SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 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. ____) *

Pacific Biosciences of California, Inc.

(Name of Issuer)

Common Stock

(Title of Class of Securities)

69404D108

(CUSIP Number)

September 22, 2011

(Date of Event Which Requires Filing of this Statement)

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

o Rule 13d-1(b)

x Rule 13d-1(c)

o Rule 13d-1(d)

(Page 1 of 16 Pages)

* 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 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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		Page 2 01 10 Pages			
1.		NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)			
	Deerfield Capital, L.P.				
2.	CHECK THE APPROPRIATE BOX	(-) -			
		(b) x			
3.	SEC USE ONLY	SEC USE ONLY			
4.	CITIZENSHIP OR PLACE OF ORG.	ANIZATION			
	Delaware				
	5.	SOLE VOTING POWER			
NUMBER OF		0			
SHARES BENEFICIALLY	6.	SHARED VOTING POWER			
OWNED BY		2,360,070 (1)			
EACH REPORTING PERSON WITH	7.	SOLE DISPOSITIVE POWER			
		0			
	8.	SHARED DISPOSITIVE POWER			
		2,360,070 (1)			
9.	AGGREGATE AMOUNT BENEFIC	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON			
	2,360,070 (1)				
10.	CHECK BOX IF THE AGGREGATE CERTAIN SHARES*	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*			
11.	PERCENT OF CLASS REPRESENT	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9			
	4.37%				
12.	TYPE OF REPORTING PERSON*				
	PN				

(1) Comprised of 42,800 shares of common stock held by Deerfield Partners, L.P., 295,333 shares of common stock held by Deerfield Special Situations Fund, L.P., 774,402 shares of common stock held by Deerfield Private Design Fund, L.P., and 1,247,535 shares of common stock held by Deerfield Private Design International, L.P.

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		Page 3 of 16 Pages			
1.	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)				
	Deerfield Partners, L.P.	Deerfield Partners, L.P.			
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) o (b) x				
3.	SEC USE ONLY				
4.	CITIZENSHIP OR PLACE OF ORGA	CITIZENSHIP OR PLACE OF ORGANIZATION			
	Delaware				
	5.	SOLE VOTING POWER			
NUMBER OF		0			
SHARES BENEFICIALLY	6.	SHARED VOTING POWER			
OWNED BY		42,800			
EACH REPORTING PERSON WITH	7.	SOLE DISPOSITIVE POWER			
		0			
	8.	SHARED DISPOSITIVE POWER			
		42,800			
9.	AGGREGATE AMOUNT BENEFICI	ALLY OWNED BY EACH REPORTING PERSON			
	42,800				
10.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*				
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9				
	0.08%				
12.	TYPE OF REPORTING PERSON*				
	PN				

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		Page 4 01 10 Page			
1.	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Deerfield Special Situations Fund, L.P.				
2.	CHECK THE APPROPRIATE BOX	IF A MEMBER OF A GROUP* (a) o			
		(b) x			
3.	SEC USE ONLY				
4.	CITIZENSHIP OR PLACE OF ORG	ANIZATION			
	Delaware				
	5.	SOLE VOTING POWER			
NUMBER OF		0			
SHARES BENEFICIALLY	6.	SHARED VOTING POWER			
OWNED BY		295,333			
EACH REPORTING PERSON WITH	7.	SOLE DISPOSITIVE POWER			
		0			
	8.	SHARED DISPOSITIVE POWER			
		295,333			
9.	AGGREGATE AMOUNT BENEFIC	IALLY OWNED BY EACH REPORTING PERSON			
	295,333				
10.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*				
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9				
	0.55%				
12.	TYPE OF REPORTING PERSON*				
	PN				

		Page 5 of 16 Pages		
1.	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF AE	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)		
	Deerfield Management Company, L.P.			
2.		CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) o (b) x		
3.	SEC USE ONLY			
4.	CITIZENSHIP OR PLACE OF ORGA	ANIZATION		
	Delaware			
	5.	SOLE VOTING POWER		
NUMBER OF		0		
SHARES BENEFICIALLY	6.	SHARED VOTING POWER		
OWNED BY		517,267 (2)		
EACH REPORTING PERSON WITH	7.	SOLE DISPOSITIVE POWER		
		0		
	8.	SHARED DISPOSITIVE POWER		
		517,267 (2)		
9.	AGGREGATE AMOUNT BENEFICI	ALLY OWNED BY EACH REPORTING PERSON		
	517,267 (2)			
10.	CHECK BOX IF THE AGGREGATE CERTAIN SHARES*	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES		
11.	PERCENT OF CLASS REPRESENT	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9		
	0.96%			
12.	TYPE OF REPORTING PERSON*			
	PN			

(2) Comprised of 57,200 shares of common stock held by Deerfield International Limited and 460,067 shares of common stock held by Deerfield Special Situations Fund International Limited.

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1.	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF AE	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)			
	Deerfield International Limited	Deerfield International Limited			
2.	CHECK THE APPROPRIATE BOX I	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) o (b) x			
3.	SEC USE ONLY				
4.	CITIZENSHIP OR PLACE OF ORGA	ANIZATION			
	British Virgin Islands				
	5.	SOLE VOTING POWER			
NUMBER OF		0			
SHARES BENEFICIALLY	6.	SHARED VOTING POWER			
OWNED BY		57,200			
EACH REPORTING PERSON WITH	7.	SOLE DISPOSITIVE POWER			
		0			
	8.	SHARED DISPOSITIVE POWER			
		57,200			
9.	AGGREGATE AMOUNT BENEFICI	ALLY OWNED BY EACH REPORTING PERSON			
	57,200				
10.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*				
11.	PERCENT OF CLASS REPRESENT	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9			
	0.11%	0.11%			
12.	TYPE OF REPORTING PERSON*				
	СО				

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1.		NAME OF REPORTING PERSONS			
	I.R.S. IDENTIFICATION NO. OF A	I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)			
	Deerfield Special Situations Fund Int	Deerfield Special Situations Fund International Limited			
2.	CHECK THE APPROPRIATE BOX				
		(b) x			
3.	SEC USE ONLY	SEC USE ONLY			
4.	CITIZENSHIP OR PLACE OF ORG	GANIZATION			
	British Virgin Islands				
	5.	SOLE VOTING POWER			
NUMBER OF		0			
SHARES	6.	SHARED VOTING POWER			
BENEFICIALLY OWNED BY		400.007			
EACH REPORTING	7.	460,067 SOLE DISPOSITIVE POWER			
PERSON WITH	7.	SOLE DISPOSITIVE POWER			
		0			
	8.	SHARED DISPOSITIVE POWER			
		460,067			
9.	AGGREGATE AMOUNT BENEFIC	TALLY OWNED BY EACH REPORTING PERSON			
	460,067				
10.		E AMOUNT IN ROW (9) EXCLUDES \Box			
	CERTAIN SHARES*				
11.	PERCENT OF CLASS REPRESENT	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9			
	0.85%				
12.	U.85% TYPE OF REPORTING PERSON*				
12.					
	PN				

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Î		Page 6 01 10 Page			
1.	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)				
	Deerfield Private Design Fund, L.P.				
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) o (b) x				
3.	SEC USE ONLY				
4.	CITIZENSHIP OR PLACE OF ORGANIZATION				
	Delaware				
	5.	SOLE VOTING POWER			
NUMBER OF		0			
SHARES BENEFICIALLY	6.	SHARED VOTING POWER			
OWNED BY		774,402			
EACH REPORTING PERSON WITH	7.	SOLE DISPOSITIVE POWER			
		0			
	8.	SHARED DISPOSITIVE POWER			
		774,402			
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON				
	774,402				
10.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*				
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9				
	1.43%				
12.	TYPE OF REPORTING PERSON*	TYPE OF REPORTING PERSON*			
	CO				

[Page 9 01 10 Pages			
1.	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)				
	Deerfield Private Design International, L.P.				
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) o (b) x				
3.	SEC USE ONLY				
4.	CITIZENSHIP OR PLACE OF ORG	CITIZENSHIP OR PLACE OF ORGANIZATION			
	British Virgin Islands				
	5.	SOLE VOTING POWER			
NUMBER OF		0			
SHARES BENEFICIALLY	6.	SHARED VOTING POWER			
OWNED BY		1,247,535			
EACH REPORTING PERSON WITH	7.	SOLE DISPOSITIVE POWER			
		0			
	8.	SHARED DISPOSITIVE POWER			
		1,247,535			
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON				
	1,247,535				
10.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*				
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9				
	2.31%				
12.	TYPE OF REPORTING PERSON*				
	со				

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1.	NAME OF REPORTING PERSONS				
	I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)				
	James E. Flynn				
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) o				
		(b) x			
3.	SEC USE ONLY				
4.	CITIZENSHIP OR PLACE OF ORG.	ANIZATION			
	United States				
	5.	SOLE VOTING POWER			
NUMBER OF		0			
SHARES	6.	SHARED VOTING POWER			
BENEFICIALLY					
OWNED BY EACH REPORTING		2,877,337 (3)			
PERSON WITH	7.	SOLE DISPOSITIVE POWER			
FERSON WITH					
		0			
	8.	SHARED DISPOSITIVE POWER			
		2,877,337 (3)			
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON				
	2,877,337 (3)				
10.					
10.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*				
	CERTAIN SHARES				
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9				
11.	TERCENT OF CLASS REPRESENTED DT ANIOUNT IN ROW 5				
	5.33%				
12.	TYPE OF REPORTING PERSON*				
	IN				
L					

(3) Comprised of 42,800 shares of common stock held by Deerfield Partners, L.P., 295,333 shares of common stock held by Deerfield Special Situations Fund, L.P., 774,402 shares of common stock held by Deerfield Private Design Fund, L.P., 1,247,535 shares of common stock held by Deerfield Private Design International, L.P., 57,200 shares of common stock held by Deerfield International Limited, and 460,067 shares of common stock held by Deerfield Special Situations Fund International Limited.

CUSIP No. 69404D108

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, CA 94025
Item 2(a).	Name of Person Filing:
	James E. Flynn, Deerfield Capital, L.P., Deerfield Partners, L.P., Deerfield Special Situations Fund, L.P., Deerfield Management Company, L.P., Deerfield International Limited, Deerfield Special Situations Fund International Limited; Deerfield Private Design Fund, L.P.; Deerfield Private Design International, L.P.
Item 2(b).	Address of Principal Business Office, or if None, Residence:
	James E. Flynn, Deerfield Capital, L.P., Deerfield Partners, L.P., Deerfield Special Situations Fund, L.P., Deerfield Management Company, L.P., Deerfield Private Design Fund, L.P., Deerfield Private Design International, L.P., 780 Third Avenue, 37th Floor, New York, NY 10017; Deerfield International Limited, Deerfield Special Situations Fund International Limited, c/o Citi Hedge Fund Services (B.V.I.) Ltd., Bison Court, Columbus Centre, P.O. Box 3460, Road Town, Tortola, D8, British Virgin Islands
Item 2(c).	Citizenship:
	Mr. Flynn - United States citizen Deerfield Capital, L.P., Deerfield Partners, L.P., Deerfield Special Situations Fund, L.P., Deerfield Management Company, L.P. and Deerfield Private Design Fund, L.P Delaware limited partnerships Deerfield International Limited and Deerfield Special Situations Fund International Limited - British Virgin Islands corporations Deerfield Private Design International, L.P. – British Virgin Islands limited partnership
Item 2(d).	Title of Class of Securities:
	Common Stock
Item 2(e).	CUSIP Number:
	69404D108
Item 3.	If This Statement is Filed Pursuant to Rule 13d-1(b), or 13d-2(b) or (c), Check Whether the Person Filing is a:
(a)	o Broker or dealer registered under Section 15 of the Exchange Act.
(b)	o Bank as defined in Section 3(a)(6) of the Exchange Act
(C)	o Insurance company as defined in Section 3(a)(19) of the Exchange Act.
(d)	o Investment company registered under Section 8 of the Investment Company Act.
(e)	o An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);

- (f) o An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F);
- (g) o A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G);
- (h) o A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act;
- (i) o A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act;
- (j) o A non-U.S. institution in accordance with Rule 13d-1(b)(1)(ii)(J);
- (k) o Group, in accordance with Rule 13d-1(b)(1)(ii)(K).

If filing as a non-U.S. institution in accordance with Rule 13d-1(b)(1)(ii)(J), please specify the type of institution: ______

Item 4. Ownership.

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

(a) Amount beneficially owned**:

Deerfield Capital, L.P. – 2,360,070 shares Deerfield Partners, L.P. – 42,800 shares Deerfield Special Situations Fund, L.P. – 295,333 shares Deerfield Management Company, L.P. – 517,267 shares Deerfield International Limited – 57,200 shares Deerfield Special Situations Fund International Limited – 460,067 shares Deerfield Private Design Fund, L.P. – 774,402 shares Deerfield Private Design International, L.P. – 1,247,535 shares James E. Flynn – 2,877,337 shares

(b) Percent of class**:

Deerfield Capital, L.P. – 4.37% Deerfield Partners, L.P. – 0.08% Deerfield Special Situations Fund, L.P. – 0.55% Deerfield Management Company, L.P. – 0.96% Deerfield International Limited – 0.11% Deerfield Special Situations Fund International Limited – 0.85% Deerfield Private Design Fund, L.P. – 1.43% Deerfield Private Design International, L.P. – 2.31% James E. Flynn – 5.33%

- (c)
- Number of shares as to which such person has**:
 - (i) Sole power to vote or to direct the vote
 - (ii) Shared power to vote or to direct the vote

All Reporting Persons - 0

Deerfield Capital, L.P. – 2,360,070 Deerfield Partners, L.P. – 42,800 Deerfield Special Situations Fund, L.P. – 295,333 Deerfield Management Company, L.P. – 517,267 Deerfield International Limited – 57,200 Deerfield Special Situations Fund International Limited – 460,067 Deerfield Private Design Fund, L.P. – 774,402 Deerfield Private Design International, L.P. – 1,247,535 James E. Flynn - 2,877,337

- (iii) Sole power to dispose or to direct the disposition of
- (iv) Shared power to dispose or to direct the disposition of

All Reporting Persons - 0

Deerfield Capital, L.P. – 2,360,070 Deerfield Partners, L.P. – 42,800 Deerfield Special Situations Fund, L.P. – 295,333 Deerfield Management Company, L.P. – 517,267 Deerfield International Limited – 57,200 Deerfield Special Situations Fund International Limited – 460,067 Deerfield Private Design Fund, L.P. – 774,402 Deerfield Private Design International, L.P. – 1,247,535 James E. Flynn - 2,877,337

**See footnotes on cover pages which are incorporated by reference herein.

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 followingo.

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

If any other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, such securities, a statement to that effect should be included in response to this item and, if such interest relates to more than five percent of the class, such person should be identified. A listing of the shareholders of an investment company registered under the Investment Company Act of 1940 or the beneficiaries of employee benefit plan, pension fund or endowment fund is not required.

N/A

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

If a parent holding company or Control person has filed this schedule, pursuant to Rule 13d-1(b)(1)(ii)(G), so indicate under Item 3(g) and attach an exhibit stating the identity and the Item 3 classification of the relevant subsidiary. If a parent holding company or control person has filed this schedule pursuant to Rule 13d-1(c) or Rule 13d-1(d), attach an exhibit stating the identification of the relevant subsidiary.

N/A

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

If a group has filed this schedule pursuant to ss.240.13d-1(b)(1)(ii)(J), so indicate under Item 3(j) and attach an exhibit stating the identity and Item 3 classification of each member of the group. If a group has filed this schedule pursuant to ss.240.13d-1(c) or ss.240.13d-1(d), attach an exhibit stating the identity of each member of the group.

See Exhibit B

Item 9. Notice of Dissolution of Group.

Notice of dissolution of a group may be furnished as an exhibit stating the date of the dissolution and that all further filings with respect to transactions in the security reported on will be filed, if required, by members of the group, in their individual capacity. See Item 5.

N/A

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."

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

DEERFIELD CAPITAL, L.P.

- By: J.E. Flynn Capital LLC, General Partner
- By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD PARTNERS, L.P.

- By: Deerfield Capital, L.P., General Partner
- By: J.E. Flynn Capital LLC, General Partner
- By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD SPECIAL SITUATIONS FUND, L.P.

- By: Deerfield Capital, L.P., General Partner
- By: J.E. Flynn Capital LLC, General Partner
- By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD PRIVATE DESIGN FUND, L.P.

- By: Deerfield Capital, L.P., General Partner
- By: J.E. Flynn Capital LLC, General Partner
- By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD PRIVATE DESIGN INTERNATIONAL, L.P.

- By: Deerfield Capital, L.P., General Partner
- By: J.E. Flynn Capital LLC, General Partner
- By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD MANAGEMENT COMPANY, L.P.

By: Flynn Management LLC, General Partner

By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD INTERNATIONAL LIMITED

By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD SPECIAL SITUATIONS FUND INTERNATIONAL LIMITED

By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

JAMES E. FLYNN

/s/ Darren Levine Darren Levine, Attorney-In-Fact

Date: September 26, 2011

Exhibit A. Joint Filing Agreement.

Exhibit B. Item 8 Statement.

Exhibit C (1). Power of Attorney.

(1) Previously filed as Exhibit 24 to a Form 4 with regard to Dynavax Technologies Corporation filed with the Securities and Commission on July 20, 2007 by Deerfield Capital L.P.; Deerfield Partners, L.P.; Deerfield Management Company, L.P.; Deerfield International Limited; Deerfield Special Situations Fund, L.P.; Deerfield Special Situations Fund International Limited; Deerfield Private Design Fund, L.P.; Deerfield Private Design International, L.P. and James E. Flynn.

Exhibit A

Agreement

The undersigned agree that this Schedule 13G, and all amendments thereto, relating to the Common Stock of Pacific Biosciences of California, Inc. shall be filed on behalf of the undersigned.

DEERFIELD CAPITAL, L.P.

- By: J.E. Flynn Capital LLC, General Partner
- By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD PARTNERS, L.P.

- By: Deerfield Capital, L.P., General Partner
- By: J.E. Flynn Capital LLC, General Partner
- By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD SPECIAL SITUATIONS FUND, L.P.

- By: Deerfield Capital, L.P., General Partner
- By: J.E. Flynn Capital LLC, General Partner
- By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD MANAGEMENT COMPANY, L.P.

- By: Flynn Management LLC, General Partner
- By: /s/ Darren Levine

Darren Levine, Attorney-In-Fact

DEERFIELD PRIVATE DESIGN FUND, L.P.

- By: Deerfield Capital, L.P., General Partner
- By: J.E. Flynn Capital LLC, General Partner
- By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD PRIVATE DESIGN INTERNATIONAL, L.P.

- By: Deerfield Capital, L.P., General Partner
- By: J.E. Flynn Capital LLC, General Partner
- By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD INTERNATIONAL LIMITED

By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

DEERFIELD SPECIAL SITUATIONS FUND INTERNATIONAL LIMITED

By: /s/ Darren Levine Darren Levine, Attorney-In-Fact

JAMES E. FLYNN

/s/ Darren Levine

Darren Levine, Attorney-In-Fact

Due to the relationships between them, the reporting persons hereunder may be deemed to constitute a "group" with one another for purposes of Section 13(d)(3) of the Securities Exchange Act of 1934.