



DIVISION OF  
CORPORATION FINANCE

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

April 18, 2012

Via E-mail

Thomas B. King  
President and Chief Executive Officer  
Alexza Pharmaceuticals, Inc.  
2091 Stierlin Court  
Mountain View, California 94043

**Re: Alexza Pharmaceuticals, Inc.  
Preliminary Proxy Statement on Schedule 14A  
Filed on April 6, 2012  
File No. 000-51820**

Dear Mr. King:

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/ Jeffrey Riedler

Jeffrey Riedler  
Assistant Director

cc: Brent D. Fassett  
Cooley LLP  
380 Interlocken Crescent, Suite 900  
Broomfield, CO 80021