

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

SCHEDULE 13G  
(Rule 13d-102)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT  
TO RULES 13d-1(b), (c), AND (d) AND AMENDMENTS THERETO FILED  
PURSUANT TO RULE 13d-2(b)  
(Amendment No. )<sup>1</sup>

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Pacific Biosciences of California, Inc.  
(Name of Issuer)

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Common Stock, par value \$0.001 per share  
(Title of Class of Securities)

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69404D108  
(CUSIP Number)

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June 8, 2012  
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)  
 Rule 13d-1(c)  
 Rule 13d-1(d)

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<sup>1</sup> The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the *Notes*).

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1	NAME OF REPORTING PERSON Raging Capital Fund, LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER - 0 -
	6	SHARED VOTING POWER 1,001,328
	7	SOLE DISPOSITIVE POWER - 0 -
	8	SHARED DISPOSITIVE POWER 1,001,328
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,001,328	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 1.8%	
12	TYPE OF REPORTING PERSON PN	

1	NAME OF REPORTING PERSON Raging Capital Fund (QP), LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER - 0 -
	6	SHARED VOTING POWER 2,159,766
	7	SOLE DISPOSITIVE POWER - 0 -
	8	SHARED DISPOSITIVE POWER 2,159,766
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,159,766	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 3.9%	
12	TYPE OF REPORTING PERSON PN	

1	NAME OF REPORTING PERSON Raging Capital Management, LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER - 0 -
	6	SHARED VOTING POWER 3,161,094
	7	SOLE DISPOSITIVE POWER - 0 -
	8	SHARED DISPOSITIVE POWER 3,161,094
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,161,094	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 5.7%	
12	TYPE OF REPORTING PERSON OO	

1	NAME OF REPORTING PERSON William C. Martin	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION USA	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER - 0 -
	6	SHARED VOTING POWER 3,161,094
	7	SOLE DISPOSITIVE POWER - 0 -
	8	SHARED DISPOSITIVE POWER 3,161,094
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,161,094	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 5.7%	
12	TYPE OF REPORTING PERSON IN	

**Item 1(a). Name of Issuer:**

Pacific Biosciences of California, Inc.

**Item 1(b). Address of Issuer's Principal Executive Offices:**

1380 Willow Road  
Menlo Park, California 94025

**Item 2(a). Name of Person Filing:**

This statement is filed by Raging Capital Fund, LP, a Delaware limited partnership ("Raging Capital Fund"), Raging Capital Fund (QP), LP, a Delaware limited partnership ("Raging Capital Fund QP" and together with Raging Capital Fund, the "Raging Funds"), Raging Capital Management, LLC, a Delaware limited liability company ("Raging Capital"), and William C. Martin ("Mr. Martin"). Each of the foregoing is referred to as a "Reporting Person" and collectively as the "Reporting Persons."

Raging Capital is the general partner of each of the Raging Funds. Mr. Martin is the managing member of Raging Capital. By virtue of these relationships, each of Raging Capital and Mr. Martin may be deemed to beneficially own the Issuer's Common Stock, par value \$0.001 per share, owned directly by the Raging Funds.

**Item 2(b). Address of Principal Business Office or, if none, Residence:**

The principal business address of each of the Reporting Persons is Ten Princeton Avenue, Rocky Hill, New Jersey 08553.

**Item 2(c). Citizenship:**

The Raging Funds and Raging Capital are organized under the laws of the State of Delaware. Mr. Martin is a citizen of the United States of America.

**Item 2(d). Title of Class of Securities:**

Common Stock, par value \$0.001 per share (the "Shares").

**Item 2(e). CUSIP Number:**

69404D108

**Item 3. If this statement is filed pursuant to Section 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:**

/X/ Not Applicable

(a)  / / Broker or dealer registered under Section 15 of the Act (15 U.S.C. 78o).

(b)  / / Bank as defined in Section 3(a)(6) of the Act (15 U.S.C. 78c).

- (c) // Insurance company as defined in Section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d) // Investment company registered under Section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e) // Investment adviser in accordance with Section 240.13d-1(b)(1)(ii)(E).
- (f) // Employee benefit plan or endowment fund in accordance with Section 240.13d-1(b)(1)(ii)(F).
- (g) // Parent holding company or control person in accordance with Section 240.13d-1(b)(1)(ii)(G).
- (h) // Savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813).
- (i) // Church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act (15 U.S.C. 80a-3).
- (j) // Non-U.S. institution in accordance with Section 240.13d-1(b)(1)(ii)(J).
- (k) // Group, in accordance with Section 240.13d-1(b)(1)(ii)(J).

**Item 4. Ownership.**

All ownership information reported in this Item 4 is as of the date hereof.

***Raging Capital Fund***

- (a) Amount beneficially owned:  
1,001,328 Shares
- (b) Percent of class:  
1.8% (based upon 55,582,052 Shares outstanding, which is the total number of Shares outstanding as of April 30, 2012 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 7, 2012).
- (c) Number of shares as to which such person has:
  - (i) Sole power to vote or to direct the vote  
0 Shares
  - (ii) Shared power to vote or to direct the vote  
1,001,328 Shares
  - (iii) Sole power to dispose or to direct the disposition of  
0 Shares

- (iv) Shared power to dispose or to direct the disposition of  
1,001,328 Shares

***Raging Capital Fund QP***

- (a) Amount beneficially owned:  
2,159,766 Shares
- (b) Percent of class:  
3.9% (based upon 55,582,052 Shares outstanding, which is the total number of Shares outstanding as of April 30, 2012 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 7, 2012).
- (c) Number of shares as to which such person has:
  - (i) Sole power to vote or to direct the vote  
0 Shares
  - (ii) Shared power to vote or to direct the vote  
2,159,766 Shares
  - (iii) Sole power to dispose or to direct the disposition of  
0 Shares
  - (iv) Shared power to dispose or to direct the disposition of  
2,159,766 Shares

***Raging Capital***

- (a) Amount beneficially owned:  
3,161,094 Shares\*
- (b) Percent of class:  
5.7% (based upon 55,582,052 Shares outstanding, which is the total number of Shares outstanding as of April 30, 2012 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 7, 2012).
- (c) Number of shares as to which such person has:
  - (i) Sole power to vote or to direct the vote  
0 Shares



CUSIP NO.

- (ii) Shared power to vote or to direct the vote  
3,161,094 Shares\*
- (iii) Sole power to dispose or to direct the disposition of  
0 Shares
- (iv) Shared power to dispose or to direct the disposition of  
3,161,094 Shares\*

\* Consists of the Shares owned directly by the Raging Funds.

***Mr. Martin***

- (a) Amount beneficially owned:  
3,161,094 Shares\*
- (b) Percent of class:  
5.7% (based upon 55,582,052 Shares outstanding, which is the total number of Shares outstanding as of April 30, 2012 as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 7, 2012).
- (c) Number of shares as to which such person has:
  - (i) Sole power to vote or to direct the vote  
0 Shares
  - (ii) Shared power to vote or to direct the vote  
3,161,094 Shares\*
  - (iii) Sole power to dispose or to direct the disposition of  
0 Shares
  - (iv) Shared power to dispose or to direct the disposition of  
3,161,094 Shares\*

\* Consists of the Shares owned directly by the Raging Funds.

As the general partner of each of the Raging Funds, Raging Capital may be deemed to be the beneficial owner of the Shares owned directly by the Raging Funds. As the managing member of Raging Capital, Mr. Martin may be deemed to be the beneficial owner of the Shares owned directly by the Raging Funds.

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The filing of this Schedule 13G shall not be construed as an admission that the Reporting Persons are, for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, the beneficial owners of any of the Shares reported herein. Each of the Reporting Persons specifically disclaims beneficial ownership of the Shares reported herein that are not directly owned by such Reporting Person.

**Item 5. Ownership of Five Percent or Less of a Class.**

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following [ ].

**Item 6. Ownership of More than Five Percent on Behalf of Another Person.**

Not Applicable.

**Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.**

Not Applicable.

**Item 8. Identification and Classification of Members of the Group.**

See Exhibit 99.1.

**Item 9. Notice of Dissolution of Group.**

Not Applicable.

**Item 10. Certifications.**

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

SIGNATURES

After reasonable inquiry and to the best of his knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: June 18, 2012

Raging Capital Fund, LP

By: Raging Capital Management, LLC  
General Partner

By: /s/ Frederick C. Wasch  
Name: Frederick C. Wasch  
Title: Attorney-in-fact for William C. Martin, Managing  
Member

Raging Capital Fund (QP), LP

By: Raging Capital Management, LLC  
General Partner

By: /s/ Frederick C. Wasch  
Name: Frederick C. Wasch  
Title: Attorney-in-fact for William C. Martin, Managing  
Member

Raging Capital Management, LLC

By: /s/ Frederick C. Wasch  
Name: Frederick C. Wasch  
Title: Attorney-in-fact for William C. Martin, Managing  
Member

/s/ Frederick C. Wasch  
Frederick C. Wasch as Attorney-in-fact for William C. Martin



JOINT FILING AGREEMENT

In accordance with Rule 13d-1(k)(1)(iii) under the Securities Exchange Act of 1934, as amended, the persons named below agree to the joint filing on behalf of each of them of a Statement on Schedule 13G dated June 18, 2012 (including amendments thereto) with respect to the Common Stock of Pacific Biosciences of California, Inc. This Joint Filing Agreement shall be filed as an Exhibit to such Statement.

Dated: June 18, 2012

Raging Capital Fund, LP

By: Raging Capital Management, LLC  
General Partner

By: /s/ Frederick C. Wasch

Name: Frederick C. Wasch

Title: Attorney-in-fact for William C. Martin, Managing  
Member

Raging Capital Fund (QP), LP

By: Raging Capital Management, LLC  
General Partner

By: /s/ Frederick C. Wasch

Name: Frederick C. Wasch

Title: Attorney-in-fact for William C. Martin, Managing  
Member

Raging Capital Management, LLC

By: /s/ Frederick C. Wasch

Name: Frederick C. Wasch

Title: Attorney-in-fact for William C. Martin, Managing  
Member

/s/ Frederick C. Wasch

Frederick C. Wasch as Attorney-in-fact for William C. Martin