



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

May 31, 2017

Via E-mail

Susan K. Barnes
Chief Financial Officer
Pacific Biosciences of California, Inc.
1305 O'Brien Drive
Menlo Park, CA 94025

Re: Pacific Biosciences of California, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2016
Filed March 6, 2017
File No. 001-34899

Dear Ms. Barnes:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Note 9. Stockholders' Equity, page 66

Stock-based Compensation, page 68

1. We note that in determining the fair value of your employee stock options and your ESPP you have used an expected volatility of 70.0% for years ended December 31, 2016, 2015, and 2014, respectively. We also note from your disclosure on page 56 that your expected volatility is based on the historical volatility of your common stock as well as several comparable publicly listed companies. Please address the following:
 - Explain to us how you weight your historical volatility and the volatility of comparable publicly listed companies in determining your overall expected volatility. Also explain why your expected volatility has remained unchanged for the last 3 years.

- As the company has been a public company since 2010, please tell us when you expect to no longer consider the volatility rates of comparable publicly listed companies when estimating your expected volatility. Refer to ASC 718-10-55-37 and Question 6 of SAB Topic 14.D.1.
2. As a related matter, we note from page 56 that the expected term of your options is estimated based on the simplified method because you have limited historical information available. Please tell us how you have considered the extent of your exercise activity since your initial public offering in your determination to use the simplified method. Also tell us when you expect that sufficient historical information will be available. Refer to Question 6 of SAB Topic 14.D.2.

Note 11 – Segment and Geographic Information, page 70

3. We note that you include all revenues attributed to customers in North America in one line item. In future filings, please separately disclose revenues for the United States, your country of domicile, in accordance with ASC 280-10-50-41(a).

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

You may contact Eric Atallah at (202) 551-3663 or me at (202) 551-3671 if you have questions regarding comments on the financial statements and related matters. Please contact Caleb French at (202) 551-6947 or Timothy Buchmiller, Senior Attorney, at (202) 551-3635 with any other questions.

Sincerely,

/s/ Martin James

Martin James
Senior Assistant Chief Accountant
Office of Electronics and Machinery