



DIVISION OF  
CORPORATION FINANCE

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

January 30, 2015

Via E-mail

Mr. Geoffrey M. Parker  
Executive Vice President and  
Chief Financial Officer  
Anacor Pharmaceuticals, Inc.  
1020 East Meadow Circle  
Palo Alto, CA 94303-4230

**Re: Anacor Pharmaceuticals, Inc.  
Form 10-K for the Fiscal Year Ended December 31, 2013  
Filed March 17, 2014  
File No. 001-34973**

Dear Mr. Parker:

We have completed our review of your filing. We remind you that our comments or changes to disclosure in response to our comments do not foreclose the Commission from taking any action with respect to the company or the filing and the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States. We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable rules require.

Sincerely,

/s/ Sharon M. Blume

Sharon M. Blume  
Accounting Branch Chief