



DIVISION OF
CORPORATION FINANCE

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

June 20, 2011

Via E-mail

Mr. Christopher A. Artzer
Vice President, General Counsel and Secretary
KiOR, Inc.
13001 Bay Park Road
Pasadena, TX 77507

Re: KiOR, Inc.
Amendment No. 3 to Registration Statement on Form S-1
Filed June 10, 2011
File No. 333-173440

Dear Mr. Artzer:

We have reviewed your registration statement and have the following comments.

Front Cover Page of the Prospectus

1. In the fourth paragraph, you disclose that entities affiliated with Khosla Ventures will own shares of your common stock representing 73% of the combined voting power of your outstanding common stock. Please clarify whether this voting power includes any of the 3,500,000 shares that these entities may purchase in the offering. Please make conforming changes, as necessary, throughout the prospectus.

Summary Consolidated Financial Data, page 11

2. We note that total stockholders' equity (deficit) in the "as further adjusted" column does not agree with the same caption presented on the capitalization table on page 36. Please revise or explain to us why the amounts are not the same.

Dilution, page 39

3. In the paragraph following your table on page 39, you state that a \$1.00 increase in the assumed initial public offering price would increase "the dilution in the pro forma net tangible book value to new investors in this offering by \$17.87 per share." Please revise this statement to indicate that a \$1.00 increase in the assumed initial public offering price would increase "the dilution in the pro forma net tangible book value to new investors in this offering to \$17.87 per share."

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4. We note the paragraph on page 41 that refers to the effect on dilution if outstanding options or warrants are exercised. Please provide us your analysis that shows how these amounts were derived.

Consolidated Financial Statements, page F-1

Consolidated Balance Sheets, pages F-3 and F-30

5. We note that the par value of your convertible preferred stock, common stock and class A common stock remains \$0.0001 subsequent to your 2-for-1 stock split on June 9, 2011. Please explain to us why the par value is the same as prior to your stock split or revise your balance sheets as appropriate. This comment also applies to your capitalization table and any references to the par value of your equity throughout your registration statement.

Item 16. Exhibits and Financial Statement Schedules, page II-3

6. We note your disclosure that you have requested confidential treatment for certain portions of Exhibits 10.11 and 99.1 to your registration statement. Please be advised that we will take your filing effective only after resolving any comments with respect to your confidential treatment application. Upon review of your confidential treatment application, we will send our comments on the confidential treatment application under separate cover.

You may contact Dale Welcome, Staff Accountant, at (202) 551-3865 or, in his absence, John Cash, Accounting Branch Chief, at (202) 551-3768 if you have questions regarding comments on the financial statements and related matters. Please contact Jessica Dickerson, Staff Attorney, at (202) 551-3749 or, in her absence, Dietrich King, Senior Staff Attorney, at (202) 551-3338 with any other questions.

Sincerely,

/s/ Dietrich King for

Pamela Long
Assistant Director

cc: Via E-mail
Troy Lee
Baker Botts L.L.P.