



DIVISION OF
CORPORATION FINANCE

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

April 13, 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 limited our review of the above proxy statement to the issue we have addressed in our comment. Please respond to this letter by revising the proxy statement. Where you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to our comment, we may have additional comments.

1. We note that you are seeking approval to effect a reverse stock split in the range of 3:1 to 10:1. Please revise your disclosure to describe any specific plans, arrangements or understandings, whether written or oral, to issue any of the authorized shares that will be newly available as a result of the approval of the reverse stock split. If you have no such plans, arrangements or understandings, please revise your disclosure to so state.

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 Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comment, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;

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- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to 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.

You may contact Johnny Gharib at (202) 551-3170 or me at (202) 551-3715 with any questions.

Sincerely,

/s/ Daniel Greenspan for

Jeffrey Riedler
Assistant Director

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