

<HTML>
<HEAD>
<TITLE> S-8 Registration Statement</TITLE>
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<CENTER> As filed with the Securities and Exchange Commission on February 10, 2000</Center>

<H5 ALIGN=RIGHT>Registration No. 333-</H5>

<HR>

<H1 ALIGN=CENTER>SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549</H1>

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<H1 ALIGN=CENTER>FORM S-8
REGISTRATION STATEMENT</H1>

<CENTER><I>Under

The Securities Act of 1933</I></CENTER>

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<H1 ALIGN=CENTER>BOSTON BIOMEDICA, INC.</H1>

<CENTER>(Exact Name of Registrant as Specified in its Charter)</CENTER>

<PRE>

Massachusetts 04-2652826
(State or Other Jurisdiction of (I.R.S. Employer
Incorporation or Organization) Identification Number)

</PRE>

<H1 ALIGN=CENTER>375 West Street, West Bridgewater, Massachusetts
02379</H1>

<CENTER>(Address, Including Zip Code, and Telephone
Number, Including Area Code, of Registrant's Principal Executive Offices)</CENTER>

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<H1 ALIGN=CENTER><U>Employee Stock Option Plan
1999 Nonqualified Stock Option Plan
1999 Employee Stock Purchase Plan</U></H1>

<CENTER>(Full title of Plan)</CENTER>

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<H1 ALIGN=CENTER>Richard T. Schumacher, Chief Executive Officer
Boston Biomedica, Inc.
375 West Street
West Bridgewater, MA 02379
(508) 580-1900</H1>

<CENTER>(Name, Address and Telephone Number, Including Area Code, of Agent for Service)</CENTER>

<H1 ALIGN=CENTER><I>with a copy to:</I></H1>

<H1 ALIGN=CENTER>Steven R. London, Esq.
Brown, Rudnick, Freed & Gesmer
One Financial Center, Boston, Massachusetts 02111
(617) 856-8200</H1>

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<H1 ALIGN=CENTER>CALCULATION OF REGISTRATION FEE</H1>

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| Title of Each Class of Securities to Be Registered | Amount to Be Registered | Proposed Maximum Registered (1) | Proposed Maximum Offering Price Per Share (3) | Aggregate Offering Price(3) | Amount of Registration Fee |
|--|-------------------------|---------------------------------|---|-----------------------------|----------------------------|
| Common Stock, \$.01 par value | 2,000,000 | Shares(2) | \$5.46 | \$10,920,000 | \$2,882.88 |

(1) Includes (i) 1,250,000 shares that may be issued pursuant to the 1999 Employee Stock Option Plan, (ii) 500,000 shares that may be issued pursuant to the 1999 Nonqualified Stock Option Plan and (iii) 250,000 shares that may be issued pursuant to the Employee Stock Purchase Plan.

(2) Such presently indeterminable number of additional shares of Common Stock are also registered hereunder as may be issued in the event of a merger, consolidation, reorganization, recapitalization, stock dividend, stock split or other similar change in Common Stock.

(3) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, on the basis of the average of the high and low reported price of the Common Stock of \$5.46 on the Nasdaq Stock Market, Inc. on February 4, 2000.

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<H1 ALIGN=CENTER>PART II</H1>

at the time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(h) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the Registrant's Certificate of Incorporation, as amended, By-Laws, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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<H1 ALIGN=CENTER>SIGNATURES</H1>

<P><U>The Registrant</U>. 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 West Bridgewater, Commonwealth of Massachusetts, on February 11, 2000.

<H1 ALIGN=RIGHT>BOSTON BIOMEDICA, INC.</H1>

<PRE>

By:/S/ Richard T. Schumacher

Richard T. Schumacher

Principal Executive Officer

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<H1 ALIGN=CENTER>POWER OF ATTORNEY</H1>

<P>KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Richard T. Schumacher, and Kevin W. Quinlan and each of them (with full power to each of them to act alone), his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any or all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all 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 any of them, or their substitutes, may lawfully do or cause to be done by virtue hereof.

<P>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.

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| Signature | Title | Date |
|-----------|-------|------|
|-----------|-------|------|

| | | |
|---------------------------|-----------------------------|-------------------|
| /S/ Richard T. Schumacher | | February 11, 2000 |
| ----- | Principal Executive Officer | ----- |
| Richard T. Schumacher | and Director | |

| | | |
|----------------------|------------------------------------|-------------------|
| /S/ Kevin W. Quinlan | | February 11, 2000 |
| ----- | Principal Financial and Accounting | ----- |
| Kevin W. Quinlan | Officer and Director | |

| | | |
|--------------------------|----------|-------------------|
| /S/ Francis E. Capitanio | | February 11, 2000 |
| ----- | Director | ----- |
| Francis E. Capitanio | | |

/S/ Calvin A. Saravis
----- Director
Calvin A. Saravis

February 11, 2000

/S/ William R. Prather
----- Director
Dr. William R. Prather

February 11, 2000

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<H1 ALIGN=CENTER>EXHIBIT INDEX</H1>

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Item 8. Exhibits.

(4) Instruments defining the rights of security holders, including indentures.

(a) Description of Certificate of Common Stock filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-10759) (the "S-1 Registration Statement").*

(b) Amended and Restated Articles of Organization of the Registrant, filed as Exhibit 3.1 to the S-1 Registration Statement.*

(c) Amended and Restated By-Laws of the Registrant, filed as Exhibit 3.2 to the S-1 Registration Statement.*

(5) Opinion regarding legality.

(a) Legal Opinion of Brown, Rudnick, Freed & Gesmer.

(24) Consents of experts and counsel.

(a) Consent of PricewaterhouseCoopers LLP, independent accountants.

(b) Consent of Brown, Rudnick, Freed & Gesmer is included within their legal opinion filed as Exhibit (5)(a) hereof.

(25) Power of Attorney (included on signature page hereof).

(99) Additional Exhibits.

(a) Boston Biomedica, Inc. Employee Stock Option Plan filed as Exhibit 10.16 to the S-1 Registration Statement.*

(b) Boston Biomedica, Inc. 1999 Nonqualified Stock Option Plan.*

(c) Boston Biomedica, Inc. 1999 Employee Stock Purchase Plan.*

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* Not filed herewith. In accordance with Rule 411(c) promulgated pursuant to the Securities Act of 1933, as amended, reference is made to the documents previously filed with the Securities and Exchange Commission which documents are hereby incorporated by reference.

<H1 ALIGN=CENTER>EXHIBIT 5</H1>

<CENTER>Opinion of Brown, Rudnick, Freed & Gesmer <P>

February 11, 2000</CENTER><P>

Boston Biomedica, Inc.

375 West Street

West Bridgewater, MA 02379

<PRE>
RE: Boston Biomedica, Inc.
Registration Statement on Form S-8

Dear Ladies and Gentlemen:

We have acted as legal counsel to Boston Biomedica, Inc., a Massachusetts corporation (the "Company"), in connection with the preparation and filing of a Registration Statement on Form S-8 (the "Registration Statement") with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Act"), relating to an aggregate of 2,000,000 shares of the Company's Common Stock, \$.01 par value (the "Shares").

The Shares issuable pursuant to the exercise of options granted or to be granted pursuant to the Boston Biomedica, Inc. Employee Stock Option Plan, the

Boston Biomedica, Inc. 1999 Nonqualified Stock Purchase Plan and the Boston Biomedica, Inc. Employee Stock Purchase Plan (collectively, the "Plans").

In connection with this Opinion Letter, we have examined the documents listed on Schedule A attached hereto (collectively, the "Documents").

We have not made any independent review or investigation of orders, judgments, rules or other regulations or decrees by which the Company or any of its property may be bound, nor have we made any independent investigation as to the existence of actions, suits, investigations or proceedings, if any, pending or threatened against the Company.

With your concurrence, the opinion hereafter expressed, whether or not qualified by language such as "to our knowledge," is based solely upon (i) our review of the Documents, (ii) discussions with certain officers of the Company with respect to the Documents, (iii) discussions with those of our attorneys who have given substantive legal representation to the Company in connection with the Registration Statement, and (iv) such review of published sources of law as we have deemed necessary.

This firm, in rendering legal opinions, customarily makes certain assumptions which are described in Schedule B hereto. In the course of our representation of the Company in connection with the Registration Statement, nothing has come to our attention which causes us to believe reliance upon any of those assumptions is inappropriate, and, with your concurrence, the opinion hereafter expressed is based upon those assumptions. For purposes of those assumptions, the Enumerated Party referred to in Schedule B is the Company.

Our opinion hereafter expressed is limited to the law of the Commonwealth of Massachusetts and Federal law.

We express no legal opinion upon any matter other than as explicitly addressed in numbered paragraph 1 below, and our express opinion therein contained shall not be interpreted to be implied opinions upon any other matter.

Based upon and subject to the foregoing, we are of the opinion that:

1. The Shares have been duly authorized, and when issued and paid for in accordance with the terms of the Plans, will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as an Exhibit to the Registration Statement and to the reference to this firm wherever it appears in the Registration Statement.

Very truly yours,

BROWN, RUDNICK, FREED & GESMER
By: Brown, Rudnick, Freed & Gesmer, P.C.,
a partner

By: /S/ Steven R. London

Steven R. London
Duly authorized

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SRL/JGN/JRS

<H1 ALIGN=CENTER>SCHEDULE A

<U>LIST OF DOCUMENTS</U></H1>
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In connection with the Opinion Letter to which this Schedule A is attached, we have reviewed the following Documents. However, except as otherwise expressly indicated, we have not reviewed any documents, instruments or agreements referred to in or listed upon any of the following documents:

(i) the Amended and Restated Articles of Organization of the Company, as amended, as certified by the Secretary of State of the Commonwealth of Massachusetts.

(ii) copy of the Amended and Restated By-laws of the Company.

(iii) the corporate minute books or other records of the Company pertaining to certain resolutions of the directors and the stockholders of the Company as to the Plans and a certificate of the Clerk of the Company as to certain resolutions of the directors of the Company;

(iv) a certificate dated as of a recent date of the Secretary of State of the Commonwealth of Massachusetts as to the good standing of the Company;

(v) a letter dated as of a recent date from the Company's transfer agent with respect to the number of shares of Common Stock of the Company outstanding;

(vi) the Plans; and

(vii) the Registration Statement.

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<H1 ALIGN=CENTER>SCHEDULE B

BROWN, RUDNICK, FREED & GESMER

<U>STANDARD ASSUMPTIONS</U></H1>

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In rendering legal opinions in third party transactions, Brown, Rudnick, Freed & Gesmer makes certain customary assumptions described below:

1. Each natural person executing any of the documents has sufficient legal capacity to enter into such Documents.

2. Each person other than the Enumerated Party has all requisite power and authority and has taken all necessary corporate or other action to enter into the Documents to which it is a part or by which it is bound, to the extent necessary to make the documents enforceable against it.

3. Each person other than the Enumerated Party has complied with all legal requirements pertaining to its status as such status relates to its rights to enforce the Documents against the Enumerated Party.

4. Each Document is accurate, complete and authentic, each original is authentic, each copy conforms to an authentic original and all signatures are genuine.

5. All official public records are accurate, complete and properly indexed and filed.

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<H1 ALIGN=CENTER>EXHIBIT (24)(a)

CONSENT OF INDEPENDENT ACCOUNTANTS</H1>

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated February 24, 1999, except as to certain information in the first paragraph of Note 9, for which the date is March 31, 1999, relating to the consolidated financial statements and financial statement schedule, which appears in Boston Biomedica, Inc.'s Annual Report on Form 10-K for the year ended December 31, 1998.<P>

<CENTER>/S/ PricewaterhouseCoopers LLP</CENTER><P>

Boston, Massachusetts

February 11, 2000

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