

**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)

**84 October Hill Road
Holliston, Massachusetts 01746
(508) 893-8999**
(Address of Registrant's
principal executive offices)

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

**HARVARD BIOSCIENCE, INC. THIRD AMENDED AND RESTATED 2000
STOCK OPTION AND INCENTIVE PLAN**
(Full Title of the Plan)

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

With copies to:

**Josef B. Volman
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

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company

Calculation of Registration Fee

Title of Securities to be Registered	Amount to be Registered(1)(2)	Proposed Maximum Offering Price Per Share(3)	Proposed Maximum Aggregate Offering Price(3)	Amount of Registration Fee
Common Stock, par value \$0.01 per share	3,700,000 shares	\$4.90	\$18,130,000	\$2,105

- (1) This Registration Statement relates to 3,700,000 shares of Common Stock, par value \$0.01 per share, of Harvard Bioscience, Inc. (“Common Stock”) available for issuance under the Harvard Bioscience, Inc. Third Amended and Restated 2000 Stock Option and Incentive Plan (together with previous versions of such plan, the “Plan”); plus such indeterminate number of additional shares of Common Stock as may be required pursuant to the Plan 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) The Company previously filed a Registration Statement on Form S-8 on January 17, 2001 (SEC File No. 333-53848), registering the issuance of 4,849,096 shares of Common Stock under the Plan and other equity plans of the Company, as amended by Post-Effective Amendment No.1 to Form S-8 filed on June 15, 2001 registering the issuance of an additional 263,202 shares of Common Stock under the Plan. On April 15, 2003, the Company filed a Registration Statement on Form S-8 (SEC File No. 333-104544) registering the issuance of 787,413 additional shares of Common Stock under the Plan. On June 28, 2006, the Company filed a Registration Statement on Form S-8 (SEC File No. 333-135418) registering the issuance of 2,067,060 additional shares of Common Stock under the Plan. On May 19, 2008, the Company filed a Registration Statement on Form S-8 (SEC File No. 333-151003) registering the issuance of 2,500,000 additional shares of Common Stock under the Plan. By filing this Registration Statement in accordance with Instruction E to Form S-8, the Company registers the issuance of the 3,700,000 additional shares of Common Stock approved for issuance under the Plan at the Annual Meeting of Stockholders of the Company held on May 25, 2011.
- (3) 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 19, 2011, as reported on the NASDAQ Global Market.

The Company previously filed (i) a Registration Statement on Form S-8 with the Securities and Exchange Commission, or SEC, on January 17, 2001 as amended on June 15, 2001 (SEC File No. 333-53848), (ii) a Registration Statement on Form S-8 with the SEC on April 15, 2003 (SEC File No. 333-104544), (iii) a Registration Statement on Form S-8 with the SEC on June 28, 2006 (SEC File No. 333-135418) and (iv) a Registration Statement on Form S-8 with the SEC on May 19, 2008 (SEC File No. 333-151003), each filed to register shares to be issued pursuant to the Plan (collectively, the "Original Filings"). This Registration Statement registers additional shares of the Company's Common Stock to be issued pursuant to the Plan. The contents of the Original Filings are incorporated by reference into this Registration Statement pursuant to General Instruction E of Form S-8.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits

The exhibits listed below represent a complete list of exhibits filed or incorporated by reference as part of this Registration Statement.

<u>Exhibit Number</u>	<u>Description</u>
(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.
(1)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
(3)4.3	Shareholder Rights Agreement, dated as of February 5, 2008 between Harvard Bioscience, Inc., and Registrar and Transfer Company, as Rights Agent
(4)4.4	Harvard Bioscience, Inc. Third Amended and Restated 2000 Stock Option and Incentive Plan
*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 (File No. 333-45996) 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.

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- (3) 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.
 - (4) Previously filed as Appendix A to the Company's Definitive Schedule 14A (Proxy Statement) (filed on April 15, 2011) and incorporated by reference thereto.

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 25th day of May, 2011.

HARVARD BIOSCIENCE, INC.

By: /S/ Chane Graziano
Chane Graziano, *Chief Executive Officer*

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS that each individual whose signature appears below constitutes and appoints each of Chane Graziano and Thomas McNaughton 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.

Signature	Title	Date
<u>/s/ Chane Graziano</u> Chane Graziano	Director and Chief Executive Officer (Principal Executive Officer)	May 25, 2011
<u>/s/ Thomas McNaughton</u> Thomas McNaughton	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	May 25, 2011
<u>/s/ David Green</u> David Green	Director	May 25, 2011
<u>/s/ Robert Dishman</u> Robert Dishman	Director	May 25, 2011
<u>/s/ Neal J. Harte</u> Neal J. Harte	Director	May 25, 2011
<u>/s/ John F. Kennedy</u> John F. Kennedy	Director	May 25, 2011
<u>/s/ Earl R. Lewis</u> Earl R. Lewis	Director	May 25, 2011
<u>/s/ George Uveges</u> George Uveges	Director	May 25, 2011

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May 25, 2011

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 3,700,000 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 Third Amended and Restated 2000 Stock Option and Incentive Plan (the "Plan").

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.

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 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.

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 and Shareholders
Harvard Bioscience, Inc.:

We consent to the use of our report dated March 16, 2011, with respect to the consolidated balance sheets of Harvard Bioscience, Inc. and subsidiaries as of December 31, 2010 and 2009, and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss), and cash flows for each of the years in the three-year period ended December 31, 2010, and our report dated March 16, 2011 with respect to the effectiveness of internal control over financial reporting as of December 31, 2010, which reports appear in the December 31, 2010 annual report on Form 10-K of Harvard Bioscience, Inc., incorporated by reference herein.

/s/ KPMG

Boston, Massachusetts
May 25, 2011