



DIVISION OF
CORPORATION FINANCE

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

August 22, 2014

Via E-mail

Ryan Ashton
Chief Executive Officer
Great Basin Scientific, Inc.
2441 South 3850 West
Salt Lake City, UT 84120

**Re: Great Basin Scientific, Inc.
Registration Statement on Form S-1
Filed August 8, 2014
File No. 333-197954**

Dear Mr. Ashton:

We have reviewed your registration statement 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 this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Our Company, page 1

1. We note your revisions in response to prior comment 5. Please further revise to clarify whether you take into account any minimum and/or any recurring purchase requirements in calculating your "win rate."

Use of Proceeds, page 9

2. We note your response to prior comment 11. Please revise to provide the information required by Instruction 3 to Item 504 of Regulation S-K regarding the amounts and sources of additional funds needed to accomplish the specified purposes.

Capitalization, page 40

3. Please refer to your response to comment 33. Please revise to disclose the conditions that must be met for the automatic conversion of the preferred stock to common stock in the narrative to the Capitalization table.

Note 8. Common and Preferred Stock, page F-14

4. Please refer to your response to comment 32. We see that you intend to effect a reverse stock split of your common stock prior to the completion of the offering. Please note we will continue our review of the response provided pending the finalization of the reverse stock split and the offering price range.

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 Act of 1933 and all applicable Securities 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Ryan Ashton
Great Basin Scientific, Inc.
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You may contact Kevin Kuhar at 202-551-3662 or Brian Cascio at 202-551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at 202-551-3637 or Mary Beth Breslin at 202-551-3625 with any other questions.

Sincerely,

/s/ Mary Beth Breslin for

Amanda Ravitz
Assistant Director

cc (via e-mail): David Marx