership of beneficial interests in a global security will be limited to participants and to persons that may hold beneficial interests through participants. The depositary will credit, on its book-entry registration and transfer system, the respective principal amounts of debt securities represented by the global security to the accounts of its participants.

Ownership of beneficial interests in a global security will be shown on and effected through records maintained by the depositary, with respect to participants' interests, or any participant, with respect to interests of persons held by participants on their behalf.

Payments, transfers and exchanges relating to beneficial interests in a global security will be subject to policies and procedures of the depositary. The depositary policies and procedures may change from time to time. Neither any trustee nor we will have any responsibility or liability for the depositary's or any participant's records with respect to beneficial interests in a global security.

Payment and paying agents

Unless otherwise indicated in a prospectus supplement, the provisions described in this paragraph will apply to the debt securities. Payment of interest on a debt security on any interest payment date will be made to the person in whose name the debt security is registered at the close of business on the regular record date. Payment on debt securities of a particular series will be payable at the office of a paying agent or paying agents designated by us. However, at our option, we may pay interest by mailing a check to the record holder. The trustee will be designated as our initial paying agent.

We may also name any other paying agents in a prospectus supplement. We may designate additional paying agents, change paying agents or change the office of any paying agent. However, we will be required to maintain a paying agent in each place of payment for the debt securities of a particular series.

All moneys paid by us to a paying agent for payment on any debt security that remain unclaimed for a period ending the earlier of:

10 business days prior to the date the money would be turned over to the applicable state; or

at the end of two years after such payment was due,
will be repaid to us thereafter. The holder may look only to us for such payment.

No protection in the event of a change of control

Unless otherwise indicated in a prospectus supplement with respect to a particular series of debt securities, the debt securities will not contain any provisions that may afford holders of the debt securities protection in the event we have a change in control or in the event of a highly leveraged transaction, whether or not such transaction results in a change in control.

Covenants

Unless otherwise indicated in a prospectus supplement with respect to a particular series of debt securities, the debt securities will not contain any financial or restrictive covenants.

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Consolidation, merger and sale of assets

Unless we indicate otherwise in a prospectus supplement with respect to a particular series of debt securities, we may not consolidate with or merge into any other person (other than one of our subsidiaries), in a transaction in which we are not the surviving corporation, or convey, transfer or lease our properties and assets substantially as an entirety to, any person (other than one of our subsidiaries), unless:

the successor entity, if any, is a U.S. corporation, limited liability company, partnership, trust or other business entity;

the successor entity assumes our obligations on the debt securities and under the indentures;

immediately after giving effect to the transaction, no default or event of default shall have occurred and be continuing; and

certain other conditions specified in the indenture are met.

Events of default

Unless we indicate otherwise in a prospectus supplement, the following will be events of default for any series of debt securities under the indentures:

- (1) we fail to pay principal of or any premium on any debt security of that series when due;
- (2) we fail to pay any interest on any debt security of that series for 30 days after it becomes due;
- (3) we fail to deposit any sinking fund payment when due;
- (4) we fail to perform any other covenant in the indenture and such failure continues for 90 days after we are given the notice required in the indentures; and
- (5) certain events involving our bankruptcy, insolvency or reorganization.

Additional or different events of default applicable to a series of debt securities may be described in a prospectus supplement. An event of default of one series of debt securities is not necessarily an event of default for any other series of debt securities.

The trustee may withhold notice to the holders of any default, except defaults in the payment of principal, premium, if any, interest, any sinking fund installment on, or with respect to any conversion right of, the debt securities of such

series. However, the trustee must consider it to be in the interest of the holders of the debt securities of such series to withhold this notice.

Unless we indicate otherwise in a prospectus supplement, if an event of default, other than an event of default described in clause (5) above, shall occur and be continuing with respect to any series of debt securities, either the trustee or the holders of at least 25 percent in aggregate principal amount of the outstanding securities of that series may declare the principal amount and premium, if any, of the debt securities of that series, or if any debt securities of that series are original issue discount securities, such other amount as may be specified in the applicable prospectus supplement, in each case together with accrued and unpaid interest, if any, thereon, to be due and payable immediately.

Unless we indicate otherwise in a prospectus supplement, if an event of default described in clause (5) above shall occur, the principal amount and premium, if any, of all the debt securities of that series, or if any debt securities of that series are original issue discount securities, such other amount as may be specified in the applicable prospectus supplement, in each case together with accrued and unpaid interest, if any, thereon, will automatically become immediately due and payable. Any payment by us on the subordinated debt securities following any such acceleration will be subject to the subordination provisions described below under Subordinated debt securities.

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Notwithstanding the foregoing, each indenture will provide that we may, at our option, elect that the sole remedy for an event of default relating to our failure to comply with our obligations described under the section entitled Reports below or our failure to comply with the requirements of Section 314(a)(1) of the Trust Indenture Act will for the first 360 days after the occurrence of such an event of default consist exclusively of the right to receive additional interest on the relevant series of debt securities at an annual rate equal to (i) 0.25% of the principal amount of such series of debt securities for the first 180 days after the occurrence of such event of default and (ii) 0.50% of the principal amount of such series of debt securities from the 181st day to, and including, the 360th day after the occurrence of such event of default, which we call additional interest. If we so elect, the additional interest will accrue on all outstanding debt securities from and including the date on which such event of default first occurs until such violation is cured or waived and shall be payable on each relevant interest payment date to holders of record on the regular record date immediately preceding the interest payment date. On the 361st day after such event of default (if such violation is not cured or waived prior to such 361st day), the debt securities will be subject to acceleration as provided above. In the event we do not elect to pay additional interest upon any such event of default in accordance with this paragraph, the debt securities will be subject to acceleration as provided above.

In order to elect to pay the additional interest as the sole remedy during the first 360 days after the occurrence of any event of default relating to the failure to comply with the reporting obligations in accordance with the preceding paragraph, we must notify all holders of debt securities and the trustee and paying agent of such election prior to the close of business on the first business day following the date on which such event of default occurs. Upon our failure to timely give such notice or pay the additional interest, the debt securities will be immediately subject to acceleration as provided above.

After acceleration, the holders of a majority in aggregate principal amount of the outstanding securities of that series may, under certain circumstances, rescind and annul such acceleration if all events of default, other than the non-payment of accelerated principal, or other specified amounts or interest, have been cured or waived.

Other than the duty to act with the required care during an event of default, the trustee will not be obligated to exercise any of its rights or powers at the request of the holders unless the holders shall have offered to the trustee reasonable indemnity. Generally, the holders of a majority in aggregate principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee.

A holder of debt securities of any series will not have any right to institute any proceeding under the indentures, or for the appointment of a receiver or a trustee, or for any other remedy under the indentures, unless:

- (1) the holder has previously given to the trustee written notice of a continuing event of default with respect to the debt securities of that series;
- (2) the holders of at least 25 percent in aggregate principal amount of the outstanding debt securities of that series have made a written request and have offered reasonable indemnity to the trustee to institute the proceeding; and
- (3) the trustee has failed to institute the proceeding and has not received direction inconsistent with the original request from the holders of a majority in aggregate principal amount of the outstanding debt securities of that

series within 60 days after the original request.

Holders may, however, sue to enforce the payment of principal, premium or interest on any debt security on or after the due date or to enforce the right, if any, to convert any debt security (if the debt security is convertible) without following the procedures listed in (1) through (3) above.

We will furnish the trustee an annual statement from our officers as to whether or not we are in default in the performance of the conditions and covenants under the indenture and, if so, specifying all known defaults.

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Modification and waiver

Unless we indicate otherwise in a prospectus supplement, the applicable trustee and we may make modifications and amendments to an indenture with the consent of the holders of a majority in aggregate principal amount of the outstanding securities of each series affected by the modification or amendment.

We may also make modifications and amendments to the indentures for the benefit of holders without their consent, for certain purposes including, but not limited to:

to evidence the succession of another person to Pacific Biosciences, or successive successions, and the assumption by any such successor of the covenants of Pacific Biosciences in the indentures;

adding covenants under the indentures;

adding events of default under the indentures;

making certain changes to facilitate the issuance of the debt securities;

to add to, change or eliminate any of the provisions of the indentures or more series of securities, provided that any such addition, change or elimination (A) shall neither (i) apply to any security of any series created prior to the execution of such supplemental indenture and entitled to the benefit of such provision nor (ii) modify the rights of the holder of any such security with respect to such provision or (B) shall become effective only when there is no such security outstanding;

securing the debt securities;

providing for guaranties of, or additional obligors on, the debt securities;

to establish the form or term of debt securities as permitted by the indentures;

providing for a successor trustee or additional trustees;

conforming the indenture to the description of the debt securities set forth in this prospectus or the accompanying prospectus supplement;

curing any ambiguity, defect or inconsistency; provided that such action shall not adversely affect the interest of the holders in any material respect;

permitting or facilitating the defeasance and discharge of the debt securities;

make such other provisions in regard to matters or questions arising under the indentures or under any supplemental indentures as our board of directors may deem necessary or desirable, and which does not in each case adversely affect the interests of the holders of the debt securities of a series; and

comply with requirements of the SEC in order to effect or maintain the qualifications of the indentures under the Trust Indenture Act of 1939, as amended.

However, neither the trustee nor we may make any modification or amendment without the consent of the holder of each outstanding security of that series affected by the modification or amendment if such modification or amendment would:

change the stated maturity of the principal of, or any installment of principal or interest on, any debt security;

reduce the principal, premium, if any, or interest on any debt security or any amount payable upon redemption or repurchase, whether at our option or the option of any holder, or reduce the amount of any sinking fund payments;

reduce the principal of an original issue discount security or any other debt security payable on acceleration of maturity;

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change the place of payment or the currency in which any debt security is payable;

impair the right to enforce any payment after the stated maturity or redemption date;

if subordinated debt securities, modify the subordination provisions in a materially adverse manner to the holders;

adversely affect the right to convert any debt security if the debt security is a convertible debt security; or

change the provisions in the indenture that relate to modifying or amending the indenture.

Satisfaction and discharge; defeasance

We may be discharged from our obligations on the debt securities, subject to limited exceptions, of any series that have matured or will mature or be redeemed within one year if we deposit enough money with the trustee to pay all the principal, interest and any premium due to the stated maturity date or redemption date of the debt securities.

Each indenture contains a provision that permits us to elect either or both of the following: