

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

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

HARVARD BIOSCIENCE, INC.  
(Exact Name of Registrant as Specified in Its Charter)

Delaware  
(State of Incorporation)

04-3306140  
(I.R.S. Employer  
Identification No.)

84 October Hill Road  
Holliston, Massachusetts  
(Address of Principal Executive Offices)

01746  
(Zip Code)

HARVARD BIOSCIENCE, INC.  
EMPLOYEE STOCK PURCHASE PLAN  
(Full Title of the Plan)

Jeffrey A. Duchemin, Chief Executive Officer  
HARVARD BIOSCIENCE, INC.  
84 October Hill Road  
Holliston, Massachusetts 01746  
(508) 893-8999  
(Name, address, and telephone number, including area code, of agent for service)

*With copies to:*

Chad J. Porter  
Burns & Levinson LLP  
125 Summer Street  
Boston, Massachusetts 02110  
(617) 345-3000

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting 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"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input 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

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**Calculation of Registration Fee**

<b>Title of Securities to be Registered</b>	<b>Amount to be Registered(1)</b>	<b>Proposed Maximum Offering Price Per Share(2)</b>	<b>Proposed Maximum Aggregate Offering Price(2)</b>	<b>Amount of Registration Fee</b>
Common Stock, par value \$0.01 per share	300,000 shares	\$2.33	\$699,000	\$82.00

- (1) This Registration Statement relates to 300,000 shares of Common Stock, par value \$0.01 per share, of Harvard Bioscience, Inc. (“Common Stock”) available for issuance under the Harvard Bioscience, Inc. Employee Stock Purchase Plan (as amended, the “ESPP”); plus such indeterminate number of additional shares of Common Stock as may be required pursuant to the ESPP in the event of a stock dividend, stock split, split-up, recapitalization or other similar event. This Registration Statement also relates to the Rights to purchase shares of Series A Junior Participating Cumulative Preferred Stock of Harvard Bioscience, Inc. (the “Company”) which are attached to all shares of Common Stock pursuant to the terms of the Company’s Shareholder Rights Agreement dated February 5, 2008. Until the occurrence of certain prescribed events, the Rights are not exercisable, are evidenced by the certificates for the Common Stock and will be transferred only with such stock.
- (2) This estimate is made pursuant to Rule 457(c) and (h) under the Securities Act of 1933, as amended (the “Securities Act”), solely for the purpose of determining the amount of the registration fee. The registration fee is based upon the average of the high and low sales prices for a share of Common Stock on May 26, 2017, as reported on the NASDAQ Global Market.

## INCORPORATION BY REFERENCE OF PRIOR REGISTRATION STATEMENT

This Registration Statement is filed by Harvard Bioscience, Inc. (the “Registrant”) for the purpose of registering pursuant to General Instruction E to Form S-8, 300,000 additional shares of the Registrant’s common stock, \$0.01 par value per share (the “Common Stock”) under Amendment No. 3 to Harvard Bioscience, Inc. Employee Stock Purchase Plan (the “ESPP”). On April 5, 2017, the Registrant filed with the Securities and Exchange Commission (the “Commission”) a definitive proxy statement that included proposals to, among other things, increase the number of shares available for issuance under the ESPP by 300,000 shares of Common Stock. The proposal to increase the number of shares available for issuance under the ESPP was approved by the Registrant’s stockholders on May 18, 2017. This Registration Statement registers the 300,000 additional shares of Common Stock available for issuance under the ESPP.

The additional 300,000 shares of Common Stock available for issuance under the ESPP registered pursuant to this Registration Statement are the same class as those included on registration statements on Form S-8, and post-effective amendments thereto, filed on January 17, 2001 (File No. 333-53848), June 15, 2001 (File No. 333-53848), and June 7, 2013 (File No. 333-189175). The contents of all aforementioned Registration Statements, including any amendments thereto or filings incorporated therein, are incorporated herein by reference, except as modified herein.

## PART II

### INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

#### Item 3. Incorporation of Documents by Reference.

The Registrant is subject to the informational and reporting requirements of Sections 13(a), 14 and 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and in accordance therewith files reports, proxy statements and other information with the Commission. The following documents, which are on file with the Commission, are incorporated in this registration statement by reference:

(a) The Registrant’s Annual Report on Form 10-K for the year ended December 31, 2016, filed with the Commission on March 17, 2017;

(b) All other reports filed by the Registrant pursuant to Section 13(a) or 15(d) of the Exchange Act, since the end of the fiscal year covered by the Registrant’s Annual Report on Form 10-K described in (a) above; and

(c) The description of the Registrant’s Common Stock contained in the Registrant’s registration statement on Form 8-A (File No. 000-31923 ) filed with the Commission on November 9, 2000 under the Exchange Act, including any amendment or report filed for the purpose of updating such description.

All documents subsequently filed by the registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of the filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

#### Item 8. Exhibits

The Exhibit Index immediately preceding the exhibits is incorporated herein by reference.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Company 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 Holliston, Massachusetts, on this 5<sup>th</sup> day of June, 2017.

HARVARD BIOSCIENCE, INC.

By: /s/ JEFFREY A. DUCHEMIN  
Jeffrey A. Duchemin, *Chief Executive Officer*

## POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS that each individual whose signature appears below constitutes and appoints each of Jeffrey A. Duchemin and Robert E. Gagnon as such person's true and lawful attorney-in-fact and agent with full power of substitution and resubstitution, for such person in such person's name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement (or any registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto each said attorney-in-fact and agent 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 such person might or could do in person, hereby ratifying and confirming all that any said attorney-in-fact and agent, or any substitute or substitutes of any of them, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the date indicated. Each person listed below has signed this registration statement as an officer or director of Harvard Bioscience, Inc.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ JEFFREY A. DUCHEMIN</u> Jeffrey A. Duchemin	Director and Chief Executive Officer (Principal Executive Officer)	June 5, 2017
<u>/s/ ROBERT E. GAGNON</u> Robert E. Gagnon	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	June 5, 2017
<u>/s/ JAMES GREEN</u> James Green	Director	June 5, 2017
<u>/s/ JOHN F. KENNEDY</u> John F. Kennedy	Director	June 5, 2017
<u>/s/ EARL R. LEWIS</u> Earl R. Lewis	Director	June 5, 2017
<u>/s/ BERTRAND LOY</u> Bertrand Loy	Director	June 5, 2017
<u>/s/ GEORGE UVEGES</u> George Uveges	Director	June 5, 2017

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## EXHIBIT INDEX

<b>Exhibit Number</b>	<b>Description</b>
(1)3.1	Second Amended and Restated Certificate of Incorporation of Harvard Bioscience, Inc.
(1)3.2	Amended and Restated Bylaws of Harvard Bioscience, Inc.
(2)3.3	Amendment No. 1 to Amended and Restated Bylaws of Harvard Bioscience, Inc. (as adopted October 30, 2007)
(1)4.1	Specimen certificate for shares of Common Stock, \$0.01 par value, of Harvard Bioscience, Inc.
(3)4.2	Amended and Restated Securityholders' Agreement dated as of March 2, 1999 by and among Harvard Apparatus, Inc., Pioneer Partnership II, Pioneer Capital Corp., First New England Capital, L.P. and Citizens Capital, Inc. and Chane Graziano and David Green
(4)4.3	Shareholder Rights Agreement, dated as of February 5, 2008 between Harvard Bioscience, Inc., and Registrar and Transfer Company, as Rights Agent
(5)4.4	Harvard Bioscience, Inc. Employee Stock Purchase Plan, as amended
*5.1	Legal opinion from Burns & Levinson LLP
*23.1	Consent of KPMG LLP, as independent registered public accounting firm
23.2	Consent of Burns & Levinson LLP (contained in the opinion filed as Exhibit 5.1 to this Registration Statement)
24.1	Power of attorney (included on the signature page to this Registration Statement)

\* Filed herewith.

- (1) Previously filed as an exhibit to the Company's Registration Statement on Form S-1/A (File No. 333-45996) (filed on November 9, 2000) and incorporated by reference thereto.
  - (2) Previously filed as an exhibit to the Company's Current Report on Form 8-K (filed on November 1, 2007) and incorporated by reference thereto.
  - (3) Previously filed as an exhibit to the Company's Registration Statement on Form S-1/A (File No. 333-45996) (filed on October 25, 2000) and incorporated by reference thereto.
  - (4) Previously filed as an exhibit to the Company's Current Report on Form 8-K (filed on February 8, 2008) and incorporated by reference thereto.
  - (5) Previously filed as Appendix A to the Company's Definitive Schedule 14A (Proxy Statement) (filed on April 5, 2017) and incorporated by reference thereto.
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June 5, 2017

Harvard Bioscience, Inc.  
84 October Hill Road  
Holliston, MA 01746-1371

Re: Securities Being Registered under Registration Statement on Form S-8

Ladies and Gentlemen:

This opinion letter is furnished to you in connection with your filing of a Registration Statement on Form S-8 (the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), on or about the date hereof relating to an aggregate of 300,000 shares (the "Shares") of Common Stock, \$0.01 par value per share (the "Common Stock"), of Harvard Bioscience, Inc., a Delaware corporation (the "Company"), that may be issued pursuant to the Company's Employee Stock Purchase Plan, as amended (the "Plan"), as well the associated preferred stock purchase rights (the "Rights") that will attach to such issued Shares pursuant to the Shareholder Rights Agreement, dated as of February 5, 2008, between the Company and Registrar and Transfer Company (the "Rights Agreement").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinion expressed below. We have relied, without independent verification, as to matters of fact material to the opinion set forth below, on certificates of officers of the Company.

In rendering this opinion, we have also assumed that the Rights Agreement was duly authorized, executed and delivered by the Rights Agent and that the members of the Company's Board of Directors (the "Board") acted in a manner consistent with their fiduciary duties as required under applicable law in adopting the Rights Agreement. With respect to the Rights, our opinion does not address the determination a court of competent jurisdiction may make regarding whether the Board would be required to redeem or terminate, or take other action with respect to, the Rights at some future time based on the facts and circumstances existing at that time. This opinion addresses the Rights and the Rights Agreement in their entirety and not any particular provision of the Rights or the Rights Agreement, and it should be understood that it is not settled whether the invalidity of any particular provision of a rights agreement or of purchase rights issued thereunder would result in invalidating such rights in their entirety. The Rights exist by virtue of and are subject to the Rights Agreement and the terms and conditions thereof, and it should be understood that the Rights Agreement and the Rights may be terminated or amended at the Company's option.

The opinion expressed below is limited to the Delaware General Corporation Law (which includes applicable provisions of the Delaware Constitution and reported judicial decisions interpreting the Delaware General Corporation Law and the Delaware Constitution).

For purposes of the opinion expressed below, we have assumed that a sufficient number of authorized but unissued shares of the Company's Common Stock will be available for issuance when the Shares are issued.

Based on the foregoing, we are of the opinion that (i) the Shares have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms of the Plan, will be validly issued, fully paid and nonassessable, and (ii) upon issuance the Rights, such Rights will be valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

BURNS & LEVINSON LLP

/s/ BURNS & LEVINSON LLP

**Consent of Independent Registered Public Accounting Firm**

The Board of Directors  
Harvard Bioscience, Inc.:

We consent to the use of our reports dated March 16, 2017, with respect to the consolidated balance sheets of Harvard Bioscience, Inc. as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive (loss) income, stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 2016, and the effectiveness of internal control over financial reporting as of December 31, 2016 incorporated by reference herein.

Our report dated March 16, 2017, on the effectiveness of internal control over financial reporting as of December 31, 2016, expresses our opinion that the Company did not maintain effective internal control over financial reporting as of December 31, 2016 because of the effect of material weaknesses on the achievement of the objectives of the control criteria and contains an explanatory paragraph that states that material weaknesses related to sufficient resources within the organization with assigned accountability over the design and operation of inventory controls at Multi Channel Systems MCS GmbH (MCS), an operating subsidiary, and over the design and operation of income tax controls, ineffective process level control activities over the accuracy of data and assumptions used in the measurement of inventory costs and inventory reserves at MCS, and the recognition, measurement, and disclosure of current and deferred income taxes.

(signed) KPMG LLP

Cambridge, Massachusetts  
June 2, 2017