
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM S-8
REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

HTG MOLECULAR DIAGNOSTICS, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

86-0912294
(I.R.S. Employer
Identification No.)

3430 E. Global Loop
Tucson, Arizona
(Address of Principal Executive Offices)

85706
(Zip Code)

2014 Equity Incentive Plan
2014 Employee Stock Purchase Plan
(Full titles of the plans)

Timothy B. Johnson
Chief Executive Officer
HTG Molecular Diagnostics, Inc.
3430 E. Global Loop
Tucson, Arizona 85706
(877) 289-2615
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Steven M. Przesmicki, Esq.
Cooley LLP
4401 Eastgate Mall
San Diego, California 92121
(858) 550-6000

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large Accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share (2)	Proposed maximum aggregate offering price (2)	Amount of registration fee
2014 Equity Incentive Plan				
Common Stock, \$0.001 par value per share	1,143,417 (3)	\$2.343	\$2,679,026.03	\$324.70
2014 Employee Stock Purchase Plan				
Common Stock, \$0.001 par value per share	195,000 (4)	\$2.343	\$456,885.00	\$55.37
Total	1,338,417	N/A	\$3,135,911.03	\$380.07

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “Securities Act”), this Registration Statement shall also cover any additional shares of the Common Stock (“Common Stock”) of HTG Molecular Diagnostics, Inc. (the “Registrant”) that become issuable under the above-referenced plans by reason of any stock dividend, stock split, recapitalization or other similar transaction.
- (2) This estimate is made pursuant to Rule 457(h)(1) and Rule 457(c) of the Securities Act solely for purposes of calculating the registration fee. The price per share and aggregate offering price are based upon the average of the high and low prices of the Common Stock on January 15, 2019, as reported on The Nasdaq Capital Market.
- (3) Represents shares of Common Stock that were automatically added to the shares authorized for issuance under the HTG Molecular Diagnostics, Inc. 2014 Equity Incentive Plan (the “2014 EIP”) on January 1, 2019 pursuant to an “evergreen” provision contained in the 2014 EIP. Pursuant to such provision, on January 1 of each year from January 1, 2016 through and including January 1, 2024, the number of shares authorized for issuance under the 2014 EIP is automatically increased by a number equal to 4% of the total number of shares of Common Stock outstanding on December 31 of the preceding calendar year, or such lesser number of shares determined by the Registrant’s board of directors (the “Board”).
- (4) Represents shares of Common Stock that were automatically added to the shares authorized for issuance under the HTG Molecular Diagnostics, Inc. 2014 Employee Stock Purchase Plan (the “2014 ESPP”) on January 1, 2019 pursuant to an “evergreen” provision contained in the 2014 ESPP. Pursuant to such provision, on January 1 of each year from January 1, 2016 through and including January 1, 2024, the number of shares authorized for issuance under the 2014 ESPP is automatically increased by a number equal to the least of: (a) 1% of the total number of shares of Common Stock outstanding on December 31 of the preceding calendar year; (b) 195,000 shares; and (c) a number determined by the Board that is less than the amounts set forth in the foregoing clauses (a) and (b).

INCORPORATION OF DOCUMENTS BY REFERENCE

This Registration Statement is being filed for the purpose of increasing the number of securities of the same class as other securities for which Registration Statements of the Registrant on Form S-8 relating to the same employee benefit plans are effective.

The Registrant previously registered shares of its Common Stock for issuance under the 2014 EIP and the 2014 ESPP under Registration Statements on Form S-8 filed with the Securities and Exchange Commission (the "Commission") on May 7, 2015 (File No. 333-203930), March 25, 2016 (File No. 333-210401), March 24, 2017 (File No. 333-216942) and January 17, 2018 (File No. 333-222571). Pursuant to General Instruction E to Form S-8, this Registration Statement hereby incorporates by reference the contents of the Registration Statements referenced above.

EXHIBIT INDEX

Exhibit Number	Description
4.1	<u>Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-37369), filed with the Commission on May 12, 2015).</u>
4.2	<u>Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-37369), filed with the Commission on May 12, 2015).</u>
4.3	<u>Form of Common Stock Certificate of the Registrant (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-201313), originally filed with the Commission on December 30, 2014, as amended).</u>
5.1	<u>Opinion of Cooley LLP.</u>
23.1	<u>Consent of Independent Registered Public Accounting Firm.</u>
23.2	<u>Consent of Cooley LLP. Reference is made to Exhibit 5.1.</u>
24.1	<u>Power of Attorney. Reference is made to the signature page hereto.</u>
99.1	<u>HTG Molecular Diagnostics, Inc. 2014 Equity Incentive Plan and Forms of Stock Option Agreement, Notice of Exercise and Stock Option Grant Notice thereunder (incorporated by reference to Exhibit 99.3 to the Registrant's Registration Statement on Form S-8 (File No. 333-203930), filed with the Commission on May 7, 2015).</u>
99.2	<u>HTG Molecular Diagnostics, Inc. 2014 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form S-1 (File No. 333-201313), originally filed with the Commission on December 30, 2014, as amended).</u>

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Tucson, State of Arizona, on January 18, 2019.

HTG MOLECULAR DIAGNOSTICS, INC.

By: /s/ Timothy B. Johnson
Timothy B. Johnson
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Timothy B. Johnson and Shaun D. McMeans, and each of them, as his or her true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him or her and in his or her name, place or stead, in any and all capacities, to sign any and all amendments to this Registration Statement, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Timothy B. Johnson</u> Timothy B. Johnson	Chief Executive Officer and Member of the Board of Directors <i>(Principal Executive Officer)</i>	January 18, 2019
<u>/s/ Shaun D. McMeans</u> Shaun D. McMeans	Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	January 18, 2019
<u>/s/ Ann F. Hanham</u> Ann F. Hanham	Chair of the Board of Directors	January 18, 2019
<u>/s/ Harry A. George</u> Harry A. George	Member of the Board of Directors	January 18, 2019
<u>/s/ Donnie M. Hardison</u> Donnie M. Hardison	Member of the Board of Directors	January 18, 2019
<u>/s/ James T. LaFrance</u> James T. LaFrance	Member of the Board of Directors	January 18, 2019
<u>/s/ Lee R. McCracken</u> Lee R. McCracken	Member of the Board of Directors	January 18, 2019

/s/ Michelle R. Griffin
Michelle R. Griffin

Member of the Board of Directors

January 18, 2019

Steven M. Przesmicki
+1 858 550 6070
przes@cooley.com

Exhibit 5.1

January 18, 2019

HTG Molecular Diagnostics, Inc.
3430 E. Global Loop
Tucson, AZ 85706

Ladies and Gentlemen:

We have represented HTG Molecular Diagnostics, Inc., a Delaware corporation (the "**Company**"), in connection with the filing by the Company, of a Registration Statement on Form S-8 (the "**Registration Statement**") with the Securities and Exchange Commission, covering the offering of up to an aggregate of 1,338,417 shares of the Company's Common Stock, \$0.001 par value (the "**Shares**"), including (i) 1,143,417 shares (the "**2014 Plan Shares**") reserved for issuance pursuant to the Company's 2014 Equity Incentive Plan (the "**2014 Plan**"), and (ii) 195,000 shares (the "**ESPP Shares**") reserved for issuance pursuant to the Company's 2014 Employee Stock Purchase Plan (the "**2014 ESPP**").

In connection with this opinion, we have examined and relied upon the Registration Statement and the related prospectuses, the 2014 Plan and the 2014 ESPP, the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws and such other documents, records, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals and the conformity to originals of all documents submitted to us as copies thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not sought independently to verify such matters.

Our opinion is expressed only with respect to the federal laws of the United States of America and the General Corporation Law of the State of Delaware. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued in accordance with the 2014 Plan and the 2014 ESPP, respectively, and the Registration Statement and related prospectuses, will be validly issued, fully paid, and nonassessable (except as to Shares issued pursuant to certain deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

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We consent to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/Steven M. Przesmicki
Steven M. Przesmicki

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Consent of Independent Registered Public Accounting Firm

HTG Molecular Diagnostics, Inc.
Tucson, Arizona

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 22, 2018, relating to the financial statements of HTG Molecular Diagnostics, Inc. (the "Company") appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2017.

/s/ BDO USA, LLP
Phoenix, Arizona

January 18, 2019