



DIVISION OF
CORPORATION FINANCE

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

March 9, 2015

Via E-mail

Timothy B. Johnson
President and Chief Executive Officer
HTG Molecular Diagnostics, Inc.
3430 E. Global Loop
Tucson, AZ 85706

**Re: HTG Molecular Diagnostics, Inc.
Amendment No. 1 to Registration Statement on Form S-1
Filed February 25, 2015
File No. 333-201313**

Dear Mr. Johnson:

We have reviewed your amended 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 the 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.

Risks Associated With our Business, page 7

1. Please expand the disclosure in this section to include a bullet point to highlight that your report from your independent registered public accounting firm for the year ended December 31, 2014 includes an explanatory paragraph stating that your recurring losses from operations since inception and negative cash flows from operating activities raise substantial doubt about your ability to continue as a going concern.

Exhibits and Financial Statement Schedules, page II-7

2. We note your disclosure in footnote 4 on page 112 that Mr. Grimm will be appointed as a member of your board of directors effective immediately following the closing of this offering. Please file as an exhibit the written consent from Mr. Grimm in which he consents to being named in the prospectus. Refer to Securities Act Rule 438.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure

Timothy B. Johnson
HTG Molecular Diagnostics, Inc.
March 9, 2015
Page 2

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.

You may contact Kevin Kuhar at (202) 551-3662 or Brian Cascio, Accounting Branch Chief, at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Tom Jones at (202) 551-3602 or Mary Beth Breslin, Senior Attorney, at (202) 551-3625 with any other questions.

Sincerely,

/s/ Mary Beth Breslin for

Amanda Ravitz
Assistant Director

cc (via e-mail): M. Wainwright Fishburn, Jr., Esq.