

## INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

OMB APPROVAL

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Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934  
or Section 30(h) of the Investment Company Act of 1940

<b>1. Name and Address of Reporting Person*</b> <u>Dow Brian B</u> <hr/> (Last) (First) (Middle) PACIFIC BIOSCIENCES OF CALIFORNIA, INC. 1380 WILLOW ROAD <hr/> (Street) MENLO CA 94025 <hr/> (City) (State) (Zip)	<b>2. Date of Event Requiring Statement (Month/Day/Year)</b> 10/26/2010	<b>3. Issuer Name and Ticker or Trading Symbol</b> PACIFIC BIOSCIENCES OF CALIFORNIA INC [ PACB ] <hr/> <b>4. Relationship of Reporting Person(s) to Issuer (Check all applicable)</b> Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <p style="text-align: center;">VP and PAO</p>	<b>5. If Amendment, Date of Original Filed (Month/Day/Year)</b>  <hr/> <b>6. Individual or Joint/Group Filing (Check Applicable Line)</b> <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person
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### Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)

### Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
Stock Option (right to buy)	(1)	06/09/2020	Common Stock	50,000	10.84	D	
Stock Option (right to buy)	(2)	07/29/2020	Common Stock	27,500	12.74	D	

**Explanation of Responses:**

1. 1/4 of the shares subject to the option will vest on May 10, 2011, and the remaining shares will vest monthly thereafter, such that 100% of the shares subject to the option will be fully vested on May 10, 2014. All shares subject to the option are early exercisable.

2. 1/5 of the shares subject to the option will vest on June 1, 2011, and the remaining shares will vest monthly thereafter, such that 100% of the shares subject to the option will be fully vested on June 1, 2015. All shares subject to the option are early exercisable.

Brian B. Dow
10/26/2010

\*\* Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 5 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

**Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.**

POWER OF ATTORNEY

The undersigned, as a Section 16 reporting person of Pacific Biosciences of California, Inc. (the "Company"), hereby constitutes and appoints Susan K. Barnes, Brian Dow and Matthew Murphy, and each of them, the undersigned's true and lawful attorney-in-fact to:

1. complete and execute Forms 3, 4 and 5 and other forms and all amendments thereto as such attorney-in-fact shall in his or her discretion determine to be required or advisable pursuant to Section 16 of the Securities Exchange Act of 1934 (as amended) and the rules and regulations promulgated thereunder, or any successor laws and regulations, as a consequence of the undersigned's ownership, acquisition or disposition of securities of the Company; and
2. do all acts necessary in order to file such forms with the Securities and Exchange Commission, any securities exchange or national association, the Company and such other person or agency as the attorney-in-fact shall deem appropriate.

The undersigned also hereby constitutes and appoints the responsible attorneys and paralegals of Wilson Sonsini Goodrich & Rosati P.C., and each of them, the undersigned's true and lawful attorney-in-fact and agent to complete, execute and file a Form ID Application Acknowledgement on EDGAR or such other forms as prescribed by the U.S. Securities and Exchange Commission in order for the undersigned to apply for and obtain EDGAR filing codes.

The undersigned hereby ratifies and confirms all that said attorneys-in-fact and agents shall do or cause to be done by virtue hereof. The undersigned acknowledges that the foregoing attorneys-in-fact, in serving in such capacity at the request of the undersigned, are not assuming, nor is the Company assuming, any of the undersigned's responsibilities to comply with Section 16 of the Securities Exchange Act of 1934 (as amended).

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Forms ID, 3, 4 and 5 with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the Company and the foregoing attorneys-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 30th day of September, 2010.

Signature: /s/ Brian Dow  
Name: Brian Dow