



DIVISION OF
CORPORATION FINANCE

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

November 25, 2014

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
Draft Registration Statement on Form S-1
Submitted November 13, 2014
CIK No. 0001169987**

Dear Mr. Johnson:

We have reviewed your amended draft 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 providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Stock-Based Compensation, page 57

1. We note your response to prior comment 14 but it is not clear how the issuance of the Series E Preferred Stock and Warrants in February and March 2014, which are convertible on a one-to-one basis into common shares, was considered in the valuation of your common shares. We note that you have not provided sufficient discussion of the factors contributing to the significant difference in the \$.22 per share price of the Series E Preferred Stock with either the \$.02 exercise price of the common stock options or the \$.07 per share retrospective valuation. Please describe for us how the Series E Preferred Share issuance impacted the valuation of your common stock.
2. In this regard, we note that you have also not provided sufficient discussion of each factor contributing to the significant difference between the \$.02 exercise price or the

retrospective valuation of \$.07 as of March 31, 2014 with the estimated IPO price range. This discussion should describe significant intervening events and business activities within the company that explain the changes in the estimated fair value of the underlying common stock between these periods. We note that this significant increase in the estimated fair value of the underlying shares in the period leading up to the initial public offering appears to have a significant impact on your financial statements. Additionally, please tell us the expected amount of the reverse stock split.

Financial Statements

Statements of Operations, page F-5

3. We note that the conversion of your preferred securities will occur subsequent to the latest balance sheet date and that this will result in a material reduction in earnings per share. Accordingly, pro forma earnings per share for the latest year and interim period should be presented giving effect to the conversion of these securities. Please tell us why you have removed the pro forma earnings per share amounts on page F-33.

Note 1. Revenue Recognition, page F-10

4. We note your response to prior comment 21. Please tell us how you allocate consideration when an arrangement includes “design services for customer specified consumables.” Please tell us whether this service represents a separate unit of accounting and the general timing of revenue recognition.

Note 12. Other Agreements, page F-29

NuvoGen Obligation, page F-29

5. Please refer to prior comment 22 and address the following:
 - Please provide us your present value calculations supporting the \$7,941,088 and \$9,949,751 utilized in the extinguishment of debt accounting under FASB ASC 470-50-40, including details and timing of all cash flows considered. We note the information provided in Exhibit 1 to your response letter is not sufficient to support the amounts recorded.
 - We note that FASB ASC 470-50-40-12(e) requires the discount rate to be the effective interest rate of the original September 2004 agreement. Please tell us how the effective interest rate was determined. Please also tell us how the 2.5% stated interest rate in the November 2012 amendment impacted the discount rate selected.

Timothy B. Johnson
HTG Molecular Diagnostics, Inc.
November 25, 2014
Page 3

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.