

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

**FORM S-3
REGISTRATION STATEMENT**

*UNDER
THE SECURITIES ACT OF 1933*

Pacific Biosciences of California, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

16-1590339
(I.R.S. Employer
Identification Number)

1305 O'Brien Drive
Menlo Park, California 94025
(650) 521-8000

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Christian O. Henry
President and Chief Executive Officer
Pacific Biosciences of California, Inc.
1305 O'Brien Drive
Menlo Park, California 94025
(650) 521-8000

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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From time to time after the effective date of this registration statement.

(Approximate date of commencement of proposed sale to the public)

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box:

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

Large accelerated filer	<input type="checkbox"/>		Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>		Smaller reporting company	<input checked="" type="checkbox"/>
			Emerging growth company	<input type="checkbox"/>

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

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered(1)	Proposed maximum offering price per share(2)	Proposed maximum aggregate offering price(2)	Amount of registration fee
Common Stock, par value \$0.001 per share	11,214,953 shares	\$27.19	\$304,934,572.07	\$33,268.36

(1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this Registration Statement also covers any additional shares of the registrant's common stock that become issuable by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of outstanding shares of common stock of the registrant.

(2) Estimated in accordance with Rule 457(c) solely for purposes of calculating the registration fee on the basis of the average of the high and low sale prices of the common stock of the registrant as reported on The Nasdaq Global Select Market on September 16, 2021.

PROSPECTUS



Pacific Biosciences of California, Inc.

11,214,953 Shares

Common Stock

This prospectus relates to the proposed resale or other disposition by the selling stockholders identified in this prospectus of up to an aggregate of 11,214,953 shares of common stock, par value \$0.001 per share (the “Common Stock”), of Pacific Biosciences of California, Inc. The shares being offered were issued and sold to accredited investors in a private placement (the “Private Placement”), which closed on September 20, 2021 and is more fully described in the section entitled “Prospectus Summary—Private Placement.”

The selling stockholders may offer and sell or otherwise dispose of the shares of Common Stock described in this prospectus from time to time through public or private transactions at fixed prices, at prevailing market prices, at prices related to prevailing market prices, at privately negotiated prices and/or at varying prices determined at the time of sale. The selling stockholders may sell shares directly or to or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the selling stockholders, the purchasers of the shares, or both. The selling stockholders will bear all underwriting fees, commissions, and discounts, if any, attributable to the sales of shares and any transfer taxes. We will bear all other costs, expenses, and fees in connection with the registration of the shares. The selling stockholders may sell any, all or none of the securities offered by this prospectus and we do not know when or in what amount the selling stockholders may sell their shares of common stock hereunder following the effective date of the registration statement of which this prospectus forms a part. See “Plan of Distribution” beginning on page 10 for more information about how the selling stockholders may sell or dispose of their shares of Common Stock.

We will not receive any proceeds from the sale of the shares by the selling stockholders.

Our Common Stock is listed on the Nasdaq Global Select Market (“Nasdaq”) under the symbol “PACB.” Each prospectus supplement will indicate whether the securities offered thereby will be listed on any securities exchange. On September 17, 2021, the closing sale price of our Common Stock on Nasdaq was \$29.44 per share.

Investing in these securities involves risks. Please carefully read the information under the headings “[Risk Factors](#)” beginning on page 6 of this prospectus and “Item 1A—Risk Factors” of our most recent report on Form 10-K or Form 10-Q that is incorporated by reference in this prospectus before you invest in our 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 September 20, 2021.

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Neither we nor any selling stockholders or the underwriters, if any, have authorized anyone to provide you with any information or to make any representation other than those contained in or incorporated by reference into this prospectus, any prospectus supplement or in any free writing prospectus that we may file with the Securities and Exchange Commission (the “SEC”) in connection with this offering. We do not, and any selling stockholders or the underwriters, if any, do not, take any responsibility for, and can provide no assurances as to, the reliability of any information that others may provide you. We are not offering to sell any securities in any jurisdiction where such offer and sale are not permitted. The information contained in or incorporated by reference into this prospectus or any prospectus supplement, free writing prospectus or other offering material is accurate only as of the date of those documents or information, regardless of the time of delivery of the documents or information or the time of any sale of the securities. Neither the delivery of this prospectus or any applicable prospectus supplement nor any distribution of securities pursuant to such documents shall, under any circumstances, create any implication that there has been no change in the information set forth in this prospectus or any applicable prospectus supplement or in our affairs since the date of this prospectus or any applicable prospectus supplement.

ABOUT THIS PROSPECTUS

This prospectus is part of an “automatic shelf” registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC, as a “well-known seasoned issuer” as defined in Rule 405 of the Securities Act of 1933, as amended. Under this shelf registration process, the selling stockholders may, from time to time, offer and sell shares of our Common Stock, as described in this prospectus, in one or more offerings.

You should read this prospectus and any prospectus supplement for a specific offering of securities, together with additional information described in the sections entitled “Where You Can Find More Information” and “Information Incorporated by Reference” below, before making an investment decision. You should rely only on the information contained in or incorporated by reference into this prospectus, any accompanying prospectus supplement or any free writing prospectus prepared by or on behalf of us to which we have referred you. If there is any inconsistency between this prospectus and the information contained in a prospectus supplement or any free writing prospectus, you should rely on the information in the prospectus supplement or such free writing prospectus prepared by or on behalf of us to which we have referred you.

We have not authorized anyone to provide you with information that is different from that contained in this prospectus (as supplemented and amended). We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus (as supplemented and amended) does not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in this prospectus or an offer to sell or the solicitation of an offer to buy any such securities in any circumstances in which such offer or solicitation is unlawful. This document may only be used where it is legal to sell these securities.

You should not assume that the information contained in this prospectus (as supplemented and amended) is accurate as of any dates other than their respective dates, regardless of the time of delivery of this prospectus or any sale of our Common Stock by the selling stockholders. Our business, financial condition, results of operations and prospects may have changed since the date on the front cover of this prospectus.

We urge you to read carefully this prospectus (as supplemented and amended) before deciding whether to purchase any of the shares of Common Stock being offered.

Unless we state otherwise or the context otherwise requires, references to “Pacific Biosciences,” “PacBio,” the “Company,” “us,” “we” or “our” in this prospectus mean Pacific Biosciences of California, Inc. and its consolidated subsidiaries. When we refer to “you” in this section, we mean all purchasers of the securities being offered by this prospectus and any accompanying prospectus supplement, whether they are the holders or only indirect owners of those 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, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. The words “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “expect,” “could,” “would,” “project,” “plan,” “potentially,” “likely,” 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 captioned “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and include statements regarding the intent, belief or current expectations of our management that are subject to known and unknown risks, uncertainties and assumptions. You are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, and that actual results may differ materially from those projected in the forward-looking statements as a result of various factors.

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.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and although we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted a thorough inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

This prospectus and the documents incorporated by reference in this prospectus may contain market data that we obtain from industry sources. These sources do not guarantee the accuracy or completeness of the information. Although we believe that our industry sources are reliable, we do not independently verify the information. The market data may include projections that are based on a number of other projections. While we believe these assumptions to be reasonable and sound as of the date of this prospectus, actual results may differ from the projections.

PROSPECTUS SUMMARY

This summary highlights selected information that is presented in greater detail elsewhere, or incorporated by reference, in this prospectus. It does not contain all of the information that may be important to you and your investment decision. Before investing in our securities, you should carefully read this entire prospectus, including the matters set forth under the section of this prospectus captioned “Risk Factors” and the financial statements and related notes and other information that we incorporate by reference herein, including our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q. Unless the context indicates otherwise, references in this prospectus to “Pacific Biosciences,” “PacBio,” “we,” “our” and “us” refer, collectively, to Pacific Biosciences of California, Inc., a Delaware corporation, and its subsidiaries taken as a whole.

Company 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 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.

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.

Private Placement

On July 19, 2021, the Company entered into a securities purchase agreement (the “Purchase Agreement”) with certain qualified institutional buyers and institutional accredited investors (the “Investors”), pursuant to which the Company agreed to sell to the Investors an aggregate of 11,214,953 shares of the Company’s common stock, par value \$0.001 per share (the “Shares”), at a price of \$26.75 per share, for aggregate gross proceeds to the Company of approximately \$300 million (the “Private Placement”).

THE OFFERING

Common stock offered by the selling securityholders	11,214,953 shares
Use of proceeds	All of the shares of Common Stock being offered under this prospectus are being sold by the selling stockholders. Accordingly, we will not receive any proceeds from the sale of these shares.
Risk Factors	See “Risk Factors” beginning on page 6 for a discussion of factors you should carefully consider before deciding to invest in our common stock.
Listing	Our Common Stock is listed on the Nasdaq Global Select Market under the symbol “PACB.”

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 section in the applicable prospectus supplement captioned “Risk Factors,” 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 “Part I—Item 1A—Risk Factors” of our most recent Annual Report on Form 10-K and in “Part II—Item 1A—Risk Factors” in our most recent Quarterly Report on Form 10-Q filed subsequent to such Form 10-K, each of which are incorporated herein by reference, as may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. 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.

USE OF PROCEEDS

All shares of Common Stock sold pursuant to this prospectus will be sold by the selling stockholders. We will not receive any of the proceeds from such sales. The selling stockholders will bear all underwriting fees, commissions, and discounts, if any, attributable to the sales of shares and any transfer taxes. We will bear all other costs, expenses, and fees in connection with the registration of the Common Stock.

DESCRIPTION OF CAPITAL STOCK

The description of our capital stock is incorporated by reference to Exhibit 4.2 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, filed with the SEC on February 26, 2021.

SELLING STOCKHOLDERS

Up to 11,214,953 shares of Common Stock are being offered by this prospectus, all of which are being offered for resale for the account of the selling stockholders. The shares being offered were issued to the selling stockholders in the Private Placement. The selling stockholders may, from time to time, offer and sell pursuant to this prospectus any or all of the shares of Common Stock being registered. When we refer to the “selling stockholders” in this prospectus, we mean the selling stockholders listed in the table below, together with their respective transferees, pledgees, donees or other successors.

The table below sets forth certain information known to us, based upon written representations from the selling stockholders, with respect to the beneficial ownership of our shares of Common Stock beneficially held by the selling stockholders as of September 20, 2021. We have not independently verified this information. Because the selling stockholders may sell, transfer or otherwise dispose of all, some or none of the shares of our Common Stock covered by this prospectus, we cannot determine the number of such shares that will be sold, transferred or otherwise disposed of by the selling stockholders, or the amount or percentage of shares of our Common Stock that will be held by the selling stockholders upon termination of any particular offering. See the section of this prospectus captioned “Plan of Distribution” for additional information. For purposes of the table below, we assume that the selling stockholders will sell all their shares of Common Stock covered by this prospectus.

In the table below, the percentage of shares beneficially owned is based on 199,197,784 shares of our Common Stock outstanding on August 31, 2021, determined in accordance with Rule 13d-3 under the Exchange Act of 1934, as amended. Under such rule, beneficial ownership includes any shares over which the selling stockholder has sole or shared voting power or investment power and also any shares that the selling stockholder has the right to acquire within 60 days of such date through the exercise of any options or other rights. Except as otherwise indicated, we believe that the selling stockholders have sole voting and investment power with respect to all shares of the Common Stock shown as beneficially owned by them. The beneficial ownership information presented in this table is not necessarily indicative of beneficial ownership for any other purpose.

<u>Name of Selling Stockholder(1)</u>	<u>Prior to the Offering</u>		<u>Number of Shares of Common Stock Being Registered For Resale</u>	<u>After the Offering</u>	
	<u>Number of Shares of Common Stock Beneficially Owned</u>	<u>Percent of Shares of Common Stock Outstanding</u>		<u>Shares Beneficially Owned After the Offering</u>	<u>Percent of Shares of Common Stock Outstanding</u>
Casdin Partners Master Fund, L.P.(2)	7,990,652	3.8%	2,990,652	5,000,000	2.4%
Entities advised by Capital Research and Management Company(3)	14,784,127	7.0%	2,616,823	12,167,304	5.8%
Entities affiliated with Baker Bros. Advisors LP(4)	5,444,963	2.6%	2,242,991	3,201,972	1.5%
SB Northstar LP(5)	8,156,107	3.9%	2,242,991	5,913,116	2.8%
Entities advised or sub advised by T. Rowe Price Associates(6)	1,121,496	*	1,121,496	—	—

* Represents less than 1%

- (1) Information concerning the named selling stockholder or future transferees, pledgees, assignees, distributees, donees or successors of or from the selling stockholder or others who later hold the selling stockholder’s interests will be set forth in supplements to this prospectus, absent circumstances indicating that the change is not material. In addition, post-effective amendments to the registration statement of which this prospectus forms a part will be filed to disclose any material changes to the plan of distribution from the description in this prospectus.
- (2) The shares reflected as beneficially owned by Casdin Partners Master Fund, LP in the table above consist of 7,990,652 shares of Common Stock. Such securities are owned directly by Casdin Partners Master Fund, LP

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and may be deemed to be indirectly beneficially owned by (i) Casdin Capital, LLC, the investment adviser to Casdin Partners Master Fund, LP, (ii) Casdin Partners GP, LLC, the general partner of Casdin Partners Master Fund LP, and (iii) Eli Casdin, the managing member of Casdin Capital, LLC and Casdin Partners GP, LLC. Each of Casdin Capital, LLC, Casdin Partners GP, LLC and Eli Casdin disclaims beneficial ownership of such securities except to the extent of their respective pecuniary interest therein.

- (3) Consists of (i) 3,850,936 shares of Common Stock held by The Growth Fund of America (“GFA”), (ii) 1,140,379 shares of Common Stock held by American Funds Insurance Series—Growth Fund (“VIG”), (iii) 9,754,575 shares of Common Stock held by SMALLCAP World Fund, Inc. (“SCWF” and, together with GFA and VIG, the “CRMC Stockholders”), and (iv) 38,237 shares of Common Stock held by Capital Group Growth Fund of America Trust (US) (“TGFA”). Capital Research and Management Company (“CRMC”) is the investment adviser or subadviser for each CRMC Stockholder. Capital Bank and Trust Company (“CB&T”) is the discretionary trustee and investment adviser for TGFA, and CRMC has been retained by CB&T as investment adviser to TGFA. For purposes of the reporting requirements of the Exchange Act, CRMC, Capital International Investors (“CII”), and/or Capital World Investors (“CWI”) may be deemed to be the beneficial owner of the common shares held by each CRMC Stockholder; however, each of CRMC, CII and CWI expressly disclaims that each is, in fact, the beneficial owner of such securities. For purposes of the reporting requirements of the Exchange Act, CB&T, CRMC, CII and/or CWI may be deemed to be the beneficial owner of the common shares held by TGFA; however, each of CB&T, CRMC, CII and CWI expressly disclaims that it is, in fact, the beneficial owner of such securities. Christopher D. Buchbinder, Mark L. Casey, Barry S. Crosthwaite, J. Blair Frank, Joanna F. Jonsson, Carl M. Kawaja, Donald D. O’Neal, Anne-Marie Peterson, Alex Popa, Andraz Razen, Martin Romo, Lawrence R. Solomon, and Alan J. Wilson, as portfolio managers, have voting and investment powers over the shares held by GFA. Paul Benjamin, Mark L. Casey, Irfan M. Furniturewala, Anne-Marie Peterson, Andraz Razen, and Alan J. Wilson, as portfolio managers, have voting and investment powers over the shares held by VIG. Brady L. Enright, Julian N. Abdey, Jonathan Knowles, Gregory W. Wendt, Peter Eliot, Bradford F. Freer, Leo Hee, Roz Hongsaranagon, Harold H. La, Dimitrije Mitrinovic, Aidan O’Connell, Samir Parekh, Andraz Razen, Renaud H. Samyn, Michael Beckwith, and Arun Swaminathan, as portfolio managers, have voting and investment powers over the shares held by SCWF. Christopher D. Buchbinder, Mark L. Casey, Barry S. Crosthwaite, J. Blair Frank, Joanna F. Jonsson, Carl M. Kawaja, Donald D. O’Neal, Anne-Marie Peterson, Alex Popa, Andraz Razen, Martin Romo, Lawrence R. Solomon, and Alan J. Wilson, as portfolio managers, have voting and investment powers over the shares held by TGFA. The address for each of the CRMC Stockholders and TGFA is c/o Capital Research and Management Company, 333 S. Hope St., 50th Floor, Los Angeles, California 90071. Each of the CRMC Stockholders and TGFA acquired the securities being registered hereby in the ordinary course of its business.
- (4) Consists of 5,047,774 shares of Common Stock held by Baker Brothers Life Sciences, L.P. and 397,189 shares of Common Stock held by 667, L.P. (collectively referred to as the “Baker Funds”). Baker Bros. Advisors LP (“BBA”) is the investment adviser to the Baker Funds and has the sole voting and investment power with respect to the securities held by the Baker Funds and thus may be deemed to beneficially own such securities. Baker Bros. Advisors (GP) LLC (“BBA GP”) is the sole general partner of BBA and thus may be deemed to beneficially own the securities held by the Baker Funds. Julian C. Baker and Felix J. Baker are the sole managing members of BBA GP. Julian C. Baker, Felix J. Baker, BBA and BBA GP disclaim beneficial ownership of all shares held by Baker Funds, except to the extent of their indirect pecuniary interest therein. The principal business address of BBA is 860 Washington Street, 3rd Floor, New York, NY 10014.
- (5) In addition, SB Northstar LP beneficially owns \$900 million aggregate principal amount of the Company’s 1.5% Convertible Notes due 2028, which are convertible into 20,689,655 shares or cash, at our election. SB Management Limited is the investment manager of SB Northstar LP and as such may be deemed to have voting and investment power over the securities held by SB Northstar LP. SB Management Limited is owned by Softbank Group Corp. The principal business address of SB Northstar LP is 190 Elgin Avenue, George Town, Grand Cayman KY1-9008, Cayman Islands.
- (6) Consists of 505,896 shares of Common Stock held by T. Rowe Price Small-Cap Value Fund, Inc., 365,964 shares of Common Stock held by T. Rowe Price Health Sciences Fund, Inc., 186,509 shares of Common

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Stock held by T. Rowe Price U.S. Small-Cap Value Equity Trust, 31,223 shares of Common Stock held by TD Mutual Funds—TD Health Sciences Fund, 16,493 shares of Common Stock held by T. Rowe Price Health Sciences Portfolio, 9,419 shares of Common Stock held by T. Rowe Price U.S. Equities Trust, and 5,992 shares of Common Stock held by MassMutual Select Funds—MassMutual Select T. Rowe Price Small and Mid Cap Blend Fund (collectively referred to as the T. Rowe Funds”). T. Rowe Price Associates, Inc. (“TRPA”) serves as investment adviser or subadviser, as applicable, to the T. Rowe Funds with power to direct investments and/or sole power to vote the securities owned by the selling stockholder, as well as securities owned by certain other individual and institutional investors. For purposes of reporting requirements of the Exchange Act, TRPA may be deemed to be the beneficial owner of all of the shares held by the T. Rowe Funds; however, TRPA expressly disclaims that it is, in fact, the beneficial owner of such securities. TRPA is the wholly-owned subsidiary of T. Rowe Price Group, Inc., which is a publicly-traded financial services holding company. T. Rowe Price Investment Services, Inc. (“TRPIS”), a registered broker-dealer (and FINRA member), is a subsidiary of TRPA. TRPIS was formed primarily for the limited purpose of acting as the principal underwriter of shares of the funds in the T. Rowe Price fund family. TRPIS does not engage in underwriting or market-making activities involving individual securities. The address of the selling stockholder is c/o T. Rowe Price, Associates, Inc., 100 E. Pratt Street, Baltimore, MD 21202.

PLAN OF DISTRIBUTION

The selling stockholders, including their pledgees, donees, transferees, distributees, beneficiaries or other successors in interest, may from time to time offer some or all of the shares of Common Stock covered by this prospectus. To the extent required, this prospectus may be amended and supplemented from time to time to describe a specific plan of distribution.

The selling stockholders will not pay any of the costs, expenses and fees incurred in connection with the registration and sale of the shares of Common Stock covered by this prospectus, but will pay any and all underwriting discounts, selling commissions and stock transfer taxes, if any, attributable to sales of the shares of Common Stock. We will not receive any proceeds from the sale of the shares of Common Stock covered hereby.

The selling stockholders may sell the shares of Common Stock covered by this prospectus, as it may be amended and supplemented, from time to time, and may also decide not to sell all or any of the shares of Common Stock that they are allowed to sell under this prospectus. The selling stockholders will act independently of us in making decisions regarding the timing, manner and size of each sale. These dispositions may be at fixed prices, at market prices prevailing at the time of sale, at prices related to such prevailing market prices, at varying prices determined at the time of sale, or at privately negotiated prices. Sales may be made by the selling stockholders in one or more types of transactions, which may include:

- directly to one or more purchasers in privately negotiated transactions;
- in underwritten offerings;
- through ordinary brokerage transactions, or other transactions involving brokers, dealers or agents;
- on any national securities exchange or quotation service on which the shares of Common Stock may be listed or quoted at the time of the sale;
- in the over-the-counter market;
- through block trades in which the broker or dealer engaged to handle the block trade will attempt to sell the shares of Common Stock as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- through the writing or settlement of options or other hedging transactions (including the issuance by the selling stockholders of derivative securities), whether the options or such other derivative securities are listed on an options exchange or otherwise;
- through short sales;
- in hedging transactions;
- through a combination of any of the above methods of sale; or
- by any other method permitted pursuant to applicable law.

The shares of Common Stock may also be exchanged pursuant to this prospectus for satisfaction of the selling stockholders' obligations or other liabilities to their creditors. Such transactions may or may not involve brokers or dealers.

The prices at which the shares of Common Stock offered by this prospectus are sold may include:

- a fixed price or prices, which may be changed;
- prevailing market prices at the time of sale;
- prices related to prevailing market prices, including sales made directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents;

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- varying prices determined at the time of sale; or
- negotiated prices (which may vary from the prices at which the shares of Common Stock may trade).

Once sold under the shelf registration statement of which this prospectus forms a part, the shares of Common Stock will be freely tradeable in the hands of persons other than our affiliates. The selling stockholders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of Common Stock, and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of Common Stock from time to time under this prospectus, or under a supplement or amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee. The selling stockholders also may transfer the shares in other circumstances, in which case the donees, transferees, pledgees or other successors will be the selling beneficial owners for purposes of this prospectus.

To the extent required, this prospectus may be amended or supplemented under Rule 424(b) or other applicable provision of the Securities Act from time to time to describe a specific plan of distribution.

The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

The selling stockholders have informed us that, except as otherwise indicated in the table included in the section of this prospectus captioned “Selling Stockholders,” none of them has any agreement or understanding, directly or indirectly, with any person to distribute the shares covered by this prospectus. If any selling stockholder notifies us that a material arrangement has been entered into with a broker-dealer for the sale of shares through a block trade, special offering or secondary distribution or a purchase by a broker or dealer, we may be required to file a prospectus supplement pursuant to the applicable rules promulgated under the Securities Act.

The shares of Common Stock may be offered to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more of such firms. Unless otherwise set forth in the prospectus, the obligations of the underwriters or dealers to purchase the shares of Common Stock offered will be subject to certain conditions precedent and the underwriters or dealers will be obligated to purchase all of the offered shares of Common Stock if any are purchased. Any public offering price and any discount or concession allowed or re-allowed or paid by underwriters or dealers to other dealers may be changed from time to time.

If shares of Common Stock are sold through underwriters or broker-dealers, each selling stockholder will be responsible for underwriting discounts or commissions or agent’s commissions applicable to the sale of such selling stockholder’s shares Common Stock.

Each selling stockholder reserves the right to accept and, together with its agents, to reject, any proposed purchases of shares of Common Stock to be made directly or through agents.

The selling stockholders may be subject to the applicable provisions of Regulation M of the Exchange Act and the rules and regulations thereunder, which provisions may limit the timing of purchases and sales of any of the shares of Common Stock. Regulation M may also restrict the ability of any person engaged in the distribution of the shares of Common Stock to engage in market-making activities with respect to the shares of Common Stock. These restrictions may affect the marketability of such shares of Common Stock.

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In order to comply with the securities laws of certain states, if applicable, the shares of Common Stock may be sold in those jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states, the shares of Common Stock may not be sold unless they have been registered or qualified for sale in the state or an exemption from the registration or qualification requirement is available and complied with.

There can be no assurance that any selling stockholder will sell any or all of the shares of Common Stock registered pursuant to the shelf registration statement of which this prospectus forms a part.

We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities under the Securities Act or state securities laws unless such losses arise from written information furnished to us by the selling stockholders specifically for use in this prospectus, or the selling stockholders may be entitled to contribution. We may be indemnified by the selling stockholders against certain losses, claims, damages and liabilities under the Securities Act or state securities laws that may arise from written information furnished to us by the selling stockholders specifically for use in this prospectus.

We may restrict or suspend offers and sales or other dispositions of the shares under the shelf registration statement of which this prospectus forms a part from and after the effective date of the shelf registration statement of which this prospectus forms a part subject to certain terms and conditions. In the event of such restriction or suspension, the selling stockholders will not be able to offer or sell or otherwise dispose of the shares of Common Stock under the shelf registration statement.

If the selling stockholders use this prospectus for any sale of the shares of Common Stock, they will be subject to the prospectus delivery requirements of the Securities Act.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California. Additional legal matters may be passed on for us, or any underwriters, dealers or agents by counsel we will name in the applicable prospectus supplement.

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, 2020, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

The financial statements of Omniome, Inc. as of December 31, 2020 and 2019, and for each of the years in the two-year period ended December 31, 2020, have been incorporated by reference herein in reliance upon the report of KPMG LLP, independent auditors, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. The audit report covering the December 31, 2020 financial statements contains an explanatory paragraph that states that Omniome's recurring losses from operations raise substantial doubt about the entity's ability to continue as a going concern. The financial statements do not include any adjustments that might result from the outcome of that uncertainty.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current 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. Copies of certain information filed by us with the SEC are also available on our website at <https://www.pacb.com/>. Information accessible on or through our website is not a part of this prospectus.

This prospectus and any prospectus supplement is part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. You should review the information and exhibits in the registration statement for further information on us and our consolidated subsidiaries and the securities that we are offering. Forms of any documents establishing the terms of the offered securities are filed as exhibits to the registration statement of which this prospectus forms a part or under cover of a Current Report on Form 8-K and incorporated in this prospectus by reference. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should read the actual documents for a more complete description of the relevant matters.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference much of the information that we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated by reference in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below and any

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future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents furnished pursuant to Items 2.02 or 7.01 of any Current Report on Form 8-K and, except as may be noted in any such Form 8-K, exhibits filed on such form that are related to such information), until the offering of the securities under the registration statement of which this prospectus forms a part is terminated or completed:

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2020;
- the portions of our Definitive Proxy Statement on [Schedule 14A](#) (other than information furnished rather than filed) that are incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, filed with the SEC on April 30, 2021;
- our Quarterly Reports on Form 10-Q for the fiscal quarters ended [March 31, 2021](#) and [June 30, 2021](#);
- our Current Reports on Form 8-K filed on [January 8, 2021](#) (other than information furnished rather than filed), [January 13, 2021](#) (other than information furnished rather than filed), [February 9, 2021](#), [February 10, 2021](#), [February 17, 2021](#), [April 19, 2021](#), [April 27, 2021](#), [April 29, 2021](#) (other than information furnished rather than filed), [May 14, 2021](#), [June 17, 2021](#), [July 20, 2021](#) and [September 20, 2021](#); and
- The description of our Common Stock contained in the Registration Statement on [Form 8-A](#) relating thereto, filed on October 6, 2010, including any amendment or report filed for the purpose of updating such description.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

Pacific Biosciences of California, Inc.
1305 O'Brien Drive
Menlo Park, California 94025
Attn: Investor Relations
(650) 521-8000



PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution**

The following table sets forth estimated expenses in connection with the issuance and distribution of the securities being registered:

	Amount to be Paid
SEC registration fee	\$ 33,268.36
Accounting fees and expenses	7,500.00
Legal fees and expenses	15,000.00
Miscellaneous expenses	1,000.00
Total	<u>\$ 56,768.36</u>

* Estimate.

Item 15. Indemnification of Directors and Officers

Section 145 of the General Corporation Law of the State of Delaware empowers a corporation to indemnify its directors and officers and to purchase insurance with respect to liability arising out of their capacity or status as directors and officers, provided that the person acted in good faith and in a manner the person reasonably believed to be in our best interests, and, with respect to any criminal action, had no reasonable cause to believe the person's actions were unlawful. The General Corporation Law of the State of Delaware further provides that the indemnification permitted thereunder shall not be deemed exclusive of any other rights to which the directors and officers may be entitled under the corporation's bylaws, any agreement, a vote of stockholders or otherwise. Our certificate of incorporation provides for the indemnification of our directors and officers to the fullest extent permitted under the General Corporation Law of the State of Delaware. In addition, our bylaws require us to fully indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by reason of the fact that such person is or was our director or officer, or is or was serving at our request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, to the fullest extent permitted by applicable law.

Section 102(b)(7) of the General Corporation Law of the State of Delaware permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except (1) for any breach of the director's duty of loyalty to the corporation or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) for payments of unlawful dividends or unlawful stock repurchases or redemptions or (4) for any transaction from which the director derived an improper personal benefit. Our certificate of incorporation provides that our directors shall not be personally liable to the registrant or its stockholders for monetary damages for breach of fiduciary duty as a director and that if the General Corporation Law of the State of Delaware is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of our directors shall be eliminated or limited to the fullest extent permitted by the General Corporation Law of the State of Delaware, as so amended.

Section 174 of the General Corporation Law of the State of Delaware provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption may be held liable for such actions. A director who was either absent when the unlawful

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actions were approved, or dissented at the time, may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

Our policy is to enter into separate indemnification agreements with each of our directors and officers that provide the maximum indemnity allowed to directors and executive officers by Section 145 of the General Corporation Law of the State of Delaware and also to provide for certain additional procedural protections. We also maintain directors and officers insurance to insure such persons against certain liabilities.

These indemnification provisions and the indemnification agreements entered into between us and our officers and directors may be sufficiently broad to permit indemnification of our officers and directors for liabilities (including reimbursement of expenses incurred) arising under the Securities Act.

Item 16. Exhibits

<u>Exhibit No.</u>	<u>Exhibit Description</u>	<u>Incorporation by Reference</u>		
		<u>Form</u>	<u>Exhibit No.</u>	<u>Date</u>
1.1*	Underwriting Agreement	—	—	—
3.1	Amended and Restated Certificate of Incorporation	10-K	3.1	March 23, 2011
3.2	Second Amended and Restated Bylaws	8-K	3.1	November 5, 2018
4.1	Specimen Common Stock Certificate	S-1/A	4.1	October 1, 2010
4.2	Description of Registrant's securities registered under Section 12 of the Exchange Act	10-K	4.2	February 28, 2020
4.3	Registration Rights Agreement, dated as of July 19, 2021, by and between Pacific Biosciences of California, Inc. and each of the Investors	8-K	10.3	July 20, 2021
5.1	Opinion of Wilson Sonsini Goodrich & Rosati Professional Corporation			Filed herewith
10.1	Securities Purchase Agreement, dated as of July 19, 2021, by and between Pacific Biosciences of California, Inc. and each of the Investors	8-K	10.2	July 20, 2021
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm			Filed herewith
23.2	Consent of KPMG LLP, Independent Auditors of Omniome, Inc.			Filed herewith
23.3	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in the opinion filed as Exhibit 5.1 to this Registration Statement)			Filed herewith
24.1	Power of Attorney (included on the signature page to this Registration Statement)			Filed herewith

* To be filed by amendment or as an exhibit to a document to be incorporated by reference herein in connection with an offering of securities.

Item 17. Undertakings

(a) The undersigned registrant hereby undertakes:

(1) to file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission, or the Commission, pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) that, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) that, for the purpose of determining liability under the Securities Act to any purchaser:

(i) each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the

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registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) that, for the purpose of determining liability of a registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of such undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(6) that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(b) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Menlo Park, State of California, on September 20, 2021.

PACIFIC BIOSCIENCES OF CALIFORNIA, INC.

By: /s/ Susan G. Kim
Susan G. Kim
Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Christian O. Henry, Susan G. Kim and Brett Atkins, and each of them, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this registration statement, including post-effective amendments, and registration statements filed pursuant to Rule 462 under the Securities Act, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith and about the premises, as fully for all intents and purposes as they, he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or any of them, or their, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated:

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Christian O. Henry</u> Christian O. Henry	Director, Chief Executive Officer and President (Principal Executive Officer)	September 20, 2021
<u>/s/ Susan G. Kim</u> Susan G. Kim	Chief Financial Officer (Principal Financial Officer)	September 20, 2021
<u>/s/ Michele Farmer</u> Michele Farmer	Chief Accounting Officer (Principal Accounting Officer)	September 20, 2021
<u>/s/ John Milligan</u> John F. Milligan	Chairman of the Board of Directors	September 20, 2021
<u>/s/ David Botstein</u> David Botstein	Director	September 20, 2021

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<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ William W. Ericson</u> William W. Ericson	Director	September 20, 2021
<u>/s/ Randall S. Livingston</u> Randall S. Livingston	Director	September 20, 2021
<u>/s/ Marshall L. Mohr</u> Marshall L. Mohr	Director	September 20, 2021
<u>/s/ Kathy Ordoñez</u> Kathy Ordoñez	Director	September 20, 2021
<u>/s/ Lucy Shapiro</u> Lucy Shapiro	Director	September 20, 2021
<u>/s/ Hannah Valentine</u> Hannah Valentine	Director	September 20, 2021



Wilson Sonsini Goodrich & Rosati
Professional Corporation

650 Page Mill Road
Palo Alto, California 94304-1050

O: 650.493.9300
F: 650.493.6811

September 20, 2021

Pacific Biosciences of California, Inc.
1305 O'Brien Drive
Menlo Park, California 94025

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

This opinion is furnished to you in connection with the filing with the Securities and Exchange Commission of a Registration Statement on Form S-3 (the "**Registration Statement**"), to be filed on or about the date hereof by Pacific Biosciences of California, Inc. (the "**Company**") for the purpose of registering under the Securities Act of 1933, as amended (the "**Securities Act**"), the resale by the selling stockholders named therein (the "**Selling Stockholders**") of up to 11,214,953 shares of the Company's common stock, \$0.001 par value per share (the "**Shares**"). The Selling Stockholders agreed to acquire the Shares from the Company pursuant to a Securities Purchase Agreement, dated July 19, 2021, by and among the Company and each of the investors named in Exhibit A thereto (the "**Securities Purchase Agreement**").

We, as counsel for the Company in connection with the registration for resale of the Shares, have examined originals or copies, certified or otherwise identified to our satisfaction, of such documents, corporate records, certificates of public officials and other instruments as we have deemed necessary for the purposes of rendering this opinion. In our examination, we have assumed: (a) the genuineness of all signatures, (b) the authenticity of all documents submitted to us as originals, (c) the conformity with the originals of all documents submitted to us as copies and the authenticity of the originals of such documents, (d) the legal competence of all signatories to such documents, and (e) the truth, accuracy and completeness of the information, representations and warranties contained in the instruments, documents, certificates and records we have reviewed. As to any facts material to the opinions expressed herein that were not independently established or verified, we have relied upon oral or written statements and representations of officers and other representatives of the Company.

We express no opinion herein as to the laws of any state or jurisdiction other than the General Corporation Law of the State of Delaware and the federal laws of the United States of America.

We express no opinion as to (i) the effect of any bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium or other similar laws relating to or affecting the rights of creditors generally, (ii) rights to indemnification and contribution which may be limited by applicable law or equitable principles, or (iii) the effect of general principles of equity, including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing, the effect of judicial discretion and the possible unavailability of specific performance, injunctive relief or other equitable relief, and the limitations on rights of acceleration, whether considered in a proceeding in equity or at law.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares have been duly authorized by the Company and are validly issued, fully paid and nonassessable.

AUSTIN BEIJING BOSTON BRUSSELS HONG KONG LONDON LOS ANGELES NEW YORK PALO ALTO
SAN DIEGO SAN FRANCISCO SEATTLE SHANGHAI WASHINGTON, DC WILMINGTON, DE

Pacific Biosciences of California, Inc.
Registration Statement on Form S-3
September 20, 2021

We consent to the use of this opinion as an exhibit to the Registration Statement, and we consent to the reference of our name under the caption “Legal Matters” in the prospectus forming part of the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Securities and Exchange Commission thereunder.

Sincerely,

/s/ Wilson Sonsini Goodrich & Rosati, Professional Corporation

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the reference to our firm under the caption “Experts” in the Registration Statement (Form S-3) and related Prospectus of Pacific Biosciences of California, Inc. for the registration of 11,214,953 shares of its common stock and to the incorporation by reference therein of our report dated February 26, 2021, with respect to the consolidated financial statements of Pacific Biosciences of California, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2020, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Redwood City, California
September 20, 2021

Consent of Independent Auditors

We consent to the use of our report dated August 30, 2021, with respect to the financial statements of Omniome, Inc., incorporated herein by reference and to the reference to our firm under the heading “Experts” in the prospectus. Our report dated August 30, 2021 contains an explanatory paragraph that states that Omniome’s recurring losses from operations raise substantial doubt about the entity’s ability to continue as a going concern. The financial statements do not include any adjustments that might result from the outcome of that uncertainty.

/s/ KPMG LLP

San Diego, California
September 20, 2021