

HARVARD BIOSCIENCE INC
Form S-4/A
September 17, 2002

[QuickLinks](#) -- Click here to rapidly navigate through this document

As filed with the Securities and Exchange Commission on September 17, 2002 Registration No. 333-98927

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

AMENDMENT NO. 1 TO

FORM S-4

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

HARVARD BIOSCIENCE, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

3826
(Primary Standard Industrial
Classification Code Number)
84 October Hill Road
Holliston, Massachusetts 01746
(508) 893-8999

04-3306140
(I.R.S. Employer Identification Number)

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

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)

Copies to:

H. David Henken, P.C.
Goodwin Procter LLP
Exchange Place
Boston, Massachusetts 02109
(617) 570-1000

Peter Sugar, Esq.
Joel Alam, Esq.
Jaffe, Raitt, Heuer & Weiss, P.C.
One Woodward Avenue, Suite 2400
Detroit, Michigan 48226
(313) 961-8380

Approximate date of commencement of proposed sale of the securities to the public: As soon as possible after the effective date of this registration statement and the consummation of the merger described in this registration statement.

If the securities being registered on this form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement number for the same offering.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

**GENOMIC SOLUTIONS INC.
4355 Varsity Drive, Suite E
Ann Arbor, Michigan 48108**

Dear Stockholders:

The Board of Directors of Genomic Solutions Inc. has adopted and approved an agreement and plan of merger, dated as of July 17, 2002, which provides for the merger of Genomic Solutions with and into HAG Acq. Corp., a wholly-owned subsidiary of Harvard Bioscience, Inc. If the merger is completed, each outstanding share of Genomic Solutions common stock will be converted into the right to receive a combination of Harvard Bioscience common stock and cash. The aggregate purchase price for all of the outstanding shares of Genomic Solutions common stock is fixed at 3,200,000 shares of Harvard Bioscience common stock and \$9,000,000 in cash, subject to adjustment in limited circumstances. The per share conversion ratio for Genomic Solutions common stock and the per share cash consideration will be determined based on the number of shares of Genomic Solutions common stock outstanding at the completion of the merger. Based on the number of outstanding shares of Genomic Solutions common stock on September 16, 2002, the most recent practicable date prior to the date of this proxy statement and prospectus, and assuming that all in-the-money options to purchase Genomic Solutions common stock as of September 16, 2002 are exercised prior to the merger, each share of Genomic Solutions common stock would be exchanged for approximately 0.1016 of a share of Harvard Bioscience common stock and \$0.2858 in cash. These per share amounts are estimates, however, and may change at the completion of the merger as a result of, among other things, an increase in the number of Genomic Solutions shares of common stock outstanding on the date the merger is completed. You will also receive cash, without interest, rather than a fractional share of Harvard Bioscience common stock that you otherwise would be entitled to receive in the merger.

Harvard Bioscience common stock is traded on the Nasdaq National Market under the trading symbol "HBIO," and on September 16, 2002, the closing price of Harvard Bioscience common stock was \$4.87 per share.

Stockholders of Genomic Solutions will be asked at a special meeting to adopt and approve the merger agreement and approve the merger. The special meeting for Genomic Solutions stockholders will be held on October 24, 2002, at 9:00 a.m., local time, at The Crowne Plaza Hotel, 610 Hilton Boulevard, Ann Arbor, Michigan 48108.

This proxy statement and prospectus provides you with detailed information concerning the merger agreement, the merger, Genomic Solutions and Harvard Bioscience. **You are encouraged to read and consider carefully this proxy statement and prospectus in its entirety. In particular, you should carefully consider the discussion in the section entitled "Risk Factors" beginning on page 21 of this proxy statement and prospectus.** You may also obtain more information about Harvard Bioscience and Genomic Solutions from documents that each of us has filed with the Securities and Exchange Commission.

The Genomic Solutions board of directors has carefully considered the terms and conditions of the merger and has unanimously determined that the merger is advisable, in the best interests of Genomic Solutions' stockholders and on terms that are fair to Genomic Solutions' stockholders. Accordingly, the board of directors has unanimously approved the merger agreement and the merger and recommends that you vote for adoption and approval of the merger agreement and approval of the merger.

Sincerely,

Jeffrey S. Williams
*President and Chief Executive
Officer*

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the merger or the shares of Harvard Bioscience common stock to be issued in the merger, or determined if the proxy statement and prospectus is accurate or adequate. Any representation to the contrary is unlawful.

The proxy statement and prospectus is dated September 17, 2002 and was first mailed to Genomic Solutions stockholders on or about September 20, 2002.

GENOMIC SOLUTIONS INC.
4355 Varsity Drive, Suite E
Ann Arbor, Michigan 48108

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS
to be held on October 24, 2002

To the Stockholders of Genomic Solutions Inc.:

A special meeting of stockholders of Genomic Solutions Inc. will be held on October 24, 2002, at 9:00 a.m., local time, at The Crowne Plaza Hotel, 610 Hilton Boulevard, Ann Arbor, Michigan 48108, for the following purposes:

1. To consider and vote on a proposal to adopt and approve the Agreement and Plan of Merger, dated as of July 17, 2002, by and among Harvard Bioscience, Inc., a Delaware corporation, HAG Acq. Corp., a Delaware corporation and a wholly-owned subsidiary of Harvard Bioscience, and Genomic Solutions Inc., a Delaware corporation, a copy of which is attached as Annex A to the accompanying proxy statement and prospectus, and to approve the merger contemplated by the merger agreement.
2. To transact any other business that may properly come before the special meeting and any adjournment or postponement of the special meeting.

Only stockholders of record of Genomic Solutions common stock at the close of business on September 19, 2002 are entitled to notice of, and will be entitled to vote at, the special meeting or any adjournment or postponement thereof. Adoption and approval of the merger agreement and approval of the merger will require the affirmative vote of the holders of Genomic Solutions common stock representing a majority of the outstanding shares of Genomic Solutions common stock entitled to vote at the special meeting.

Your vote is important. To assure that your shares are represented at the special meeting, you are urged to complete, date and sign the enclosed proxy card and mail it promptly in the postage-paid envelope provided, whether or not you plan to attend the special meeting in person. You may revoke your proxy in the manner described in the accompanying proxy statement and prospectus at any time before it has been voted at the special meeting. If you attend the special meeting you may vote in person even if you returned a proxy.

Genomic Solutions stockholders have the right to dissent from the merger and obtain payment in cash of the fair value of their shares of common stock under applicable provisions of Delaware law. In order to perfect appraisal rights, stockholders must give written demand for appraisal of their shares before the taking of the vote on the merger agreement and the merger at the special meeting and must not vote in favor

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

of the merger agreement and the merger. A copy of the applicable Delaware statutory provisions is included as Annex C to the accompanying proxy statement and prospectus, and a summary of these provisions can be found under "The Merger and Related Transactions Dissenters' Rights of Appraisal" beginning on page 87 of the accompanying proxy statement and prospectus.

BY ORDER OF THE BOARD OF
DIRECTORS

Jeffrey S. Williams
*President and Chief Executive
Officer*

Ann Arbor, Michigan
September 20, 2002

Please do not send your stock certificates at this time. If the merger is completed, you will be sent instructions regarding the surrender of your stock certificates.

ADDITIONAL INFORMATION

This proxy statement and prospectus incorporates important business and financial information about Harvard Bioscience and Genomic Solutions from other documents that are not included in or delivered with this proxy statement and prospectus. This information is available to you without charge upon your written or oral request. You can obtain those documents, which are incorporated by reference in this proxy statement and prospectus, by requesting them in writing or by telephone from the appropriate company at the following addresses and telephone numbers:

Harvard Bioscience, Inc.
84 October Hill Road
Holliston, Massachusetts 01746
(508) 893-8999

Attn: Susan M. Luscinski, Chief Financial Officer

Genomic Solutions Inc.
4355 Varsity Drive, Suite E
Ann Arbor, Michigan 48108
(734) 975-4800

Attn: Gary A. Kendra, Secretary

If you would like to request documents, you must do so by October 17, 2002 in order to receive them before the special meeting.

For additional information regarding where you can find information about Harvard Bioscience and Genomic Solutions, please see the section entitled "Where You Can Find Additional Information" beginning on page 140 of this proxy statement and prospectus.

TABLE OF CONTENTS

	<u>Page</u>
QUESTIONS AND ANSWERS ABOUT THE MERGER	1
SUMMARY	5
HARVARD BIOSCIENCE SUMMARY SELECTED CONSOLIDATED FINANCIAL DATA	11
GENOMIC SOLUTIONS SUMMARY SELECTED CONSOLIDATED FINANCIAL DATA	13
SELECTED COMBINED COMPANY UNAUDITED PRO FORMA FINANCIAL INFORMATION	17
COMPARATIVE HISTORICAL AND PRO FORMA PER SHARE DATA	18

	<u>Page</u>
COMPARATIVE PER SHARE MARKET PRICE DATA AND DIVIDEND INFORMATION	18
RISK FACTORS	21
Risks Related to the Merger	21
Risks Related to Harvard Bioscience	25
Risks Related to Genomic Solutions	34
CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS IN THIS PROXY STATEMENT AND PROSPECTUS	44
THE SPECIAL MEETING OF GENOMIC SOLUTIONS STOCKHOLDERS	46
Date, Time and Place of the Special Meeting	46
Purpose of the Special Meeting	46
Record Date	46
Vote Required for Adoption and Approval of the Merger Agreement and Approval of the Merger	46
Quorum, Abstentions and Broker Non-Votes	47
Solicitation of Proxies and Expenses	47
Voting of Proxies at the Special Meeting and Revocation of Proxies	48
Dissenters' Rights of Appraisal	48
Other Matters to be Voted on	50
Recommendation of Genomic Solutions' Board of Directors	50
THE MERGER AND RELATED TRANSACTIONS	51
Background of the Merger	51
Consideration of the Merger by Genomic Solutions' Board of Directors	56
Genomic Solutions' Reasons for the Merger	56
Recommendation of Genomic Solutions' Board of Directors	58
Opinion of Genomic Solutions' Financial Advisor	58
Interests of Genomic Solutions' Directors and Officers in the Merger	64
Consideration of the Merger by Harvard Bioscience's Board of Directors	67
The Merger Agreement	67
Structure of the Merger	67
Completion and Effectiveness of the Merger	67
Conversion of Genomic Solutions Common Stock in the Merger	67
Possible Adjustments to the Merger Consideration	68
Fractional Shares	68
Rights of Holders of Genomic Solutions Common Stock at the Effective Time of the Merger	69
Exchange of Genomic Solutions Stock Certificates for Harvard Bioscience Stock Certificates and Cash	69
Treatment of Genomic Solutions Stock Options and Warrants	69
Termination of Rights under the Genomic Solutions Employee Stock Purchase Plan	70
Genomic Solutions' Representations and Warranties	71
Harvard Bioscience's Representations and Warranties	72
Genomic Solutions' Conduct of Business Before Completion of the Merger	73
Solicitations by Genomic Solutions; Withdrawal of Recommendation by Genomic Solutions Board of Directors	75
Other Material Covenants	77
Conditions to Completion of the Merger	78

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Termination of the Merger Agreement	80
Payment of Termination Fee and Expenses	82
Extension, Waiver and Amendment of the Merger Agreement	83
Definition of Material Adverse Effect	83
Material United States Federal Income Tax Consequences of the Merger	84
Backup Withholding	86
Accounting Treatment of the Merger	86
Regulatory Filings and Approvals Required to Complete the Merger	86
Restrictions on Sales of Harvard Bioscience Common Stock by Affiliates of Genomic Solutions	86
Listing on the Nasdaq National Market of Harvard Bioscience Common Stock to be Issued in the Merger	87
Delisting and Deregistration of Genomic Solutions Common Stock after the Merger	87
Dissenters' Rights of Appraisal	87
Other Material Agreements Relating to the Merger	90
Voting Agreements	90
Employment Agreement	91
Operations After the Merger	93
UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION	94
UNAUDITED PRO FORMA CONDENSED COMBINED BALANCE SHEET	95
UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENTS OF OPERATIONS	96
UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENTS OF OPERATIONS	97
NOTES TO UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION	98
INFORMATION ABOUT GENOMIC SOLUTIONS	101
Description of Business	101
Recent Developments	101
Genomic Solutions' Strategy	102
Genomic Solutions' Products	102
Marketing, Sales and Support	105
Research and Development	106
Competition	106
Manufacturing	107
Intellectual Property	107
Government Regulation	108
Employees	108
ii	
Legal Proceedings	108
Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	109
Quantitative and Qualitative Disclosures about Market Risk	109
GENOMIC SOLUTIONS MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS OF GENOMIC SOLUTIONS	111

GENOMIC SOLUTIONS PRINCIPAL AND MANAGEMENT STOCKHOLDERS	124
HARVARD BIOSCIENCE PRINCIPAL AND MANAGEMENT STOCKHOLDERS	127
COMPARISON OF RIGHTS OF HOLDERS OF GENOMIC SOLUTIONS COMMON STOCK AND HARVARD BIOSCIENCE COMMON STOCK	129
DESCRIPTION OF HARVARD BIOSCIENCE CAPITAL STOCK	137
LEGAL MATTERS	139
EXPERTS	139
GENOMIC SOLUTIONS' STOCKHOLDER PROPOSALS	140
WHERE YOU CAN FIND ADDITIONAL INFORMATION	140
INDEX TO GENOMIC SOLUTIONS FINANCIAL STATEMENTS	F-1
INDEX TO GENOMIC SOLUTIONS FINANCIAL STATEMENTS	F-27
ANNEX A Agreement and Plan of Merger	
ANNEX B Opinion of U.S. Bancorp Piper Jaffray Inc.	
ANNEX C Delaware General Corporation Law, Section 262 Appraisal Rights	
ANNEX D Form of Voting Agreement	
ANNEX E Employment Agreement for Jeffrey S. Williams	

QUESTIONS AND ANSWERS ABOUT THE MERGER

Q: Why are Harvard Bioscience and Genomic Solutions proposing to merge? (See pages 56 and 67)

A: Harvard Bioscience and Genomic Solutions are proposing the merger because they believe the resulting combined organization will be a stronger, more competitive company capable of achieving greater financial strength, operational efficiencies and growth potential than either company could separately achieve. Harvard Bioscience and Genomic Solutions further believe that the merger will provide the opportunity for each company's stockholders to participate in the potential growth of the combined organization following the merger.

Harvard Bioscience and Genomic Solutions believe that the merger will result in a number of benefits, including:

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

the synergies that could be created in leveraging the sales and marketing functions of Harvard Bioscience and Genomic Solutions;

the synergies that could be created in leveraging the distribution channels of Harvard Bioscience and Genomic Solutions;
and

the synergies that could be created in leveraging the research and development strengths of Harvard Bioscience and Genomic Solutions.

Q:

What will I receive in the merger? (See page 67)

A:

If the merger is completed, each Genomic Solutions stockholder will have the right to receive a combination of Harvard Bioscience common stock and cash in exchange for each of his or her shares of Genomic Solutions common stock. The aggregate purchase price for all of the outstanding shares of Genomic Solutions common stock is fixed at 3,200,000 shares of Harvard Bioscience common stock and \$9,000,000 in cash, subject to adjustment in limited circumstances for extraordinary stock events and to preserve the intended tax free nature of the transaction. The per share conversion ratio for Genomic Solutions common stock and the per share cash consideration will be determined based on the number of shares of Genomic Solutions common stock outstanding at the completion of the merger. The manner in which this conversion ratio will be calculated and the amount of cash you will receive as part of the merger consideration is described in this proxy statement and prospectus. Based on the number of outstanding shares of Genomic Solutions common stock on September 16, 2002, the most recent practicable date prior to the date of this proxy statement and prospectus, and assuming that all in-the-money options to purchase Genomic Solutions common stock as of September 16, 2002 are exercised prior to the merger, each share of Genomic Solutions common stock would be exchanged for approximately 0.1016 of a share of Harvard Bioscience common stock and \$0.2858 in cash. These per share amounts are estimates, however, and may change at the completion of the merger as a result of, among other things, an increase in the number of Genomic Solutions shares of common stock outstanding on the date the merger is completed. You will also receive cash, without interest, rather than a fractional share of Harvard Bioscience common stock that you otherwise would be entitled to receive in the merger.

Q:

Will Genomic Solutions stockholders be able to trade the Harvard Bioscience common stock that they receive in the merger? (See pages 86 and 87)

A:

Yes. The Harvard Bioscience common stock issued in the merger will be registered with the Securities and Exchange Commission and listed on the Nasdaq National Market under the symbol "HBIO." All shares of Harvard Bioscience common stock that you receive in connection with the merger will be freely transferable unless you are deemed to be an affiliate of Genomic

1

Solutions prior to the completion of the merger or an affiliate of Harvard Bioscience after the completion of the merger under the Securities Act of 1933, as amended, or your shares are subject to other contractual restrictions. Shares of Harvard Bioscience common stock received by persons deemed to be affiliates in the merger may only be sold in compliance with Rule 145 under the Securities Act or as otherwise permitted under the Securities Act.

Q:

When do Harvard Bioscience and Genomic Solutions expect to complete the merger?

A:

Harvard Bioscience and Genomic Solutions expect to complete the merger when all of the conditions to completion of the merger contained in the merger agreement have been satisfied or waived. Harvard Bioscience and Genomic Solutions are working toward satisfying these conditions and completing the merger as quickly as possible. Harvard Bioscience and Genomic Solutions currently plan to complete the merger in the fourth quarter of 2002 following the special meeting of Genomic Solutions stockholders, assuming the Genomic Solutions stockholders adopt and approve the merger agreement and approve the merger and the other merger conditions are satisfied. However, because the merger is subject to some conditions which are beyond Harvard Bioscience's and Genomic

Solutions' control, the exact timing cannot be predicted.

Q:

What happens if the merger is not completed? (See page 82)

A:

If the merger is not completed, each of Genomic Solutions and Harvard Bioscience will continue as independent companies. In addition, under the terms of the merger agreement, Genomic Solutions may be required to pay Harvard Bioscience a termination fee of \$1,300,000 or to reimburse Harvard Bioscience for out-of-pocket expenses, including legal, accounting, printing and other fees, related to this transaction if the merger is not completed for specified reasons discussed in more detail in this proxy statement and prospectus.

Q:

What vote is required to approve the merger? (See page 46)

A:

Adoption and approval of the merger agreement and approval of the merger requires the affirmative vote of the holders of a majority of the outstanding shares of Genomic Solutions common stock as of the record date. Each of the boards of directors of Harvard Bioscience and Genomic Solutions has already approved the merger.

Q:

Are Harvard Bioscience stockholders voting on the merger?

A:

No. Only Genomic Solutions stockholders are voting on the merger.

Q:

How do I vote on the merger? (See page 48)

A:

First, please review the information contained or incorporated by reference in this proxy statement and prospectus, including the annexes, as it contains important information about Genomic Solutions and Harvard Bioscience. It also contains important information about what each of the boards of directors of Genomic Solutions and Harvard Bioscience, respectively, considered in evaluating the merger. Next, complete and sign the enclosed proxy card, and then mail it in the enclosed return envelope as soon as possible so that your shares can be voted at the special meeting of Genomic Solutions' stockholders at which the merger agreement and the merger will be presented and voted upon. You may also attend the special meeting in person and vote at the special meeting instead of submitting a proxy.

Q:

What happens if I don't indicate how to vote my proxy? (See page 48)

A:

If you sign and send in your proxy, but do not include instructions on how to vote your properly signed proxy card, your shares will be voted FOR adoption and approval of the merger agreement and approval of the merger.

Q:

What happens if I don't return a proxy card? (See page 47)

A:

Not returning your proxy card will have the same effect as voting against adoption and approval of the merger agreement and against approval of the merger.

Q:

Can I change my vote after I have mailed my signed proxy card? (See page 48)

A:

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Yes. You can change your vote at any time before your proxy is voted at the special meeting of Genomic Solutions' stockholders at which the merger agreement and merger will be presented and voted upon. You can do this in one of three ways:

first, you can send a written notice to the Secretary of Genomic Solutions stating that you would like to revoke your proxy;

second, you can complete and submit a later-dated proxy card; or

third, you can attend the special meeting and vote in person. Your attendance at the special meeting alone will not revoke your proxy. You must also vote at the special meeting in order to revoke your previously submitted proxy.

You should send any notice of revocation or your completed new proxy card, as the case may be, to Genomic Solutions at the following address:

Genomic Solutions Inc.
4355 Varsity Drive, Suite E
Ann Arbor, MI 48108
Attn: Gary A. Kendra, Secretary

Q:

Can I submit my proxy by telephone or over the Internet?

A:

If you hold your shares through a bank or brokerage firm, you may be able to submit your proxy by telephone or over the Internet. You should refer to the proxy card included with your materials for instructions about how to vote. If you vote by telephone or over the Internet, you do not need to complete and mail your proxy card. If you hold shares directly, then you may not vote by telephone or over the Internet.

Q:

If my broker holds my shares in "street name," will my broker vote my shares for me? (See page 48)

A:

No. Your broker will not be able to vote your shares without instructions from you. If you do not provide your broker with voting instructions, your shares may be considered present at the special meeting for purposes of determining a quorum, but will not be considered to have been voted in favor of adoption and approval of the merger agreement or approval of the merger and therefore will have the effect of a vote against the merger agreement and against the approval of the merger. If you have instructed a broker to vote your shares and wish to change your vote, you must follow directions received from your broker to change those instructions.

Q:

Should I send my stock certificates now? (See page 69)

A:

No. If the merger is completed, Harvard Bioscience will send you written instructions for exchanging your Genomic Solutions stock certificates for Harvard Bioscience stock certificates and cash. In the meantime, you should retain your certificates as the Genomic Solutions stock certificates are still valid. Please do not send in your stock certificates with your proxy. If you send your stock certificates to either Harvard Bioscience or Genomic Solutions, neither Harvard Bioscience nor Genomic Solutions will assume the risk of loss.

Q:

Am I entitled to appraisal rights? (See pages 48 and 87)

A:

Holders of Genomic Solutions common stock are entitled to appraisal rights under Section 262 of the Delaware General Corporation Law.

Q:

Are there risks I should consider in deciding whether to vote for the merger?

A: Yes. In the section entitled "Risk Factors" beginning on page 21 of this proxy statement and prospectus, Genomic Solutions and Harvard Bioscience have described a number of risk factors that you

3

should consider in connection with the merger.

Q: What are the tax consequences to me of the merger? (See page 84)

A: In general, you will recognize capital gain, but not any loss, on the exchange of your Genomic Solutions common stock for Harvard Bioscience common stock and cash to the extent of the lesser of the cash received and the gain realized in the exchange. **This tax treatment may not apply to all Genomic Solutions stockholders. You should consult with your own tax advisor for a full understanding of the merger's tax consequences that are specific to you.**

Q: Who can help answer my questions about the merger?

A: You may call Gary A. Kendra, the Secretary of Genomic Solutions, at (734) 975-4800, with any questions you may have about the merger.

4

SUMMARY

The following is a summary of the information contained in this proxy statement and prospectus. This summary may not contain all of the information that is important to you. You should carefully read this entire proxy statement and prospectus and the other documents referred to for a more complete understanding of the merger and related transactions. In particular, you should read the annexes attached to this proxy statement and prospectus, including the merger agreement and the form of voting agreement, which are attached to this proxy statement and prospectus as Annexes A and D, respectively. In addition, Harvard Bioscience incorporates by reference into this proxy statement and prospectus important business and financial information. You may obtain the information incorporated by reference into this proxy statement and prospectus without charge by following the instructions in the section entitled "Where You Can Find Additional Information" beginning on page 140 of this proxy statement and prospectus.

Parties to the Merger

HARVARD BIOSCIENCE, INC.
84 October Hill Road
Holliston, Massachusetts 01746
www.harvardbioscience.com

Harvard Bioscience is a global provider of innovative, research enabling tools that solve problems in drug discovery. Harvard Bioscience provides a broad array of tools designed to accelerate the speed and to reduce the cost at which its customers can introduce new drugs. Harvard Bioscience focuses on alleviating bottlenecks in the drug discovery process including target validation, assay development and ADMET (absorption, distribution, metabolism, elimination and toxicology) screening.

To address these critical bottlenecks, Harvard Bioscience has several innovative proprietary tools. For target validation, these tools include novel pipette tips, micro-dialyzers, plate readers and COPAS high throughput/high relevance model organism screening systems. For ADMET screening, these tools include NaviCyte diffusion chambers for drug absorption testing, 96 well equilibrium dialysis plates for drug distribution testing, and COPAS high throughput/high relevance model organism toxicology testing systems. Harvard Bioscience also has an established product base in target validation and ADMET screening. For target validation, this product base consists of DNA/RNA/protein calculators, life science spectrophotometers and amino acid analysis systems. For ADMET screening, this product base includes precision infusion pumps, organ

testing systems, ventilators, cell biology and electrophysiology products.

A key element of Harvard Bioscience's strategy to become the leading provider of innovative, enabling technologies and products for target validation and screening research in the drug discovery process is to acquire businesses that it believes will either strengthen its core business or provide major breakthroughs for drug discovery research.

The company was organized as a Massachusetts corporation in 1996 in connection with the purchase by the current management team of a portion of the assets of Harvard Apparatus, Inc., a business which, with its predecessors, had been in existence since 1901. Harvard Bioscience was reincorporated in Delaware in November 2000.

HAG Acq. Corp. is a newly formed Delaware corporation and a wholly-owned subsidiary of Harvard Bioscience. HAG Acq. Corp. was formed solely to effect the merger and has not conducted any business during any period of its existence.

GENOMIC SOLUTIONS INC.
4355 Varsity Drive, Suite E
Ann Arbor, Michigan 48108
www.genomicsolutions.com

Genomic Solutions develops, manufactures and sells instruments, consumables and software for the life sciences research and drug discovery markets. Its market focus is based on three key areas: genomics, proteomics and microscale liquid handling. These areas comprise three of the major technologies used by researchers in studying disease and developing new drugs.

5

Genomic Solutions' products allow researchers to perform high volume experiments, and analyze the resultant data, at lower costs and in less time than with traditional techniques. Genomic Solutions' products are distributed and sold to pharmaceutical and biotechnology companies, government agencies, academic institutions and private research organizations throughout the world.

Genomic Solutions' predecessor, B.I. Systems Corporation, was established in 1994 to acquire a gel electrophoresis imaging and analysis product line from Millipore Corporation used to document and analyze one-dimensional separation of DNA and proteins. In 1997, a new management team redirected the company's efforts to the growing genomic and proteomic markets. In December 1997, the company changed its name to Genomic Solutions Inc.

Voting Requirements for the Merger (See page 46)

In order to complete the merger, the holders of a majority of the outstanding shares of Genomic Solutions common stock as of the record date must vote to adopt and approve the merger agreement and approve the merger. Each share of Genomic Solutions common stock will be entitled to one vote per share. As a result, you will be entitled to cast one vote per share of Genomic Solutions common stock you owned as of September 19, 2002, the record date for the Genomic Solutions special meeting at which the merger agreement and the merger will be presented and voted upon.

Harvard Bioscience stockholders are not required to vote on the merger agreement or the merger.

Share Ownership of Management (See page 46)

As of the close of business on September 16, 2002, the most recent practicable date prior to the date of this proxy statement and prospectus, directors and officers of Genomic Solutions (and their respective affiliates) collectively owned approximately 38% of the outstanding shares of Genomic Solutions common stock entitled to vote at the special meeting on the merger agreement and the merger. All of the directors and certain of their affiliates and certain executive officers, who as of September 16, 2002 collectively owned approximately 38% of the outstanding shares of Genomic Solutions common stock entitled to vote at the special meeting, have entered into voting agreements with Harvard Bioscience under which they have agreed, among other things, to vote their shares of Genomic Solutions common stock in favor of adoption and approval of the merger agreement and approval of the merger.

Genomic Solutions' Reasons for the Merger (See page 56)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Genomic Solutions' board of directors consulted with senior management and Genomic Solutions' financial and legal advisors and considered a number of factors, including those set forth below, in reaching its decision to approve the merger agreement and the transactions contemplated by the merger agreement, and to recommend that Genomic Solutions stockholders vote FOR adoption and approval of the merger agreement and approval of the merger.

the relative value of the consideration to be received by Genomic Solutions stockholders compared to the historical and recent market prices of Genomic Solutions common stock;

the fairness opinion of Genomic Solutions' financial advisor, U.S. Bancorp Piper Jaffray;

Genomic Solutions' prospects of remaining independent;

the possible effect of the merger on its employees, customers and current facilities;

the ability of Genomic Solutions to respond to a superior acquisition proposal from a third party, in some circumstances, subject to the possible payment of a termination fee;

the limited nature of the closing conditions included in the merger agreement; and

6

the relative liquidity of Harvard Bioscience common stock compared to Genomic Solutions common stock.

The foregoing discussion of the information and factors considered by Genomic Solutions' board of directors, while not exhaustive, includes the material factors considered by the Genomic Solutions board of directors. In view of the variety of factors considered in connection with its evaluation of the merger, Genomic Solutions' board of directors did not find it practicable to, and did not, quantify or otherwise assign relative or specific weight or values to any of these factors, and individual directors may have given different weights to different factors.

Recommendation of Genomic Solutions' Board of Directors (See page 58)

After careful consideration, Genomic Solutions' board of directors unanimously determined that the merger is advisable, in the best interests of Genomic Solutions stockholders and on terms that are fair to the stockholders of Genomic Solutions. **Accordingly, Genomic Solutions' board of directors unanimously approved the merger agreement and the merger and recommends that you vote FOR adoption and approval of the merger agreement and approval of the merger.**

Opinion of Genomic Solutions' Financial Advisor (See page 58)

In deciding to approve the merger, the Genomic Solutions board of directors considered an opinion from its financial advisor, U.S. Bancorp Piper Jaffray Inc. On July 16, 2002, Piper Jaffray delivered its written opinion to the board of directors of Genomic Solutions that, as of the date of such opinion, the merger consideration set forth in the merger agreement was fair, from a financial point of view, to the holders of Genomic Solutions common stock.

The full text of the Piper Jaffray written opinion is attached to this proxy statement and prospectus as Annex B. We encourage you to read the opinion carefully as well as the section of this proxy statement and prospectus entitled "Consideration of the Merger by Genomic Solutions' Board of Directors Opinion of Genomic Solutions' Financial Advisor." The opinion of Piper Jaffray does not constitute a recommendation as to how any holder of Genomic Solutions common stock should vote with respect to the merger agreement and the merger.

Interests of Genomic Solutions' Directors and Executive Officers in the Merger (See page 64)

Some of Genomic Solutions' directors and officers have interests in the merger that are different from, or in addition to, those of Genomic Solutions stockholders generally. For instance, the merger agreement provides certain directors and officers of Genomic Solutions with

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

continuing indemnification rights and change in control payments. Genomic Solutions' board of directors was aware of these interests and considered them, among other matters, when it approved the merger agreement and the merger.

Voting Agreements of Directors and Certain Executive Officers (See page 90)

Directors and certain of their affiliates and certain executive officers of Genomic Solutions who held an aggregate of approximately 38% of Genomic Solution's total outstanding shares of common stock on July 17, 2002 have agreed to vote their shares in favor of the merger agreement and the merger.

Structure and Effects of the Merger (See page 67)

At the completion of the merger, Genomic Solutions will merge with and into HAG Acq. Corp. and HAG Acq. Corp. will survive as a wholly-owned subsidiary of Harvard Bioscience.

As a result of the merger, each outstanding share of Genomic Solutions common stock will be converted into the right to receive a combination of Harvard Bioscience common stock and cash. The aggregate purchase price for all of the outstanding shares of Genomic Solutions common stock is fixed at 3,200,000 shares of Harvard Bioscience common stock and \$9,000,000 in cash, subject to adjustment in limited circumstances for extraordinary stock events and to preserve the intended tax free nature of the transaction. The per share conversion ratio for Genomic Solutions common

7

stock and the per share cash consideration will be determined based on the number of shares of Genomic Solutions common stock outstanding at the completion of the merger. The manner in which this conversion ratio will be calculated and the amount of cash you will receive as part of the merger consideration is described in this proxy statement and prospectus. Based on the number of outstanding shares of Genomic Solutions common stock on September 16, 2002, the most recent practicable date prior to the date of this proxy statement and prospectus, and assuming that all in-the-money options to purchase Genomic Solutions common stock as of September 16, 2002 are exercised prior to the merger, each share of Genomic Solutions common stock would be exchanged for approximately 0.1016 of a share of Harvard Bioscience common stock and \$0.2858 in cash. These per share amounts are estimates, however, and may change at the completion of the merger as a result of, among other things, an increase in the number of Genomic Solutions shares of common stock outstanding on the date the merger is completed. You will also receive cash, without interest, rather than a fractional share of Harvard Bioscience common stock that you otherwise would be entitled to receive in the merger.

At the completion of the merger, holders of Genomic Solutions common stock will hold shares of Harvard Bioscience common stock. As a result, the rights of these holders following the merger will be governed by Harvard Bioscience's certificate of incorporation and bylaws, rather than Genomic Solutions' certificate of incorporation and bylaws.

Completion and Effectiveness of the Merger (See page 67)

Harvard Bioscience and Genomic Solutions expect to complete the merger when all of the conditions to completion of the merger contained in the merger agreement have been satisfied or waived.

Harvard Bioscience and Genomic Solutions are working toward satisfying these conditions and completing the merger as quickly as possible. Harvard Bioscience and Genomic Solutions currently plan to complete the merger in the fourth quarter of 2002 following the special meeting of Genomic Solutions stockholders, assuming the Genomic Solutions stockholders adopt and approve the merger agreement and approve the merger and the other merger conditions are satisfied. However, because the merger is subject to specified conditions, some of which are beyond Harvard Bioscience's and Genomic Solutions' control, the exact timing cannot be predicted.

Assuming the Genomic Solutions stockholders approve the merger and the merger agreement, and the other conditions to completion of the merger have been satisfied or waived, the merger will become effective upon the filing of a certificate of merger with the State of Delaware. Harvard Bioscience and Genomic Solutions expect to file the certificate of merger shortly following the special meeting of Genomic Solutions stockholders at which the merger agreement and the merger will be presented and voted upon.

Genomic Solutions Prohibited from Soliciting Other Offers (See page 75)

Genomic Solutions has agreed that, while the merger is pending, it will not solicit, initiate or encourage, or, subject to some limited exceptions, engage in discussions with any third parties regarding some types of extraordinary transactions, such as a tender offer, merger, consolidation or similar transaction involving Genomic Solutions.

Conditions to Completion of the Merger (See page 78)

Harvard Bioscience's and Genomic Solutions' obligations to complete the merger are subject to specified conditions described under "The Merger Agreement Conditions to Completion of the Merger."

Termination of the Merger Agreement and Payment of Termination Fee (See pages 80 and 82)

Harvard Bioscience and Genomic Solutions may terminate the merger agreement by mutual

8

agreement and under other specified circumstances.

Genomic Solutions and Harvard Bioscience have agreed that if the merger agreement is terminated under certain circumstances described under "The Merger Agreement Payment of Termination Fees and Expenses," Genomic Solutions will pay Harvard Bioscience a fee of \$1,300,000.

Genomic Solutions and Harvard Bioscience have also agreed that if the merger agreement is terminated under certain circumstances, Genomic Solutions will reimburse Harvard Bioscience for its out-of-pocket expenses.

Material United States Federal Income Tax Consequences of the Merger (See page 84)

In general, for federal income tax purposes, you will recognize capital gain, but not any loss, on the exchange of your Genomic Solutions common stock for Harvard Bioscience common stock and cash to the extent of the lesser of the cash received and the gain realized in the exchange.

This tax treatment may not apply to all Genomic Solutions stockholders. Determining the actual tax consequences of the merger to you can be complicated. You should consult your own tax advisor for a full understanding of the merger's tax consequences that are particular to you.

Genomic Solutions will not be obligated to complete the merger unless it receives a legal opinion from its tax counsel, dated as of the closing date, as to the tax consequences of the merger. If Genomic Solutions' tax counsel is unwilling or unable to render the tax opinion, Harvard Bioscience's tax counsel may render the tax opinion. This opinion will not bind the Internal Revenue Service, which could take a different view.

Accounting Treatment of the Merger (See page 86)

The merger will be accounted for under the purchase method of accounting and Harvard Bioscience will be considered the acquiror of Genomic Solutions for accounting purposes. Accordingly, the historical financial statements of Harvard Bioscience will become the historical financial statements of the combined company following the merger.

Regulatory Approvals Required to Complete the Merger (See page 86)

Neither Harvard Bioscience nor Genomic Solutions is aware of any material governmental or regulatory approval required for completion of the merger, other than compliance with applicable corporate law of the State of Delaware and federal and state securities laws.

Dissenters' Rights of Appraisal (See pages 48 and 87)

Under Section 262 of the Delaware General Corporation Law, record holders of Genomic Solutions common stock are entitled to dissent from the merger, request a judicial appraisal of the fair value of their shares of Genomic Solutions common stock and, if the merger is consummated and all requirements of Section 262 are satisfied by Genomic Solutions stockholders seeking to exercise appraisal rights, to receive payment equal to the fair value of their shares of Genomic Solutions common stock, as determined in the manner set forth under Section 262. The procedures which must be followed in connection with the exercise of appraisal rights by dissenting stockholders are described in the sections entitled "The Special Meeting of Genomic Solutions Stockholders Dissenters' Rights of Appraisal" and "The Merger and Related Transactions Dissenters' Rights of Appraisal," beginning on page 48 and page 87, respectively, of this proxy statement and prospectus. A copy of Section 262 of the Delaware General Corporation Law is attached as Annex C to this proxy statement and prospectus. Failure to strictly follow the procedures set forth in Section 262 on a timely basis may result in a termination or loss of appraisal rights.

Restrictions on the Ability to Sell Harvard Bioscience Common Stock Received in the Merger (See page 86)

All shares of Harvard Bioscience common stock that you receive in connection with the merger will be freely transferable unless you are deemed to be an affiliate of Genomic Solutions prior to the completion of the merger or an affiliate of Harvard Bioscience after the completion of the merger under the Securities Act, or your shares are subject to other contractual restrictions. Shares of Harvard Bioscience common stock received by persons deemed to be affiliates in the merger may only be sold in compliance with Rule 145 under the Securities Act.

Listing of Harvard Bioscience Common Stock (See page 87)

The shares of Harvard Bioscience common stock issued in connection with the merger will be listed on the Nasdaq National Market under the symbol "HBIO."

HARVARD BIOSCIENCE SUMMARY SELECTED CONSOLIDATED FINANCIAL DATA

The following summary selected consolidated statement of operations data of Harvard Bioscience for each of the three years ended December 31, 2001, 2000 and 1999 and the summary selected consolidated balance sheet data as of December 31, 2001 and 2000 set forth below, are derived from the historical audited consolidated financial statements included in Harvard Bioscience's Annual Report on Form 10-K for the year ended December 31, 2001. The summary selected consolidated statement of operations data for each of the two years ended December 31, 1998 and 1997 and the consolidated balance sheet data as of December 31, 1999, 1998 and 1997 are derived from Harvard Bioscience's historical audited financial statements. Harvard Bioscience derived the summary selected consolidated balance sheet and statement of operations data as of and for the six month periods ended June 30, 2002 and 2001 from its unaudited consolidated financial statements. These unaudited consolidated financial statements include, in the opinion of management, all normal and recurring adjustments that are necessary for a fair statement of results. The operating results for the six months ended June 30, 2002 are not necessarily indicative of the results that may be expected for the year ending December 31, 2002. When you read the following summary historical data, it is important that you read it along with the historical consolidated financial statements and related notes in Harvard Bioscience's Annual Report on Form 10-K for the year ended December 31, 2001 and Harvard Bioscience's quarterly reports on Form 10-Q filed with the Securities and Exchange Commission and incorporated by reference into this proxy statement and prospectus, as well as the section of Harvard Bioscience's Annual Report on Form 10-K entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Years Ended December 31,					Six Months Ended June 30,	
	1997	1998	1999	2000	2001	2001	2002
	(in thousands, except per share data)					(unaudited)	
Consolidated Statement of Operations Data:							
Revenues	\$ 11,464	\$ 12,154	\$ 26,178	\$ 30,575	\$ 40,868	\$ 18,318	\$ 25,692
Costs and Expenses:							
Cost of product revenues	5,128	5,351	13,547	15,833	20,179	9,223	12,405
General and administrative expenses	2,338	2,317	4,147	5,181	7,001	3,332	4,032
Severance and other related costs					460		
Sales and marketing expense	1,672	1,722	2,449	3,186	4,840	2,042	3,297
Research and development	207	325	1,188	1,533	3,179	1,048	2,024
Stock compensation expense			3,283	14,676	2,679	1,541	655
In-process research and development					5,447	5,447	
Amortization of goodwill and other intangibles		27	368	604	1,744	487	612
Operating income (loss)	2,119	2,412	1,196	(10,438)	(4,661)	(4,802)	2,667

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	Years Ended December 31,					Six Months Ended June 30,	
	1997	1998	1999	2000	2001	2001	2002
Other (expenses) income:							
Foreign currency (loss) gain	(96)	21	(48)	(324)	(99)	(237)	129
Common stock warrant interest expense	(117)	(1,379)	(29,694)	(36,885)			
Interest (expense) income, net	(222)	(210)	(657)	(756)	1,352	951	187
Amortization of deferred financing costs			(63)	(153)			
Other	106	10	(17)	45	(10)	7	(34)
Other income (expense), net	(329)	(1,558)	(30,479)	(38,073)	1,243	721	282
Income (loss) before income taxes	1,790	854	(29,283)	(48,511)	(3,418)	(4,081)	2,949
Income taxes	682	783	137	1,359	1,790	1,012	1,158
Net income (loss)	1,108	71	(29,420)	(49,870)	(5,208)	(5,093)	1,791
Preferred stock dividends	(122)	(122)	(157)	(136)			
Net income (loss) available to common stockholders	\$ 986	\$ (51)	\$ (29,577)	\$ (50,006)	\$ (5,208)	\$ (5,093)	\$ 1,791
Income (loss) per share:							
Basic	\$ 0.13	\$ (0.01)	\$ (5.28)	\$ (6.25)	(0.20)	(0.20)	0.07
Diluted	\$ 0.06	\$ (0.01)	\$ (5.28)	\$ (6.25)	(0.20)	(0.20)	0.07
Weighted average common shares:							
Basic	7,406	5,599	5,599	8,005	25,785	25,377	26,470
Diluted	17,500	5,599	5,599	8,005	25,785	25,377	27,061

11

Goodwill and other intangible assets Adoption of Statement of Financial Accounting Standards (SFAS) No. 142, "Goodwill and Other Intangible Assets"

The following table presents the net income (loss) data of Harvard Bioscience, as if SFAS No. 142 was adopted for all years presented. On January 1, 2002, Harvard Bioscience adopted SFAS No. 142, and accordingly no longer amortizes goodwill and indefinite lived intangible assets, but rather such assets are subject to annual impairment reviews or more frequently, if events or circumstances indicate that there may be an impairment. During the second quarter of 2002, Harvard Bioscience completed the implementation review as required under SFAS No. 142, and concluded that there was no impairment of goodwill at the time of adoption on January 1, 2002.

	Years Ended December 31,					Six Months Ended June 30,	
	1997	1998	1999	2000	2001	2001	2002
	(in thousands, except per share data)					(unaudited)	
Net income (loss)	\$ 986	\$ (51)	\$ (29,577)	\$ (50,006)	\$ (5,208)	\$ (5,093)	\$ 1,791
Add back: Goodwill amortization, net of tax	0	18	303	459	811	282	0

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	Years Ended December 31,					Six Months Ended June 30,	
	1997	1998	1999	2000	2001	2001	2002
Adjusted net income (loss)	\$ 986	\$ (33)	\$ (29,274)	\$ (49,547)	\$ (4,397)	\$ (4,811)	\$ 1,791
Basic earnings per share							
Net income (loss)	\$ 0.13	\$ (0.01)	\$ (5.28)	\$ (6.25)	\$ (0.20)	\$ (0.20)	\$ 0.07
Add back: Goodwill amortization, net of tax		0.00	0.05	0.06	0.03	0.01	
Adjusted net income (loss)	\$ 0.13	\$ (0.01)	\$ (5.23)	\$ (6.19)	\$ (0.17)	\$ (0.19)	\$ 0.07
Diluted earnings per share							
Net income (loss)	\$ 0.06	\$ (0.01)	\$ (5.28)	\$ (6.25)	\$ (0.20)	\$ (0.20)	\$ 0.07
Add back: Goodwill amortization, net of tax		0.00	0.05	0.06	0.03	0.01	
Adjusted net income (loss)	\$ 0.06	\$ (0.01)	\$ (5.23)	\$ (6.19)	\$ (0.17)	\$ (0.19)	\$ 0.07

	As of December 31,					As of June 30,	
	1997	1998	1999	2000	2001	2001	2002
	(in thousands)					(unaudited)	

Balance Sheet Data:

Cash and cash equivalents	\$ 707	\$ 957	\$ 2,396	\$ 35,817	\$ 29,386	\$ 31,182	\$ 27,025
Working capital	1,698	2,206	3,783	40,552	32,597	36,521	36,210
Total assets	6,161	7,220	20,610	58,809	82,362	73,537	83,538
Long-term debt, net of current portion	829	638	5,073	1	637	40	92
Preferred stock	1,621	1,500	2,500				
Common stock warrants		1,500	31,194				
Stockholders' equity (deficit)	737	678	(25,711)	52,335	66,812	65,317	71,481

Recent Developments

On July 1, 2002, Harvard Bioscience's Biochrom subsidiary completed the acquisition of all the assets of Walden Precision Apparatus for a purchase price of approximately \$1.4 million in cash and the assumption of specified operating liabilities. The transaction will be accounted for using the purchase method of accounting.

GENOMIC SOLUTIONS SUMMARY SELECTED CONSOLIDATED FINANCIAL DATA

The table below presents summary selected historical consolidated financial data of Genomic Solutions. When you read this summary historical financial data, it is important that you read it along with the historical consolidated financial statements and related notes included in this proxy statement and prospectus beginning on page F-1, as well as the section entitled "Genomic Solutions' Management's Discussion and Analysis of Financial Condition and Results of Operations of Genomic Solutions" beginning on page of this proxy statement and prospectus. The summary selected consolidated statement of operations data for each of the three years ended December 31, 2001, 2000 and 1999 and the selected consolidated balance sheet data as of December 31, 2001 and 2000, set forth below, are derived from the historical audited consolidated financial statements included in Genomic Solutions' Form 10-K for the year ended December 31, 2001. The summary selected historical consolidated statement of operations data of Genomic Solutions for the years ended December 31, 1998 and 1997 and the summary selected balance sheet data as of December 31, 1999, 1998 and 1997, set forth below, have been derived from the historical audited consolidated financial statements not included herein. Genomic Solutions derived the summary selected consolidated balance sheet and statement of operations data as of and for the six months ended June 30, 2002 and 2001, set forth below, from its unaudited financial statements. These unaudited financial statements include, in the opinion of management, all normal recurring adjustments that are necessary for a fair statement of results. Operating results for the six months ended June 30, 2002 are not necessarily indicative of the results that may be expected for the entire

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

year ending December 31, 2002.

	Years Ended December 31,					Six Months Ended June 30,	
	1997	1998	1999	2000	2001	2001	2002
	(in thousands, except per share data)					(unaudited)	
Consolidated statement of operations data:							
Revenue	\$ 2,164	\$ 5,507	\$ 12,092	\$ 19,077	\$ 16,840	\$ 8,842	\$ 12,716
Costs of revenue(1):	1,063	3,266	6,990	9,374	11,792	4,966	6,657
Gross profit	1,101	2,241	5,102	9,703	5,048	3,876	6,059
Operating expenses:							
Selling, general and administrative	2,198	6,372	8,652	11,919	14,136	6,932	7,311
Research and development	942	3,354	4,830	5,596	6,797	3,620	2,483
Restructuring and other unusual charges(2)	1,578	340	438	600	10,936		
Total operating expenses	4,718	10,066	13,920	18,115	31,869	10,552	9,794
Loss from operations	(3,617)	(7,825)	(8,818)	(8,412)	(26,821)	(6,676)	(3,735)
Total other (expense) income	(261)	39	(2,324)	558	721	830	(228)
Loss before taxes and extraordinary items	(3,878)	(7,786)	(11,142)	(7,854)	(26,100)	(5,846)	(3,963)
(Benefit from) Provision for income taxes	(642)					72	
Loss before extraordinary items	(3,236)	(7,786)	(11,142)	(7,854)	(26,100)	(5,918)	(3,963)
Extraordinary items(3)	1,245			(1,050)			
Net Loss	(1,991)	(7,786)	(11,142)	(8,904)	(26,100)	(5,918)	(3,963)
Non-cash common stock warrant benefit (charge)(4)			(3,861)	1,059			
Deemed dividend upon issuance to and subsequent repurchase of stock from PerkinElmer, Inc.(5)				(8,000)	(2,811)	(2,811)	
Net loss attributable to common stockholders	\$ (1,991)	\$ (7,786)	\$ (15,003)	\$ (15,845)	\$ (28,911)	\$ (8,729)	\$ (3,963)
Net loss per share, basic and diluted:							
Loss per share before extraordinary items	\$ (6.93)	\$ (2.71)	\$ (3.75)	\$ (0.45)	\$ (1.05)	\$ (0.24)	\$ (0.13)
Net loss per share	\$ (4.27)	\$ (2.71)	\$ (3.75)	\$ (0.51)	\$ (1.05)	\$ (0.24)	\$ (0.13)
Net loss per share attributable to common stockholders	\$ (4.27)	\$ (2.71)	\$ (5.04)	\$ (0.90)	\$ (1.17)	\$ (0.35)	\$ (0.13)
Weighted average common shares	467	2,876	2,974	17,526	24,791	24,734	31,176

- (1) In September 2001, Genomic Solutions recorded an inventory impairment charge of approximately \$1,180,000.
- (2) In 2001, Genomic Solutions recorded a restructuring charge of approximately \$2,731,000 to close its Lansing, Michigan engineering and production facility; to reduce its workforce by 25%; to record the impairment of goodwill originating from the acquisition of PBA Technologies, Ltd. and the electrophoresis and gel services business of ESA, Inc.; and to record the impairment of long lived assets and the loss on sale and disposal of assets. In 2001 Genomic Solutions also recorded unusual charges of \$4,200,000 for the write-off of in-process research and development acquired from Cartesian Technologies, Inc. and of \$4,005,000 for the impairment of certain long lived assets. In 2000 Genomic Solutions recorded a restructuring charge of \$600,000 to close its Chelmsford, Massachusetts proteomic facility. In 1999 Genomic Solutions recorded an unusual charge of approximately \$438,000 for the write-off of goodwill originating from the acquisition of certain assets of Insight Biomedical Imaging. In 1998 Genomic Solutions recorded an unusual charge of approximately \$340,000 for the write-off of in-process research and development acquired from ESA, Inc. In 1997 Genomic Solutions recorded an unusual charge of approximately \$1,578,000 consisting of approximately \$861,000 for the write down of goodwill and intangible assets and approximately \$328,000 write-off of unamortized capitalized software development costs related to the merger with B.I. System Corporation and approximately \$389,000 write-off of in-process research and development acquired from PBA Technologies, Ltd.
- (3) In 2000, Genomic Solutions accounted for the amendment to its subordinated notes as an extinguishment of debt and recorded an extraordinary loss of \$1,050,000. In 1997 Genomic Solutions recorded an extraordinary gain of approximately \$1,245,000 on the forgiveness of debt.
- (4) In 2000, Genomic Solutions recorded decretion of approximately \$1,059,000 on its common stock warrants. In 1999 Genomic Solutions recorded accretion of approximately \$3,861,000 on its common stock warrants.
- (5) In 2001, Genomic Solutions recorded a deemed dividend charge of approximately \$2,811,000 related to the repurchase of a portion of the Series P preferred stock held by PerkinElmer, Inc. In 2000 Genomic Solutions recorded a charge of \$8,000,000 related to the beneficial conversion feature associated with the issuance of Series P preferred stock to PerkinElmer, Inc.

Goodwill and other intangible assets Adoption of SFAS No. 142 (unaudited)

The following table presents the net loss data of Genomic Solutions, as if SFAS No. 142 was adopted for all years presented. On January 1, 2002, Genomic Solutions adopted SFAS No. 142, and accordingly no longer amortizes goodwill and indefinite lived intangible assets, but rather such assets are subject to annual impairment reviews or more frequently, if events or circumstances indicate that there may be an impairment. During the second quarter of 2002, Genomic Solutions completed the implementation review as required under SFAS No. 142, and concluded that there was no impairment of goodwill at the time of adoption on January 1, 2002.

	Years Ended December 31,					Six Months Ended June 30,	
	1997	1998	1999	2000	2001	2001	2002
	(in thousands, except per share data)						
Net loss before extraordinary items	\$ (3,236)	\$ (7,786)	\$ (11,142)	\$ (7,854)	\$ (26,100)	\$ (5,918)	\$ (3,963)
Net loss	(1,991)	(7,786)	(11,142)	(8,904)	(26,100)	(5,918)	(3,963)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	Years Ended December 31,					Six Months Ended June 30,	
	1997	1998	1999	2000	2001	2001	2002
Net loss attributable to common stockholders	(1,991)	(7,786)	(15,003)	(15,845)	(28,911)	(8,729)	(3,963)
Add back: Goodwill amortization, net of tax	13	166	416	293	248	147	
Adjusted net loss before extraordinary items	\$ (3,223)	\$ (7,620)	\$ (10,726)	\$ (7,561)	\$ (25,852)	\$ (5,771)	\$ (3,963)
Adjusted net loss	\$ (1,978)	\$ (7,620)	\$ (10,726)	\$ (8,611)	\$ (25,852)	\$ (5,771)	\$ (3,963)
Adjusted net loss attributable to common stockholders	\$ (1,978)	\$ (7,620)	\$ (14,587)	\$ (15,552)	\$ (28,663)	\$ (8,582)	\$ (3,963)
Net Loss per share, basic and diluted:							
Net loss before extraordinary items	\$ (6.93)	\$ (2.71)	\$ (3.75)	\$ (0.45)	\$ 1.05	\$ (0.24)	\$ (0.13)
Net loss	(4.27)	(2.71)	(3.75)	(0.51)	(1.05)	(0.24)	(0.13)
Net loss attributable to common stockholders	(4.27)	(2.71)	(5.04)	(0.90)	(1.17)	(0.35)	(0.13)
Add back: Goodwill amortization, net of tax	0.03	0.06	0.14	0.02	0.01	0.01	
Adjusted net loss before extraordinary items	\$ (6.90)	\$ (2.65)	\$ (3.61)	\$ (0.43)	\$ (1.04)	\$ (0.23)	\$ (0.13)
Adjusted net loss	\$ (4.24)	\$ (2.65)	\$ (3.61)	\$ (0.49)	\$ (1.04)	\$ (0.23)	\$ (0.13)
Adjusted net loss attributable to common stockholders	\$ (4.24)	\$ (2.65)	\$ (4.90)	\$ (0.89)	\$ (1.16)	\$ (0.35)	\$ (0.13)
	As of December 31,					As of June 30,	
	1997	1998	1999	2000	2001	2001	2002
	(in thousands)					(unaudited)	

Consolidated balance sheet data:

Cash and cash equivalents	\$ 5,089	\$ 2,880	\$ 1,328	\$ 40,159	\$ 13,097	\$ 23,928	\$ 5,266
Total assets	8,579	11,694	13,858	65,224	47,924	48,790	41,993
Total debt	901	2,819	11,190	1,956	2,623	1,565	2,588
Total stockholders' equity (deficit)	\$ 5,912	\$ 5,845	\$ (9,381)	\$ 51,989	\$ 34,439	\$ 40,125	\$ 30,932

15

Recent Developments

Restructuring

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

In September 2001, Genomic Solutions announced a restructuring of its operations to implement significant cost savings and to accelerate its plan to achieve profitability. As part of the restructuring, it closed its Lansing, Michigan manufacturing facility and relocated those operations to its headquarters in Ann Arbor. The restructuring reduced Genomic Solutions' workforce in the United States and the United Kingdom by approximately 25%. In connection with the Cartesian Technologies, Inc. acquisition, Genomic Solutions closed its San Diego, California sales office and consolidated these activities with Cartesian's Irvine, California operations and Cartesian has closed its United Kingdom office and moved its operations to Genomic Solutions' Huntingdon facility.

As part of the restructuring, Genomic Solutions also sold certain assets used in connection with its proteomic contract research services business to Proteomic Research Services, Inc., a newly formed company owned and controlled by former employees of Genomic Solutions who were actively involved in providing proteomic-related services. Genomic Solutions owns 19.9% of Proteomic Research Services and has agreed to contract with it for assistance with certain proteomic projects. In return, Proteomic Research Services has agreed to purchase Genomic Solutions' instruments and consumables to the extent such items are required in connection with the operations of Proteomic Research Services.

In July 2002, Genomic Solutions announced a further restructuring of its operations. The restructuring is expected to result in a reduction of Genomic Solutions' operating cost structure. As part of the restructuring, Genomic Solutions reduced its workforce by approximately 30%, discontinued certain products and will close certain facilities. As a result of this restructuring, Genomic Solutions will record restructuring and inventory impairment charges of approximately \$1.5 million during the third quarter of 2002.

Relationship with Proteometrics

In February 2002, Genomic Solutions entered into an exclusive worldwide software license with Proteometrics, LLC. Under this relationship, Genomic Solutions obtained the exclusive right to develop, support and license the Proteometrics bioinformatic software product line.

16

SELECTED COMBINED COMPANY UNAUDITED PRO FORMA FINANCIAL INFORMATION

The following selected unaudited pro forma combined financial information for the year ended December 31, 2001 and the six months ended June 30, 2002 has been derived from and should be read in conjunction with the Combined Company Unaudited Pro Forma Condensed Combined Financial Information and related notes included elsewhere in this proxy statement and prospectus. This information is based on the respective audited and unaudited historical consolidated financial statements of Harvard Bioscience and Genomic Solutions and after giving effect to the acquisition of Genomic Solutions, using the purchase method of accounting for business combinations. This information is for illustrative purposes only. The companies may have performed differently had they always been combined. You should not rely on the selected unaudited pro forma combined financial information as being indicative of the historical results that would have been achieved had the companies always been combined or the future results that the combined company will experience after the merger.

	Year Ended December 31, 2001	Six months ended June 30, 2002
(in thousands, except per share amounts)		
Pro Forma Statement of Operations Data:		
Revenues	\$ 57,708	\$ 38,408
Costs and Expenses:		
Cost of product and service revenues	31,971	19,062
Selling, marketing, general and administrative expenses	25,598	14,217
Research and development	9,976	4,507
Stock compensation expense	2,679	655
In-process research and development expense	9,647	
Amortization of goodwill and other intangibles	2,299	889
Restructuring costs	7,196	
Operating loss	(31,658)	(922)

Other (expense) income:

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	Year Ended December 31, 2001	Six months ended June 30, 2002
Interest, net	2,293	237
Other	(329)	(183)
Other (expense) income, net	1,964	54
Loss before income taxes	(29,694)	(868)
Income taxes	1,709	806
Net loss	(31,403)	(1,674)
Deemed dividend upon issuance to and subsequent repurchase of stock	(2,811)	
Net loss available to common stockholders	\$ (34,214)	\$ (1,674)
Loss per share:		
Basic and diluted	\$ (1.18)	\$ (0.06)
Weighted average common shares:		
Basic and diluted	28,985	29,670
	As of June 30, 2002	
	(in thousands)	

Pro Forma Balance Sheet Data:

Cash and cash equivalents	\$ 23,291
Working capital	37,760
Total assets	114,997
Long-term debt, net of current portion	136
Stockholders' equity	86,412

17

COMPARATIVE HISTORICAL AND PRO FORMA PER SHARE DATA

The following tables set forth certain historical per share data of Harvard Bioscience and Genomic Solutions and combined per share data on an unaudited pro forma basis after giving effect to the merger using the purchase method of accounting, and assuming that an aggregate of 3.2 million shares of Harvard Bioscience common stock are issued in exchange for all of the shares of Genomic Solutions common stock in connection with the merger. The actual conversion ratio for Genomic Solutions common stock in the merger may be different than this assumed conversion ratio. The following data should be read in conjunction with the separate historical consolidated financial statements of Genomic Solutions included in this proxy statement and prospectus and the separate historical consolidated financial statements of Harvard Bioscience incorporated by reference in this proxy statement and prospectus. The unaudited pro forma combined per share data do not necessarily indicate the operating results that would have been achieved had the merger been completed as of the beginning of the earliest period presented and should not be taken as representative of future operations. The results may have been different if the companies had always been consolidated. All per share information has been restated, as applicable for stock splits, as discussed in each entity's respective consolidated financial statements and notes thereto. No cash dividends have ever been declared or paid on Harvard Bioscience or Genomic Solutions common stock.

	For the year ended December 31, 2001	As of and for the six months ended June 30, 2002
Harvard Bioscience Historical:		

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	For the year ended December 31, 2001		As of and for the six months ended June 30, 2002	
Basic income (loss) per share	\$	(0.20)	\$	0.07
Diluted income (loss) per share	\$	(0.20)	\$	0.07
Book value per Common Share as of June 30, 2002	\$		\$	2.67
Genomic Solutions Historical:				
Basic income (loss) per share	\$	(1.17)	\$	(0.13)
Diluted income (loss) per share	\$	(1.17)	\$	(0.13)
Book value per Common Share as of June 30, 2002	\$		\$	0.99
Pro Forma Combined:				
Basic loss per share	\$	(1.18)	\$	(0.06)
Diluted loss per share	\$	(1.18)	\$	(0.06)
Book value per Common Share as of June 30, 2002	\$		\$	2.88

COMPARATIVE PER SHARE MARKET PRICE DATA AND DIVIDEND INFORMATION

Genomic Solutions common stock is traded on the Nasdaq National Market under the symbol "GNSL." Harvard Bioscience common stock is traded on the Nasdaq National Market under the symbol "HBIO." The following table shows the high and low sale prices per share of Genomic Solutions common stock and Harvard Bioscience common stock as reported on the Nasdaq National Market for each of the quarters in the two most recent years and in the current year. Genomic Solutions common stock has been listed on the Nasdaq National Market since May 5, 2000, the date of Genomic Solutions' initial public offering. Harvard Bioscience common stock has been listed on the

18

Nasdaq National Market since December 7, 2000, the date of Harvard Bioscience's initial public offering.

Fiscal Quarters	Genomic Solutions		Harvard Bioscience	
	High	Low	High	Low
2000:				
First Quarter				
* Second Quarter	\$ 17.38	\$ 7.88		
Third Quarter	30.12	11.81		
** Fourth Quarter	18.81	4.94	\$ 13.50	\$ 8.00
2001:				
First Quarter	\$ 9.00	\$ 2.50	\$ 7.12	\$ 5.88
Second Quarter	5.89	1.75	11.60	5.90
Third Quarter	4.44	1.50	14.50	7.81
Fourth Quarter	2.93	1.54	13.25	7.35
2002:				
First Quarter	\$ 2.80	\$ 1.30	\$ 10.15	\$ 6.75
Second Quarter	1.65	0.58	9.10	4.07
Third Quarter (through September 16, 2002)	0.90	0.37	6.73	3.85

* Commencing on May 5, 2000 for Genomic Solutions

** Commencing on December 7, 2000 for Harvard Bioscience

The Nasdaq stock market has notified Genomic Solutions that Genomic Solutions currently fails to meet the maintenance standards for continued listing on the Nasdaq National Market and that Genomic Solutions common stock is subject to delisting. Genomic Solutions is in the process of filing an appeal with Nasdaq and will continue to be listed on the Nasdaq National Market pending the resolution of this appeal.

Recent Closing Prices

The following table shows the closing prices per share of Genomic Solutions common stock and Harvard Bioscience common stock as reported on the Nasdaq National Market on (1) July 17, 2002, the business day preceding the public announcement that Harvard Bioscience and Genomic Solutions had entered into the merger agreement and (2) September 16, 2002, the most recent practicable date prior to the date of this proxy statement and prospectus.

The following table also includes the equivalent price per share of Genomic Solutions common stock on those dates. This equivalent per share price reflects the value of the Harvard Bioscience common stock and cash consideration you would receive for each share of your Genomic Solutions common stock if the merger was completed on either of these dates, applying (1) an assumed conversion ratio as of July 17, 2002 of 0.1015 of a share of Harvard Bioscience common stock and \$0.2855 in cash for each share of Genomic Solutions common stock and (2) an assumed conversion ratio as of September 16, 2002 of 0.1016 of a share of Harvard Bioscience common stock and \$0.2858 in cash for each share of Genomic Solutions common stock. These amounts are estimates based on the number of outstanding shares of Genomic Solutions common stock on each of July 17, 2002 and September 16, 2002, the most recent practicable date prior to the date of this proxy statement and prospectus, and assuming that all in-the-money options to purchase Genomic Solutions common stock outstanding on each of July 17, 2002 and September 16, 2002 are exercised prior to the merger, and may change at the completion of the merger as a result of changes in the number of shares of

19

Genomic Solutions common stock outstanding due to, among other things, actual stock option exercises and purchases under the Genomic Solutions employee stock purchase plan.

	Genomic Solutions Common Stock	Harvard Bioscience Common Stock	Equivalent Price Per Share
July 17, 2002	\$ 0.50	\$ 5.34	\$ 0.8275*
September 16, 2002	\$ 0.69	\$ 4.87	\$ 0.7806**

* Applying an assumed conversion ratio as of July 17, 2002 of 0.1015 of a share of Harvard Bioscience common stock and \$0.2855 in cash for each share of Genomic Solutions common stock.

** Applying an assumed conversion ratio as of September 16, 2002 of 0.1016 of a share of Harvard Bioscience common stock and \$0.2858 in cash for each share of Genomic Solutions common stock.

Because the market price of Genomic Solutions common stock and Harvard Bioscience common stock may increase or decrease before the completion of the merger, you are urged to obtain current market quotations.

As of September 16, 2002, the most recent practicable date prior to the date of this proxy statement and prospectus, there were approximately 141 stockholders of record of Genomic Solutions who held an aggregate of 31,257,198 shares of Genomic Solutions common stock.

As of September 16, 2002, the most recent practicable date prior to the date of this proxy statement and prospectus, there were approximately 104 stockholders of record of Harvard Bioscience who held an aggregate of 26,797,396 shares of Harvard Bioscience common stock.

Dividend Policy

Genomic Solutions has never paid dividends on its common stock. Genomic Solutions currently intends to retain any earnings for use in its operations and does not anticipate paying cash dividends in the foreseeable future.

Harvard Bioscience has never declared or paid dividends on its common stock in the past and does not intend to pay dividends in the foreseeable future. Any future determination to pay dividends will be at the discretion of Harvard Bioscience's board of directors and will depend on Harvard Bioscience's financial condition, results of operations, capital requirements and other factors Harvard Bioscience's board of directors deems relevant.

20

RISK FACTORS

By voting in favor of the adoption and approval of the merger agreement and the approval of the merger, you will be choosing to invest in Harvard Bioscience common stock. An investment in Harvard Bioscience common stock involves a high degree of risk. In addition to the other information contained in or incorporated by reference into this proxy statement and prospectus, you should carefully consider the following risk factors in deciding whether to vote in favor of adoption and approval of the merger agreement and approval of the merger. In addition, you should keep the following risk factors in mind when you read forward-looking statements in this proxy statement and prospectus. Please refer to the section entitled "Cautionary Statements Regarding Forward-Looking Statements in this Proxy Statement and Prospectus" beginning on page 44 of this proxy statement and prospectus.

Risks Related to the Merger

Harvard Bioscience may not realize the expected benefits of the merger due to difficulties integrating the businesses, operations and product lines of Harvard Bioscience and Genomic Solutions.

Harvard Bioscience's ability to achieve the benefits of the merger will depend in part on the integration and leveraging of technology, operations, sales and marketing channels and personnel of Harvard Bioscience and Genomic Solutions. The integration process will be a complex, time-consuming and expensive process and may disrupt Harvard Bioscience's business if not completed in a timely and efficient manner. The challenges involved in this integration include the following:

demonstrating to the combined company's customers and suppliers that the merger will not result in adverse changes in client service standards or business focus;

persuading the combined company's employees that Harvard Bioscience's and Genomic Solutions' business cultures are compatible; and

addressing any perceived adverse changes in business focus.

Harvard Bioscience may have difficulty successfully integrating the businesses, the domestic and foreign operations or the product lines of Harvard Bioscience and Genomic Solutions, and as a result, Harvard Bioscience may not realize any of the anticipated benefits of the merger. In particular, Harvard Bioscience may not successfully leverage Genomic Solutions' sales force or its distribution relationships which could adversely affect the combined company following the merger. Additionally, neither Harvard Bioscience nor Genomic Solutions can assure you that the growth rate of the combined company will equal the growth rates that have been experienced by Harvard Bioscience and Genomic Solutions, respectively, operating as separate companies in the past.

If you are a holder of Genomic Solutions common stock, you will receive a fixed amount of cash and a fixed number of shares of Harvard Bioscience common stock in exchange for each of your shares of Genomic Solutions common stock, regardless of any changes in market value of Harvard Bioscience common stock or Genomic Solutions common stock.

Upon completion of the merger, each share of Genomic Solutions common stock will be converted into the right to receive cash and shares of Harvard Bioscience common stock. While the aggregate merger consideration to be received by the stockholders of Genomic Solutions is fixed at 3,200,000 shares of Harvard Bioscience common stock and \$9,000,000 in cash, subject to adjustment in limited circumstances for extraordinary stock events and to preserve the intended tax free nature of the transaction, the per share conversion ratio for Genomic Solutions common stock will be determined based on the number of shares of Genomic Solutions common stock actually outstanding at the completion of the merger. Based on the number of outstanding shares of Genomic Solutions common stock on September 16, 2002, the most recent practicable date prior to the date of this proxy statement and prospectus, and assuming that all in-the-money options to purchase Genomic Solutions common

stock as of September 16, 2002 are exercised prior to the merger, each outstanding share of Genomic Solutions common stock would be converted into the right to receive approximately \$0.2858 in cash and 0.1016 shares of Harvard Bioscience common stock pursuant to the merger agreement. There will be no adjustment to the conversion ratio for Genomic Solutions common stock in the merger as a result of changes in the market price of either Harvard Bioscience common stock or Genomic Solutions common stock, and neither Harvard Bioscience nor Genomic Solutions is permitted to withdraw from the merger solely because of changes in the market price of Harvard Bioscience common stock or Genomic Solutions common stock. Accordingly, the amount of cash and the amount and dollar value of Harvard Bioscience common stock you will receive upon completion of the merger will depend on the number of shares of Genomic Solutions common stock outstanding and the market value of Harvard Bioscience common stock at the time of the merger, which may be different than the number of shares of Genomic Solutions common stock outstanding and the market value of Harvard Bioscience common stock on July 17, 2002 (the business day preceding the public announcement that Harvard Bioscience and Genomic Solutions had entered into the merger agreement), or September 16, 2002 (the most recent practicable date prior to the date of this proxy statement and prospectus). In addition, the merger may not be completed immediately following the Genomic Solutions special meeting at which the merger agreement and the merger are presented and voted upon, if other conditions to the merger have not been satisfied or waived. We cannot assure you that the value of the Harvard Bioscience common stock you will receive in the merger will not decline prior to the merger. Because the market price of Harvard Bioscience common stock and Genomic Solutions common stock may increase or decrease before the completion of the merger, you are urged to obtain current market quotations.

Customer, vendor and employee uncertainty about the merger could harm the combined company.

Harvard Bioscience's and Genomic Solutions' customers may, in response to the announcement or consummation of the merger, delay or defer purchasing decisions. Any delay or deferral in purchasing decisions by customers could adversely affect the business of the combined company. Similarly, Genomic Solutions' employees may experience uncertainty about their future role with the combined company until or after Harvard Bioscience announces and executes its strategies with regard to Genomic Solutions employees. This may adversely affect the combined company's ability to attract and retain key Genomic Solutions management, sales, marketing and technical personnel.

Purchase accounting treatment and the impact of amortization of intangibles with definite lives relating to the merger could adversely affect Harvard Bioscience's operating results.

The merger will be accounted for under the purchase method of accounting and Harvard Bioscience will be considered the acquirer of Genomic Solutions for accounting purposes. Accordingly, the historical financial statements of Harvard Bioscience will become the historical financial statements of the combined company following the merger. Under purchase accounting, Harvard Bioscience will record the following as the cost of acquiring the business of Genomic Solutions:

- (1) the sum of the market value of Harvard Bioscience common stock issued and the cash consideration paid in connection with the merger, and
- (2) the amount of direct transaction costs incurred by Harvard Bioscience.

Harvard Bioscience will allocate the cost of the items described in (1) and (2) above to the individual assets acquired and liabilities assumed, including intangible assets such as acquired technology, based on their respective fair values. Intangible assets, including goodwill with indefinite lives from acquisitions are evaluated annually to determine whether any portion of the remaining balance of goodwill may not be recoverable. The amount of purchase cost allocated to goodwill and other intangibles for accounting purposes is estimated to be approximately \$9.4 million computed using the estimated purchase price of \$27.0 million which is based on cash consideration of \$9 million, the

estimated fair value of common stock of \$17.3 million using the weighted average price of Harvard Bioscience's common stock during the five trading day period ended July 22, 2002, or \$5.41 per share, and direct transaction costs of approximately \$730,000. Included in the assumption of Genomic Solutions' liabilities are direct transaction costs of \$1.1 million estimated to be incurred by Genomic Solutions and one-time payments aggregating \$830,000 to certain officers of Genomic Solutions. If it is determined in the future that a portion of this goodwill is impaired, Harvard Bioscience will be required to write off that portion which could decrease the net income of Harvard Bioscience in the future, and this could have a material and adverse effect on the market value of Harvard Bioscience common stock following the completion of the

merger. These amounts are only estimates, however, and actual amounts may differ from these estimates.

Harvard Bioscience and Genomic Solutions expect to incur significant costs associated with the merger.

Harvard Bioscience estimates that it will incur direct transaction costs of approximately \$730,000, in addition to registration costs of approximately \$770,000 associated with the merger. The direct transaction costs of \$730,000 will be included as a part of the total purchase cost for accounting purposes, and the \$770,000 of registration costs will be included as a reduction of stockholders equity. In addition, Genomic Solutions estimates that it will incur transaction costs, which will be expensed as incurred for accounting purposes, of approximately \$1.9 million, including fees and other expenses payable to U.S. Bancorp Piper Jaffray Inc. in connection with the merger as described in the section entitled "The Merger and Related Transactions Consideration of the Merger by Genomic Solutions' Board of Directors Opinion of Genomic Solutions' Financial Advisor" beginning on page 58 of this proxy statement and prospectus and one-time payments aggregating \$830,000 to certain officers of Genomic Solutions. Harvard Bioscience believes the combined company may incur charges to operations, which are not currently reasonably estimable, in the quarter in which the merger is completed or the following quarters, to reflect costs associated with integrating the businesses and operations of Harvard Bioscience and Genomic Solutions. There can be no assurance that the combined company will not incur additional material charges in subsequent quarters to reflect additional costs associated with the merger.

The price of Harvard Bioscience common stock may be affected by factors different from those affecting the price of Genomic Solutions common stock.

When the merger is completed, holders of Genomic Solutions common stock will become holders of Harvard Bioscience common stock. Harvard Bioscience's business differs from that of Genomic Solutions, and Harvard Bioscience's results of operations, as well as the price of Harvard Bioscience common stock, may be affected by factors that are different from those affecting Genomic Solutions' results of operations and the price of Genomic Solutions common stock.

If the merger is not completed, Genomic Solutions' stock price and future business and operations could be adversely affected.

If the merger is not completed, Genomic Solutions may be subject to the following material risks, among others:

Genomic Solutions may be required to pay Harvard Bioscience a termination fee of \$1.3 million or to reimburse Harvard Bioscience for out-of-pocket expenses, including legal, accounting, printing and other fees, related to this transaction;

the price of Genomic Solutions common stock may decline to the extent that the current market prices of Genomic Solutions common stock reflects a market assumption that the merger will be completed; and

23

Genomic Solutions' costs related to the merger, such as legal, accounting and some of the fees of Genomic Solutions' financial advisor, must be paid even if the merger is not completed.

Further, if the merger agreement is terminated and the Genomic Solutions board of directors determines to seek another merger or business combination, Genomic Solutions may not be able to find a partner willing to pay an equivalent or more attractive price than that which would be paid in the merger with Harvard Bioscience.

The termination fee and the restrictions on solicitation contained in the merger agreement and the terms of the voting agreements may discourage other companies from trying to acquire Genomic Solutions.

Until the completion of the merger, and with some exceptions, Genomic Solutions is prohibited from initiating or engaging in discussions with a third party regarding some types of extraordinary transactions, such as a merger, business combination or sale of a material amount of assets or capital stock. Genomic Solutions also agreed to pay a termination fee of \$1.3 million to Harvard Bioscience in specified circumstances and in certain other circumstances, to reimburse Harvard Bioscience's out-of-pocket expenses, including legal, accounting, printing and other fees, related to this transaction. In addition, holders of approximately 38% of the outstanding Genomic Solutions common stock as of July 17, 2002 have entered into agreements with Harvard Bioscience in which they agreed to vote in favor of the merger and to restrictions on initiating or engaging in discussions about any other acquisition proposals. These provisions could discourage other companies from trying to acquire Genomic Solutions even though those other companies might be willing to offer greater value to Genomic Solutions stockholders than Harvard Bioscience has offered in the merger. Payment of the termination fee or Harvard Bioscience's out-of-pocket expenses could also have a material

adverse effect on Genomic Solutions' financial condition.

Certain of Genomic Solutions' directors and executive officers have special interests in the merger that may influence them to support and approve the merger.

Certain of the directors and executive officers of Genomic Solutions have interests in the merger that are in addition to, or different than, their interests solely as Genomic Solutions stockholders. These interests include the following:

the payment of \$690,000 to Genomic Solutions' chief executive officer, in order to induce him to terminate his prior employment agreement and enter into a new employment agreement with the surviving corporation, which becomes effective upon the closing of the merger;

the nomination of Genomic Solutions' chief executive officer to the board of directors of Harvard Bioscience upon the effectiveness of the proposed merger;

the receipt of change in control payments under employment agreements with certain of Genomic Solutions' other executive officers;

the receipt of ongoing indemnification and insurance coverage with respect to acts taken and omissions to take action in their capacities as directors and officers of Genomic Solutions; and

the accelerated vesting of certain stock options, most of which currently are exercisable at prices higher than the recent trading prices of Genomic Solutions common stock, under the terms of existing option agreements.

The Genomic Solutions board of directors was aware of these interests when it approved the merger agreement and the merger. For a more detailed description of these interests, see "The Merger and Related Transactions Consideration of the Merger by Genomic Solutions' Board of Directors Interests of Genomic Solutions' Directors and Officers in the Merger" beginning on page 64 of this proxy statement and prospectus.

The merger may fail to qualify as a reorganization for federal income tax purposes, resulting in your recognition of taxable gain or loss in respect of your Genomic Solutions shares and Harvard Bioscience's treatment of the merger as a taxable sale.

Both Harvard Bioscience and Genomic Solutions intend the merger to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended. Although the Internal Revenue Service, or IRS, will not provide a ruling on the matter, Genomic Solutions will, as a condition to closing, obtain a legal opinion from its tax counsel that the merger will constitute a reorganization for federal income tax purposes. These opinions do not bind the IRS or prevent the IRS from adopting a contrary position. If the merger fails to qualify as a reorganization, you generally would recognize gain or loss on each share of Genomic Solutions common stock surrendered in an amount equal to the difference between your adjusted tax basis in that share and the sum of the amount of cash and the fair market value of the Harvard Bioscience common stock received in exchange for that share upon completion of the merger.

In addition, if the merger fails to qualify as a reorganization, the merger would be treated as a deemed taxable sale of assets by Genomic Solutions for an amount equal to the merger consideration received by Genomic Solutions' stockholders plus any liabilities assumed by HAG Acq. Corp. As successor to Genomic Solutions, HAG Acq. Corp. would be liable for any tax incurred by Genomic Solutions as a result of this deemed asset sale.

Risks Related to Harvard Bioscience

If Harvard Bioscience is unable to achieve and sustain market acceptance of its new target validation high throughput screening, assay development and ADMET screening products across their broad intended range of applications, Harvard Bioscience will not generate expected revenue growth.

Harvard Bioscience's business strategy depends, in part, on successfully developing and commercializing its new target validation high throughput screening, assay development and ADMET screening technologies to meet customers' expanding needs and demands, an example of which is the COPAS[®] technology obtained from the 2001 acquisition of Union Biometrica. Market acceptance of this and other new products will depend on many factors, including the extent of Harvard Bioscience's marketing efforts and its ability to demonstrate to existing and potential customers that its technologies are superior to other technologies or techniques and products that are available now or may become available in the future. If Harvard Bioscience's new products do not gain market acceptance, or if market acceptance occurs at a slower rate than anticipated, it could materially adversely affect its business and future growth prospects.

Harvard Bioscience's products compete in markets that are subject to rapid technological change, and therefore one or more of its products could be made obsolete by new technologies.

Because the market for drug discovery tools is characterized by rapid technological change and frequent new product introductions, Harvard Bioscience's product lines may be made obsolete unless it is able to continually improve existing products and develop new products. To meet the evolving needs of its customers, Harvard Bioscience must continually enhance its current and planned products and develop and introduce new products. However, Harvard Bioscience may experience difficulties that may delay or prevent the successful development, introduction and marketing of new products or product enhancements. In addition, Harvard Bioscience's product lines are based on complex technologies that are subject to rapid change as new technologies are developed and introduced in the marketplace. Harvard Bioscience may have difficulty in keeping abreast of the rapid changes affecting each of the different markets it serves or intends to serve. Harvard Bioscience's failure to develop and introduce products in a timely manner in response to changing technology, market demands or the requirements

of its customers could cause its product sales to decline, and Harvard Bioscience could experience significant losses.

Harvard Bioscience offers and plans to offer a broad product line and has incurred and expects to continue to incur substantial expenses for development of new products and enhanced versions of its existing products. The speed of technological change in its market may prevent Harvard Bioscience from being able to successfully market some or all of its products for the length of time required to recover development costs. Failure to recover the development costs of one or more products or product lines could decrease Harvard Bioscience's profitability or cause Harvard Bioscience to experience significant losses.

Harvard Bioscience has limited experience in manufacturing some of its products that could cause problems or delays resulting in lost revenue.

If Harvard Bioscience fails to manufacture and deliver products in a timely manner, its relationships with its customers could be seriously harmed, and its revenue could decline. To achieve the production levels necessary for successful commercialization, Harvard Bioscience will need to scale-up its manufacturing facilities and in some cases establish automated manufacturing methods and quality control procedures. Harvard Bioscience cannot assure you that manufacturing or quality control problems will not arise as it attempts to scale-up its production or that it can scale-up manufacturing and quality control in a timely manner or at commercially reasonable costs. If it is unable to manufacture these products consistently on a timely basis because of these or other factors, Harvard Bioscience may not achieve the level of sales from these products that it otherwise anticipates.

If Amersham Biosciences (formerly Amersham Pharmacia Biotech) terminates its distribution agreement with Harvard Bioscience or fails to perform its obligations under the distribution agreement, it could impair the marketing and distribution efforts for some of Harvard Bioscience's products and result in lost revenues.

For the year ended December 31, 2001, approximately 30% of Harvard Bioscience's revenues were generated through an agreement with Amersham Biosciences, which was renegotiated in August 2001, under which Amersham Biosciences acts as the primary marketing and distribution channel for the products of Harvard Bioscience's Biochrom subsidiary. Under the terms of this agreement, Harvard Bioscience is restricted from allowing another person or entity to distribute, market and sell the majority of the products of its Biochrom subsidiary. Harvard Bioscience is also restricted from making or promoting sales of the majority of the products of its Biochrom subsidiary to any person or entity other than Amersham Biosciences or its authorized sub-distributors. Harvard Bioscience has little or no control over Amersham Biosciences' marketing and sales activities or the use of its resources. Amersham Biosciences may fail to purchase sufficient quantities of products from Harvard Bioscience or perform appropriate marketing and sales activities. The failure by Amersham Biosciences to perform these activities could materially adversely affect Harvard Bioscience's business and growth prospects during the term of this agreement. In addition, Harvard Bioscience's inability to maintain its arrangement with Amersham Biosciences for product distribution could materially impede the growth of Harvard Bioscience's business and its ability to generate sufficient revenue. Harvard Bioscience's agreement with Amersham Biosciences may be terminated with 30 days notice under some circumstances, including in the event of a breach of a material term by Harvard Bioscience. This

agreement has an initial term of three years, commencing August 1, 2001, after which it will automatically renew for an additional two years, unless terminated earlier by either party. In addition, the agreement may be terminated in accordance with its terms by either party upon 18 months prior written notice. While Harvard Bioscience believes its relationship with Amersham Biosciences is good, Harvard Bioscience cannot guarantee that the contract will be renewed or that Amersham Biosciences will aggressively market Harvard Bioscience's products in the future.

Harvard Bioscience may be adversely affected by litigation involving Harvard University.

On December 26, 2000, Harvard University filed a lawsuit in U.S. District Court, District of Massachusetts alleging that Harvard Bioscience's use of the "Harvard Bioscience" and "Harvard Apparatus" names infringes on Harvard University's trademarks. Harvard University is seeking both injunctive relief and monetary damages. On April 10, 2001, the U.S. District Court, District of Massachusetts denied Harvard University's request for a preliminary injunction prohibiting Harvard Bioscience from using the names "Harvard Bioscience" and "Harvard Apparatus." The Court did issue an order directing Harvard Bioscience not to use the "Harvard" name in the color crimson or in a font similar to the font used by Harvard University. On May 6, 2002, the Court issued a partial summary judgment order in favor of Harvard Bioscience and against Harvard University regarding Harvard Bioscience's use of the name "Harvard Apparatus." Harvard Bioscience intends to continue to vigorously defend the remaining claims as it believes that it has strong rights to the name "Harvard Bioscience" and that Harvard University's claims are without merit. Harvard Bioscience believes that the defense of these claims could involve significant litigation-related expenses, which could have an adverse effect on Harvard Bioscience's results of operations. If claims for injunctive relief or other damages are decided against it, Harvard Bioscience could suffer monetary damages, lose its ability to use the names "Harvard Bioscience" and "Harvard Apparatus," lose the reputation and goodwill associated with these names and ultimately experience decreased revenues and earnings in subsequent periods.

Harvard Bioscience may be adversely affected by litigation or arbitration involving Paul D. Grindle.

On February 4, 2002, Paul D. Grindle, the former owner of Harvard Apparatus, Inc., initiated an arbitration proceeding against Harvard Bioscience and certain directors before JAMS in Boston, Massachusetts. Mr. Grindle's claims arise out of post-closing purchase price adjustments related to Harvard Bioscience's purchase of the assets and business of Harvard Apparatus by virtue of an Asset Purchase Agreement dated March 15, 1996 and certain related agreements. In the arbitration demand, Mr. Grindle sought the return of 1,563,851 shares of stock in Harvard Bioscience, or the disgorgement of the profits of Harvard Bioscience's sale of the stock, as well as compensatory damages and multiple damages and attorney's fees under Mass. Gen. Laws, chapter 93A. In a demand letter that was attached to the arbitration demand, Mr. Grindle asserted losses in the amount of \$15 million, representing the value of the 1,563,851 shares of Harvard Bioscience's stock as of January 2, 2002. Harvard Bioscience believes that Mr. Grindle's claims are without merit and intends to defend them vigorously. Harvard Bioscience believes that the defense of these claims could involve significant litigation-related expenses, which could have an adverse effect on Harvard Bioscience's results of operations. If claims for injunctive relief or other damages are decided against it, Harvard Bioscience could suffer monetary damages.

Harvard Bioscience's competitors and potential competitors may develop products and technologies that are more effective or commercially attractive than its products.

Harvard Bioscience expects to encounter increased competition from both established and development-stage companies that continually enter the market. Harvard Bioscience anticipates that these competitors will include:

companies developing and marketing life sciences research tools,

health care companies that manufacture laboratory-based tests and analyzers,

diagnostic and pharmaceutical companies, and

companies developing drug discovery technologies.

Currently, Harvard Bioscience's principal competition comes from established companies that provide products that perform many of the same functions for which Harvard Bioscience markets its products. Harvard Bioscience's competitors may develop or market products that are more effective or commercially attractive than its current or future products. Many of Harvard Bioscience's competitors have substantially greater financial, operational, marketing and technical resources than Harvard Bioscience does. Moreover, these competitors may offer broader product lines and tactical discounts, and may have greater name recognition. In addition, Harvard Bioscience may face competition from new entrants into the field. Harvard Bioscience may not have the financial resources, technical expertise or marketing, distribution or support capabilities to compete successfully in the future.

If Harvard Bioscience is unable to effectively protect its intellectual property, third parties may use its technology, which would impair Harvard Bioscience's ability to compete in its markets.

Harvard Bioscience's continued success will depend in significant part on its ability to obtain and maintain meaningful patent protection for certain of its products throughout the world. Patent law relating to the scope of claims in the technology fields in which Harvard Bioscience operates is still evolving. The degree of future protection for Harvard Bioscience's proprietary rights is uncertain. Harvard Bioscience owns eleven U.S. patents and has eight patent applications pending in the U.S. Harvard Bioscience also owns numerous U.S. registered trademarks and trade names and has applications for the registration of trademarks and trade names pending. Harvard Bioscience relies on patents to protect a significant part of its intellectual property and to enhance its competitive position. However, Harvard Bioscience's presently pending or future patent applications may not issue as patents, and any patent previously issued to Harvard Bioscience may be challenged, invalidated, held unenforceable or circumvented. Furthermore, the claims in patents which have been issued or which may be issued to Harvard Bioscience in the future may not be sufficiently broad to prevent third parties from producing competing products similar to Harvard Bioscience's products. In addition, the laws of various foreign countries in which Harvard Bioscience competes may not protect its intellectual property to the same extent as do the laws of the United States. If Harvard Bioscience fails to obtain adequate patent protection for its proprietary technology, its ability to be commercially competitive will be materially impaired.

In addition to patent protection, Harvard Bioscience also relies on protection of trade secrets, know-how and confidential and proprietary information. To maintain the confidentiality of trade-secrets and proprietary information, Harvard Bioscience generally seeks to enter into confidentiality agreements with its employees, consultants and strategic partners upon the commencement of a relationship. However, Harvard Bioscience may not obtain these agreements in all circumstances. In the event of unauthorized use or disclosure of this information, these agreements, even if obtained, may not provide meaningful protection for Harvard Bioscience's trade-secrets or other confidential information. In addition, adequate remedies may not exist in the event of unauthorized use or disclosure of this information. The loss or exposure of Harvard Bioscience's trade secrets and other proprietary information would impair its competitive advantages and could have a material adverse effect on its operating results, financial condition and future growth prospects.

Harvard Bioscience may be involved in lawsuits to protect or enforce its patents that would be expensive and time-consuming.

In order to protect or enforce its patent rights, Harvard Bioscience may initiate patent litigation against third parties. Harvard Bioscience may also become subject to interference proceedings conducted in the patent and trademark offices of various countries to determine the priority of inventions. Several of Harvard Bioscience's products are based on patents that are closely surrounded by patents held by competitors or potential competitors. As a result, Harvard Bioscience believes there is a greater likelihood of a patent dispute than would be expected if its patents were not closely

surrounded by other patents. The defense and prosecution, if necessary, of intellectual property suits, interference proceedings and related legal and administrative proceedings would be costly and divert Harvard Bioscience's technical and management personnel from their normal responsibilities. Harvard Bioscience may not prevail in any of these suits. An adverse determination of any litigation or defense proceedings could put Harvard Bioscience's patents at risk of being invalidated or interpreted narrowly and could put its patent applications at risk of not issuing.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of Harvard Bioscience's confidential information could be compromised by disclosure during this type of litigation. For example, during the course of this kind of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments in the litigation. Securities analysts or investors may perceive these announcements to be negative, which could cause the market price of Harvard Bioscience's stock to decline.

Harvard Bioscience's success will depend partly on its ability to operate without infringing on or misappropriating the intellectual property rights of others.

Harvard Bioscience may be sued for infringing on the intellectual property rights of others, including the patent rights, trademarks and trade names of third parties. Intellectual property litigation is costly and the outcome is uncertain. If Harvard Bioscience does not prevail in any intellectual property litigation, in addition to any damages it might have to pay, Harvard Bioscience could be required to stop the infringing activity, or obtain a license to or design around the intellectual property in question. If Harvard Bioscience is unable to obtain a required license on acceptable terms, or is unable to design around any third party patent, Harvard Bioscience may be unable to sell some of its products and services, which could result in reduced revenue.

AmiKa Corporation, whose assets Harvard Bioscience purchased in July 2000, received and responded to correspondence from counsel to a third party competitor regarding the possible infringement by it of a patent and other pending patent applications held by such third party. Because this competitor has not pursued this matter since AmiKa's reply on June 7, 2000 in which AmiKa stated that it did not believe it was infringing on this competitor's patents, Harvard Bioscience believes that this matter has been concluded. However, Harvard Bioscience cannot assure you that this third party competitor will not assert these or similar claims in the future. Harvard Bioscience does not currently derive a significant portion of its revenue from products which depend on the intellectual property related to this alleged infringement.

Changes in accounting for goodwill amortization may have a material adverse effect on Harvard Bioscience.

Harvard Bioscience has historically amortized goodwill purchased in its acquisitions on a straight-line basis ranging from five to 15 years. Upon the adoption of SFAS No. 142, "Goodwill and Other Intangible Assets," goodwill and intangible assets with indefinite lives from acquisitions after June 30, 2001 and existing as of December 31, 2001 will not be amortized, but instead will be evaluated annually to determine whether any portion of the remaining balance of goodwill may not be recoverable, or more frequently, if events or circumstances indicate there may be an impairment. If it is determined in the future that a portion of Harvard Bioscience's goodwill is impaired, Harvard Bioscience will be required to write off that portion of its goodwill which could have an adverse effect on net income for the period in which the write off occurs. At June 30, 2002, Harvard Bioscience had unamortized goodwill of \$20.8 million, or 25% of its total assets.

29

Harvard Bioscience is dependent upon its licensed technologies and may need to obtain additional licenses in the future to offer its products and remain competitive.

Harvard Bioscience has licensed key components of its technologies from third parties. While it does not currently derive a material portion of its revenue from products that depend on these licensed technologies, Harvard Bioscience may in the future. If its license agreements were to terminate prematurely or if it breaches the terms of any licenses or otherwise fails to maintain its rights to these technologies, Harvard Bioscience may lose the right to manufacture or sell its products that use these licensed technologies. In addition, Harvard Bioscience may need to obtain licenses to additional technologies in the future in order to keep its products competitive. If it fails to license or otherwise acquire necessary technologies, Harvard Bioscience may not be able to develop new products that it needs to remain competitive.

Many of Harvard Bioscience's current and potential customers are from the pharmaceutical and biotechnology industries and are subject to risks faced by those industries.

Harvard Bioscience derives a substantial portion of its revenues from pharmaceutical and biotechnology companies. Harvard Bioscience expects that pharmaceutical and biotechnology companies will continue to be its major source of revenues for the foreseeable future. As a result, Harvard Bioscience is subject to risks and uncertainties that affect the pharmaceutical and biotechnology industries, such as pricing pressures as third-party payers continue challenging the pricing of medical products and services, government regulation, ongoing consolidation and uncertainty of technological change, and to reductions and delays in research and development expenditures by companies in these industries. In particular, several proposals are being contemplated by lawmakers in the United States to extend the federal Medicare program to include reimbursement for prescription drugs. Many of these proposals involve negotiating decreases in prescription drug prices or imposing price controls on prescription drugs. If appropriate reimbursement cannot be obtained, it could result in customers purchasing fewer products from Harvard Bioscience as they reduce their research and development expenditures.

In particular, the biotechnology industry has been faced with declining market capitalization and a difficult capital-raising and financing environment. If biotechnology companies are unable to obtain the financing necessary to purchase Harvard Bioscience's products, Harvard Bioscience's business and results of operations could be materially adversely affected. As it relates to the pharmaceutical industry, several companies have significant patents that have expired or are about to expire, which could result in reduced revenues for those companies. If pharmaceutical companies suffer reduced revenues as a result of these patent expirations, they may be unable to purchase Harvard Bioscience's products, and Harvard Bioscience's business and results of operations could be materially adversely affected.

In addition, Harvard Bioscience is dependent, both directly and indirectly, upon general health care spending patterns, particularly in the research and development budgets of the pharmaceutical and biotechnology industries, as well as upon the financial condition of various governments and government agencies. Many of Harvard Bioscience's customers, including universities, government research laboratories, private foundations and other institutions, obtain funding for the purchase of products from grants by governments or government agencies. There exists the risk of a potential decrease in the level of governmental spending allocated to scientific and medical research which could substantially reduce or even eliminate these grants. If government funding necessary to purchase Harvard Bioscience's products were to decrease, Harvard Bioscience's business and results of operations could be materially adversely affected.

Current negative economic trends may adversely impact Harvard Bioscience's business.

Harvard Bioscience may experience reduced demand for its products as a result of the recent downturn and increased uncertainty in the general economic environment in which Harvard Bioscience and its customers operate. Harvard Bioscience cannot project the extent of the impact of the recent economic downturn. If economic conditions worsen or if a wider economic slowdown occurs, Harvard Bioscience may experience a material adverse effect on its business, operating results, and financial condition.

Harvard Bioscience's business is subject to economic, political and other risks associated with international revenues and operations.

Since Harvard Bioscience manufactures and sells its products worldwide, its business is subject to risks associated with doing business internationally. Harvard Bioscience's revenues from its non-U.S. operations represented approximately 60% of total revenues for the year ended December 31, 2001. Harvard Bioscience anticipates that revenue from international operations will continue to represent a substantial portion of total revenues. In addition, a number of Harvard Bioscience's manufacturing facilities and suppliers are located outside the United States. Accordingly, Harvard Bioscience's future results could be harmed by a variety of factors, including:

changes in foreign currency exchange rates, which resulted in a foreign currency loss of approximately \$100,000 and a reduction of foreign equity of approximately \$235,000 for the year ended December 31, 2001,

changes in a specific country's or region's political or economic conditions, including Western Europe, in particular,

potentially negative consequences from changes in tax laws affecting the ability to expatriate profits,

difficulty in staffing and managing widespread operations, and

unfavorable labor regulations applicable to European operations, such as the unenforceability of non-competition agreements in the United Kingdom.

Harvard Bioscience's quarterly revenues will likely be affected by various factors, including the seasonal nature of purchasing in Europe and the timing of capital equipment purchases by customers.

Harvard Bioscience's revenues may vary from quarter to quarter due to a number of factors, including the timing of catalog mailings and new product introductions, future acquisitions and its substantial sales to European customers, who in summer months often defer purchases. Therefore, Harvard Bioscience expects revenues from European sales to be lower during the summer season and as a result quarter-to-quarter revenues will likely experience fluctuations. With the acquisition of Union Biometrica in May 2001, an increasing portion of Harvard Bioscience's revenues may result from sales of relatively high-priced products. Delays in purchase orders, receipt, manufacture, shipment or receivables collection of these relatively high-priced products could lead to substantial variability in revenues, operating results and working capital requirements from quarter-to-quarter, which could adversely affect Harvard Bioscience's stock price. In particular, delays or reduction in purchase orders from the pharmaceutical and biotechnology industries could have a material adverse effect on Harvard Bioscience, as more fully described elsewhere in these risk factors.

Harvard Bioscience may lose money when it exchanges foreign currency received from international revenues into U.S. dollars.

For the year ended December 31, 2001, approximately 60% of Harvard Bioscience's business was conducted in currencies other than the U.S. dollar, which is its reporting currency. As a result, currency fluctuations among the U.S. dollar and the currencies in which Harvard Bioscience does business have caused and will continue to cause foreign currency transaction gains and losses. Currently, Harvard Bioscience attempts to manage foreign currency risk through the matching of assets and liabilities. In the future, Harvard Bioscience may undertake to manage foreign currency risk through additional hedging methods. Harvard Bioscience recognizes foreign currency gains or losses arising from its operations in the period incurred. Harvard Bioscience cannot guarantee that it will be successful in managing foreign currency risk or in predicting the effects of exchange rate fluctuations upon its future operating results because of the number of currencies involved, the variability of currency exposure and the potential volatility of currency exchange rates.

If it engages in any acquisition, Harvard Bioscience will incur a variety of costs, and may never realize the anticipated benefits of the acquisition.

Harvard Bioscience's business strategy includes the future acquisition of businesses, technologies, services or products that it believes are a strategic fit with its business. If Harvard Bioscience does undertake any acquisition, the process of integrating an acquired business, technology, service or product may result in unforeseen operating difficulties and expenditures and may absorb significant management attention that would otherwise be available for ongoing development of its business. Moreover, Harvard Bioscience may fail to realize the anticipated benefits of any acquisition as rapidly as expected or at all. Future acquisitions could reduce stockholders' ownership, cause Harvard Bioscience to incur debt, expose it to future liabilities and result in amortization expenses related to intangible assets with definite lives.

If it fails to retain key personnel and hire, train and retain qualified employees, Harvard Bioscience may not be able to compete effectively, which could result in reduced revenue or increased costs.

Harvard Bioscience's success is highly dependent on the continued services of key management, technical and scientific personnel. Harvard Bioscience's management and other employees may voluntarily terminate their employment at any time upon short notice. The loss of the services of any member of the senior management team, including the Chief Executive Officer, Chane Graziano, the President, David Green, the Chief Financial Officer, Susan Luscinski, or any of the technical or scientific staff may significantly delay or prevent the achievement of product development and other business objectives. Harvard Bioscience maintains key person life insurance on Messrs. Graziano and Green. Harvard Bioscience's future success will also depend on its ability to identify, recruit and retain additional qualified scientific, technical and managerial personnel. Competition for qualified personnel in the technology area is intense, and Harvard Bioscience operates in several geographic locations where labor markets are particularly competitive, including Boston, Massachusetts and London and Cambridge, England, and where demand for personnel with these skills is extremely high and is likely to remain high. As a result, competition for qualified personnel is intense, particularly in the areas of general management, finance, information technology, engineering and science, and the process of hiring suitably qualified personnel is often lengthy and expensive, and may become more expensive in the future. If it is unable to hire and retain a sufficient number of qualified employees, Harvard Bioscience's ability to conduct and expand its business could be seriously reduced.

32

Harvard Bioscience plans significant growth, and there is a risk that it will not be able to manage this growth.

Harvard Bioscience's success will depend on the expansion of its operations both through organic growth and acquisitions. Effective growth management will place increased demands on management, operational and financial resources. To manage growth, Harvard Bioscience must expand its facilities, augment its operational, financial and management systems, and hire and train additional qualified personnel. Failure to manage this growth effectively could impair Harvard Bioscience's ability to generate revenue or could cause Harvard Bioscience's expenses to increase more rapidly than revenue, resulting in operating losses.

Harvard Bioscience's stock price has fluctuated in the past and could experience substantial declines in the future and, as a result, management's attention may be diverted from more productive tasks.

The market price of Harvard Bioscience's common stock has experienced significant fluctuations since its initial public offering in December 2000 and may become volatile and could decline in the future, perhaps substantially, in response to various factors, many of which are beyond its control, including:

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

technological innovations by competitors or in competing technologies,

revenues and operating results fluctuating or failing to meet the expectations of securities analysts or investors in any quarter,

downward revisions in securities analysts' estimates or management guidance,

conditions or trends in the biotechnology and pharmaceutical industries,

announcements of significant acquisitions or financings or changes in strategic partnerships, and

a decrease in the demand for Harvard Bioscience's common stock.

In addition, the stock market in general, and the Nasdaq National Market and the biotechnology industry market in particular, have experienced significant price and volume fluctuations that at times have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry factors may seriously harm the market price of Harvard Bioscience's common stock, regardless of its operating performance. In the past, securities class action litigation has often been instituted following periods of volatility in the market price of a company's securities. A securities class action suit against Harvard Bioscience could result in substantial costs, potential liabilities and the diversion of management's attention and resources.

Provisions of Delaware law and of Harvard Bioscience's charter and bylaws may make a takeover more difficult which could cause its stock price to decline.

Provisions in Harvard Bioscience's certificate of incorporation and bylaws and in the Delaware corporate law may make it difficult and expensive for a third party to pursue a tender offer, change in control or takeover attempt which is opposed by management and the board of directors. Public stockholders who might desire to participate in such a transaction may not have an opportunity to do so. Harvard Bioscience also has a staggered board of directors that makes it difficult for stockholders to change the composition of the board of directors in any one year. These anti-takeover provisions could substantially impede the ability of public stockholders to change Harvard Bioscience's management and board of directors. Such provisions may also limit the price that investors might be willing to pay for shares of Harvard Bioscience's common stock in the future.

33

Failure to raise additional capital or generate the significant capital necessary to expand its operations and invest in new products could reduce Harvard Bioscience's ability to compete and result in lower revenue.

Harvard Bioscience anticipates that its existing capital resources will enable it to maintain currently planned operations for the foreseeable future. However, this expectation is premised on the current operating plan, which may change as a result of many factors, including market acceptance of new products and future opportunities with collaborators. Consequently, Harvard Bioscience may need additional funding sooner than anticipated. Harvard Bioscience's inability to raise capital could seriously harm its business and product development efforts.

If Harvard Bioscience raises additional funds through the sale of equity or convertible debt or equity-linked securities, existing percentages of ownership in the company will be reduced. In addition, these transactions may dilute the value of outstanding Harvard Bioscience stock. Harvard Bioscience may issue securities that have rights, preferences and privileges senior to its common stock. If it raises additional funds through collaborations or licensing arrangements, Harvard Bioscience may relinquish rights to certain of its technologies or products, or grant licenses to third parties on terms that are unfavorable. Harvard Bioscience may be unable to raise additional funds on acceptable terms. If future financing is not available or is not available on acceptable terms, Harvard Bioscience may have to curtail operations or change its business strategy.

Future issuance of preferred stock may dilute the rights of Harvard Bioscience's common stockholders.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Harvard Bioscience's board of directors has the authority to issue up to 5,000,000 shares of preferred stock and to determine the price, privileges and other terms of these shares. The board of directors may exercise this authority without any further approval of stockholders. The rights of the holders of common stock may be adversely affected by the rights of future holders of preferred stock.

Cash dividends will not be paid on Harvard Bioscience's common stock.

Harvard Bioscience intends to retain all of its earnings to finance the expansion and development of its business and does not anticipate paying any cash dividends in the foreseeable future. As a result, capital appreciation, if any, of Harvard Bioscience's common stock will be a stockholder's sole source of gain for the foreseeable future.

An active trading market for Harvard Bioscience's common stock may not be sustained.

Although Harvard Bioscience's common stock is quoted on the Nasdaq National Market, an active trading market for the shares may not be sustained.

Risks Related to Genomic Solutions

The following matters, among others, may have a material adverse effect on the business, financial condition, liquidity, results of operations or prospects, financial or otherwise, of Genomic Solutions, particularly if the stockholders of Genomic Solutions do not vote to adopt and approve the merger agreement and approve the merger at the special meeting. In addition, many of the following risks will apply to Harvard Bioscience if the merger is completed.

Genomic Solutions has a history of losses and anticipates future losses and negative cash flow.

Genomic Solutions incurred net losses of \$4.0 million for the six months ended June 30, 2002, \$26.1 million for the fiscal year ended December 31, 2001, \$8.9 million for the fiscal year ended December 31, 2000 and \$11.1 million for the fiscal year ended December 31, 1999. As of June 30, 2002, Genomic Solutions had an accumulated deficit of \$72.0 million. In September 2001, Genomic Solutions instituted a restructuring plan designed to reduce its operating expenses. In July 2002,

34

Genomic Solutions announced a further restructuring of its operations. However, even with these restructurings, Genomic Solutions needs to generate significant revenues to achieve and maintain profitability. Genomic Solutions' continued revenue growth depends on many factors, many of which are beyond its control, including factors discussed in this risk factors section. Genomic Solutions may not sustain revenue growth and it may become profitable at a different time or it may never become profitable. Even if Genomic Solutions does achieve profitability, it may not sustain or increase profitability on a quarterly or annual basis.

Genomic Solutions may need additional capital to fund its operations, which capital may be unavailable or costly.

Based on its current plans, Genomic Solutions believes that its existing cash and cash equivalents and revenue generated from operations will be sufficient to fund its operating expenses, debt obligations and capital requirements through June 30, 2003. However, if Genomic Solutions is not able to achieve positive cash flow during this period, it may need to raise additional capital to fund its operations. Genomic Solutions may also need to raise additional capital to fund research and development programs, scale up manufacturing activities, to expand sales and marketing capabilities and to fund unforeseen expenses. Many factors, some of which are beyond its control, may determine the timing and amount of funds Genomic Solutions will need, and it may need funds sooner than currently anticipated. Genomic Solutions may be unable to obtain these funds on suitable terms, or at all.

Genomic Solutions' systems and products may fail to maintain or achieve sufficient market acceptance, which would impair its ability to generate sales revenue.

The commercial success of Genomic Solutions' systems and products will depend upon continued and expanding market acceptance of its new and existing DNA microarray, proteomic, and high speed dispensing products by pharmaceutical and biotechnology companies, academic research centers and government research laboratories. Market acceptance depends on many factors, including researchers' belief that Genomic Solutions' systems are an attractive alternative to current technologies for the generation, acquisition, analysis and management of genomic, proteomic and other drug discovery information. These potential customers may be reluctant to accept newer technologies that may require learning new techniques and procedures and abandoning or modifying current methodologies with which they are comfortable and familiar.

The relatively high price of Genomic Solutions' products and services may deter potential customers from buying its systems.

Genomic Solutions' potential customers may be deterred from buying its products due to their cost. Genomic Solutions may be required by competitive forces or for other reasons to discount the price of its products to generate sales. Furthermore, its failure to place sufficient quantities of its systems will have a material adverse effect on its ability to sell consumables. Market acceptance of products could be adversely affected by limited funding available for capital acquisitions by customers, as well as internal obstacles to customer approvals for purchases of products. Because of these and other factors, Genomic Solutions may not be able to maintain or achieve sufficient market acceptance to become profitable.

Genomic Solutions' products will require additional development to remain competitive, which it may be unable to achieve in a timely and cost-effective manner.

While Genomic Solutions' products have been sold commercially, its currently available microarray, proteomic and high speed dispensing products may require design and functional modifications as scientific procedures and methods change. As scientific knowledge advances, Genomic Solutions

anticipates a need for new instrumentation, software and consumable products. Any future products will require significant development, investment and testing. Genomic Solutions may need to undertake costly and time-consuming efforts to achieve these objectives. It cannot assure you that it will successfully design, develop, manufacture, market or sell any future products in a timely and cost-effective manner, if at all, or that it will be able to sustain or increase sales revenue from its current systems and products.

Concentration of customers may limit Genomic Solutions' market and its ability to achieve sales growth.

Genomic Solutions expects that its customers will be concentrated in a limited number of pharmaceutical and biotechnology companies, academic research centers and government-funded research laboratories that can afford its systems. As a result, its financial performance may depend on large orders from a limited number of customers, and the loss of, or reduction in, purchase orders from its customers will impair its sales. If consolidation trends in the pharmaceutical and biotechnology industries continue, the number of Genomic Solutions' current and potential customers could decrease. If this occurs, its large customers may seek reductions in the prices of products and services based on volume purchases.

If Genomic Solutions fails to achieve and maintain the high manufacturing standards that its products require, or if it is unable to develop additional manufacturing capacity, its commercial opportunity will be reduced or eliminated.

Genomic Solutions' microarray and proteomic systems and high speed dispensing products require careful calibration and precise, high-quality manufacturing. If Genomic Solutions fails to achieve and maintain these high manufacturing standards, including the incidence of manufacturing errors, design defects or component failures, it could experience product recalls or withdrawals, delays or failures in product testing or delivery, cost overruns or other problems that will impair sales. Despite its high manufacturing standards, Genomic Solutions cannot completely eliminate the risk of errors, defects or failures. If it is unable to manufacture its products on a timely basis at acceptable quality and cost and in commercial quantities, or if it experiences unanticipated technological problems or delays in production, Genomic Solutions' commercial opportunity will be reduced or eliminated.

The sales cycle for Genomic Solutions' products is lengthy and it may spend significant time on sales opportunities with no assurance of success.

Genomic Solutions' ability to obtain customers for its products depends in significant part upon the perception that its products can help accelerate drug discovery and development efforts. The sales cycle for its systems is typically between three and six months due to the education effort that is required. Genomic Solutions' sales efforts often require sales presentations to various departments within a single customer, including research and development personnel and key management. In addition, Genomic Solutions may be required to negotiate agreements containing terms unique to each customer. Genomic Solutions may expend substantial funds and management effort with no assurance that it will successfully sell its systems or products to the customer.

Genomic Solutions depends on third-party suppliers, and any failure to obtain product components from these suppliers in a timely manner will interfere with its ability to produce its products.

The lasers, filters and optics used in Genomic Solutions' GeneTAC Biochip Analyzers, the fluid transport mechanism used in its GeneTAC Hybridization Station, and the valves used in its high speed dispensing products are supplied by a limited group of suppliers. These products accounted for approximately 50% of Genomic Solutions' revenue in 2001 and 59% of Genomic Solutions' revenue in the six months ended June 30, 2002. If Genomic Solutions is unable to obtain these parts from its suppliers, it may be unable to secure an alternative supplier within a reasonable time period, or on commercially reasonable terms, if at all. Genomic Solutions' reliance on outside vendors generally, and a sole or a limited group of suppliers in particular, could also result in reduced control over quality, pricing and time of receipt of materials and components.

36

Any reduction, delay or termination of government research funding could reduce, or cause timing fluctuations in, Genomic Solutions' sales.

Genomic Solutions depends on revenue derived from sales to researchers, universities, government laboratories and private foundations whose funding may partially depend upon grants from government agencies like the U.S. National Institutes of Health and similar domestic and international agencies. Although the level of research funding has increased during the past several years, these increases may not continue or research funding may be reduced. Government funding of research and development is subject to the political process, which is inherently fluid and unpredictable. Also, government proposals aiming to reduce or eliminate budget deficits have sometimes included reduced allocations or delays or terminations of funding to the National Institutes of Health and other government agencies that fund research and development activities. A reduction in government funding for the National Institutes of Health or other government research agencies could result in lower sales or cause fluctuations in Genomic Solutions' sales and operating results.

As a result of converting its distribution arrangement with PerkinElmer, Inc. to a non-exclusive arrangement, Genomic Solutions' revenues could be adversely affected.

In 2001 Genomic Solutions relied on PerkinElmer, Inc. to exclusively market and sell Genomic Solutions' products in every country except the United States and Japan. For the year 2001, sales by PerkinElmer accounted for approximately 30% of Genomic Solutions' revenue. In November 2001, PerkinElmer completed its acquisition of Packard Biosciences, giving it the opportunity to manufacture and distribute products which are competitive with Genomic Solutions' microarray scanning and high throughput screening products. In January 2002, Genomic Solutions modified its arrangement so that PerkinElmer has the non-exclusive right to market and sell most of Genomic Solutions' products outside of the United States and Japan and non-exclusive rights to distribute limited products in the United States and Japan. If PerkinElmer does not successfully market and sell Genomic Solutions' products in its capacity as a non-exclusive distributor, Genomic Solutions' revenues will be adversely affected.

If Genomic Solutions is unable to find additional distributors to supplement PerkinElmer's efforts, its revenues could be adversely affected.

As a result of the modification of Genomic Solutions' arrangement with PerkinElmer to make PerkinElmer a non-exclusive distributor of its products, Genomic Solutions has more flexibility and control over the distribution of its products in foreign markets while retaining the benefit of having PerkinElmer as a distributor. Genomic Solutions intends to supplement the efforts of PerkinElmer by expanding its direct sales activities in Europe and appointing new distributors in other foreign markets. Because the PerkinElmer relationship was only recently changed, Genomic Solutions has not yet had adequate time to locate, hire and train the appropriate number of new salespersons and distributors and it cannot assure you that it will be able to do so. If Genomic Solutions is not successful in supplementing PerkinElmer's sales efforts with direct sales efforts and new distributors, its revenues will be adversely affected.

The risks associated with maintaining international operations could adversely affect Genomic Solutions' business.

The sale and manufacture of Genomic Solutions' products internationally involve a number of risks, including:

difficulties in staffing and managing foreign operations;

costs and risks of deploying systems in foreign countries;

37

changes in regulatory requirements;

licenses, tariffs and other trade barriers;

limited protection of intellectual property rights;

the burden of complying with a wide variety of complex foreign laws and treaties;

potentially adverse tax consequences; and

political and economic instability.

Genomic Solutions' international operations also will be subject to the risks associated with the imposition of legislation and regulations relating to the import or export of high-technology products. Tariffs or restrictions upon the importation or exportation of Genomic Solutions' products may be implemented by the United States or other countries which will adversely affect its ability to sustain or increase its international sales.

Genomic Solutions is subject to foreign currency fluctuations which may affect its operating results.

A significant portion of Genomic Solutions' business historically has been conducted in currencies other than the U.S. dollar, which is Genomic Solutions' reporting currency. Genomic Solutions' agreement with PerkinElmer requires payment in U.S. currency. Currently, only Genomic Solutions' business in Japan and the U.K. is conducted in foreign currencies. Japan and the U.K. represented approximately 20% of Genomic Solutions' total revenue in fiscal year 2001 and may continue to represent a large portion of its total sales. As Genomic Solutions establishes direct sales forces in foreign markets, some of its business may be conducted in foreign currencies. Currency fluctuations among the U.S. dollar and the currencies in which Genomic Solutions will do business will cause foreign currency transaction gains and losses in the period incurred. Genomic Solutions cannot predict the effects of exchange rate fluctuations upon its future operating results because of the variability of currency exposures and the potential volatility of currency exchange rates. Genomic Solutions may choose to engage in foreign exchange hedging transactions to manage its foreign currency exposure, but its strategies may not adequately protect its operating results from the effects of exchange rate fluctuations and may expose its business to additional risk and loss.

If Genomic Solutions is unable to retain its core employee base and hire skilled scientists, technicians and other key personnel, its ability to develop and manufacture its products and provide its services could suffer.

In September of 2001, and July of 2002, Genomic Solutions implemented separate restructuring plans that included significant reductions in the number of Genomic Solutions' employees. Genomic Solutions' ability to adequately service its customers will depend, in large part, on its ability to retain its remaining employee base and hire new scientists and technicians with the skills necessary to keep pace with continuing changes in genomic and proteomic research and high throughput dispensing. Genomic Solutions believes that it faces risks associated with employee attrition based on its recent restructuring and the general downturn in the economy. Genomic Solutions believes that its recent reductions in work force could make it difficult to retain its remaining employees and hire new employees as needed. Any failure to retain this base or hire and train new qualified personnel would seriously damage Genomic Solutions' business.

If Genomic Solutions is unable to efficiently integrate and operate recent acquisitions, its business could be harmed.

Genomic Solutions acquired Cartesian Technologies, Inc. in December 2001. It has also acquired numerous other businesses, complementary technologies and product lines in the last several years. The

rapid growth associated with these acquisitions and the difficulties Genomic Solutions has experienced in integrating these businesses has placed, and will continue to place, a significant strain on Genomic Solutions' systems, controls and managerial resources. The management team of Genomic Solutions has expended significant time and effort in integrating the operations of acquired businesses. It expects to continue to expend significant resources in integrating those companies. If it does not accomplish these tasks, Genomic Solutions' financial condition and

results of operations may be materially and adversely affected.

Genomic Solutions' stock price may be volatile and may lead to losses by investors and result in securities litigation.

The trading price of Genomic Solutions common stock may be subject to wide fluctuation. Between its initial public offering on May 5, 2000 and the conversion of all of its callable common stock to common stock on April 18, 2001, the per share sales price of Genomic Solutions callable common stock on the Nasdaq National Market fluctuated from a low of \$1.906 to a high of \$30.125. Between April 19, 2001, and September 16, 2002, the per share sales price of Genomic Solutions common stock on the Nasdaq National Market fluctuated from a low of \$.37 to a high of \$5.42.

Factors that might cause the market price of Genomic Solutions common stock to fluctuate include:

changes in Genomic Solutions' business or results of operation;

delisting of Genomic Solutions' common stock from the Nasdaq National Market;

quarterly variations in operating results or growth rates;

changes in estimates or recommendations by securities analysts;

market conditions related to investor interest in life science and biotechnology stocks;

general conditions in the industry;

announcements of mergers and acquisitions and other actions by competitors;

regulatory and judicial actions;

general economic conditions; and

announcements of product developments and other events.

In addition, the stock market in general, and the Nasdaq National Market and the biotechnology industry market in particular, have experienced significant price and volume fluctuations that at times have been unrelated or disproportionate to the operating performance of the companies whose stock is traded on those markets. These broad market and industry factors may seriously harm the market price of Genomic Solutions' common stock, regardless of its operating performance. In the past, securities class action litigation has often been instituted following periods of volatility in the market price of a company's securities. A securities class action suit against Genomic Solutions could result in substantial costs, potential liabilities and the diversion of management's attention and resources.

Genomic Solutions' market price may be negatively impacted if the merger with Harvard Bioscience is not concluded.

On July 17, 2002, Genomic Solutions entered into the merger agreement with Harvard Bioscience. Consequently, Genomic Solutions believes its stock price has begun to take into account the likelihood of the merger being concluded. Failure to consummate this merger may have a significant negative impact on the trading price of Genomic Solutions' common stock. While Genomic Solutions is working to complete the merger during the fourth quarter of calendar year 2002, the consummation of the

merger is subject to approval of the transaction by Genomic Solutions' stockholders and other customary closing conditions, many of which are beyond Genomic Solutions' control.

Genomic Solutions' common stock may be delisted from the Nasdaq National Market.

The Nasdaq stock market has notified Genomic Solutions that Genomic Solutions currently fails to meet the maintenance standards for continued listing on the Nasdaq National Market. As a result, Genomic Solutions' common stock is subject to delisting. Genomic Solutions is in the process of filing an appeal with Nasdaq and will continue to be listed on the Nasdaq National Market pending the resolution of this appeal. Genomic Solutions believes that the market price for its common stock may be adversely affected as a result of its failure to continue to be listed on the Nasdaq National Market.

The recent economic downturn may adversely affect Genomic Solutions' business.

Genomic Solutions' ability to sell its products depends upon the general economic environment in which its customers operate. The recent economic downturn could cause longer sales cycles and slower growth. In addition, Genomic Solutions' business depends upon personal interactions of its sales force and customers. Typically before a sale is consummated, the customer visits Genomic Solutions' facilities to receive a demonstration of the products. As a result of the economic downturn many customers have curtailed travel. If Genomic Solutions' customers are unwilling to travel by air, its sales could be adversely affected.

Genomic Solutions does not expect to pay any dividends in the foreseeable future.

Genomic Solutions has never paid dividends on its common stock and it does not anticipate paying cash dividends in the foreseeable future. It intends to retain any earnings to finance the development of its business and, consequently, may never pay cash dividends.

Genomic Solutions and its customers are subject to significant technological uncertainty which could result in reduced acceptance and demand for Genomic Solutions' products.

Genomic Solutions' products, and the research for which they are predominately used, involve several new and complex technologies. The instrumentation and software that comprise Genomic Solutions' systems have only recently been used in commercial applications. Scientists and technicians using Genomic Solutions' products require new technical skills and training and may experience difficulties with the products. As the products continue to be used, it is possible that previously unrecognized defects will emerge. Further, in order for Genomic Solutions to address new applications for its products, it may have to add features and design new software. If it is unable to validate or achieve the improvements in its products necessary for their continued successful commercialization, the demand for its products will suffer.

The outcomes of research based on technologies using Genomic Solutions' products will be subject to the risks of failure inherent in the development of new technologies. These risks include the possibility that:

any products based on these technologies are ineffective, unreliable or unsafe, or otherwise fail;

producers will be unable to manufacture the products on a large scale or market the products economically;

proprietary rights of third parties will preclude the marketing of the products; and

third parties will market equivalent or superior products.

The failure of research and development activities using Genomic Solutions' products to result in commercially viable products could reduce the demand for those products.

Genomic Solutions faces intense competition which could result in reduced acceptance and demand for its products.

The genomic, proteomic and high throughput screening markets are intensely competitive, highly fragmented and rapidly changing. Genomic Solutions competes with many companies in the United States and abroad that are engaged in the development and production of products that analyze genomic and proteomic information and equipment used for high speed dispensing. Currently, Genomic Solutions' principal competition comes from established companies and organizations providing products that use existing technologies which perform many of the same functions for which Genomic Solutions markets its systems. These products include a variety of established assays and tests, including gel-based technologies. Future competition in the genomic, proteomic and high throughput screening fields will likely come from existing competitors as well as other companies seeking to develop new technologies for these markets. In addition, pharmaceutical and biotechnology companies have significant needs for genomic and proteomic information and high speed dispensing equipment and may choose to develop or acquire competing technologies to meet these needs. If Genomic Solutions is unable to compete effectively, there will be reduced acceptance of and demand for its products.

Many of Genomic Solutions' competitors have greater financial, technical, research, marketing, sales, distribution, service and other resources than Genomic Solutions does. Moreover, its competitors may have greater name recognition and more extensive customer bases than it does, and they may offer discounts as a competitive tactic. In addition, several development-stage companies are currently producing or developing products that compete with or will compete with Genomic Solutions' products. Genomic Solutions' competitors may develop or market technologies or products that are more effective or commercially attractive than Genomic Solutions' current or future products, or that may render its technologies and products obsolete.

Genomic Solutions may be involved in lawsuits to protect or enforce its patents, which would be expensive and, if Genomic Solutions loses, may cause it to lose some of its intellectual property rights, which would reduce its ability to compete in the market.

Genomic Solutions' success will depend on its ability to obtain and protect patents on its technology and to protect its trade secrets. Genomic Solutions' issued and future patents may not afford meaningful protection for its technology and products. Others may challenge those patents and, as a result, the patents could be narrowed, invalidated or unenforceable. In addition, Genomic Solutions' current and future patent applications may not result in the issuance of patents in the United States or foreign countries. Competitors may develop similar products that do not conflict with Genomic Solutions' patents. Competitors may have filed applications or obtained patents or proprietary rights competitive with or similar to those of Genomic Solutions. In order to protect or enforce its patent rights, Genomic Solutions may initiate patent litigation which would be expensive, take significant time and divert management's attention from other business concerns. The patent position of biotechnology firms generally is highly uncertain, involves complex legal and factual questions, and has recently been the subject of much litigation. No consistent policy has emerged from the U.S. Patent and Trademark Office or the courts regarding the breadth of claims allowed or the degree of protection afforded under biotechnology patents. In addition, there is a substantial backlog of biotechnology patent applications at the U.S. Patent and Trademark Office, and the approval or rejection of patent applications may take several years.

The rights Genomic Solutions relies upon to protect the intellectual property underlying its products may not be adequate, which could enable third parties to use Genomic Solutions' technology, reducing its ability to compete in the market.

Genomic Solutions relies on trade secret protection for some of the confidential and proprietary information for which it has not sought patent protection. Genomic Solutions believes that it has developed proprietary technology and processes relating to numerous aspects of its micro-array, proteomic and high throughput systems. Genomic Solutions has taken measures to protect its proprietary technologies and processes and continues to explore ways to enhance these protections. It requires its employees, consultants and advisors to execute confidentiality agreements. However, Genomic Solutions cannot guarantee that these agreements will provide adequate protection against improper use or disclosure of confidential information. Further, others may independently develop substantially equivalent proprietary information and techniques, or otherwise gain access to Genomic Solutions' trade secrets.

Genomic Solutions' success depends on its ability to operate without infringing or misappropriating the proprietary rights of others.

Genomic Solutions cannot be certain that U.S. or foreign patents or patent applications of other companies do not exist or will not be issued that would materially and adversely affect its ability to commercialize its products. Genomic Solutions may be sued for infringing or misappropriating the patent or other intellectual property rights of others. Intellectual property litigation is costly, even if Genomic Solutions prevails. In addition, litigation is time consuming and could divert management attention and resources away from Genomic Solutions' business. If Genomic Solutions does not prevail in any litigation, in addition to any damages it might have to pay, it could be required to stop the infringing activity or obtain a license requiring royalty payments. Any required license may not be available to Genomic Solutions on acceptable terms, or at all. In addition, some licenses may be non-exclusive, and therefore, Genomic Solutions' competitors may have access to the same technology licensed to it. If Genomic Solutions fails to obtain a required license or is unable to design around a patent which it infringes, it may be unable to sell some of its products.

Ethical concerns surrounding the use of genomic information and misunderstanding of the nature of its business could adversely affect Genomic Solutions' ability to develop and sell its existing products and new products.

Genetic screening of humans is used to determine individual predisposition to medical conditions. Genetic screening has raised ethical issues regarding the confidentiality and appropriate uses of the resulting information. Government authorities may regulate or prohibit the use of genetic screening to determine genetic predispositions to medical conditions. Additionally, the public may disfavor and reject the use of genetic screening.

Genomic and proteomic research is used to determine the role of genes and proteins in living organisms. Genomic Solutions' products are designed and used for genomic and proteomic research and drug discovery and cannot be used for genetic screening without significant modification. However, it is possible that government authorities and the public may fail to distinguish between the genetic screening of humans and genomic and proteomic research. If this occurs, Genomic Solutions' products and the processes for which its products are used may be subjected to government regulations intended to affect genetic screening. Further, if the public fails to distinguish between the two fields, it may pressure Genomic Solutions' customers to discontinue the research and development initiatives for which Genomic Solutions' products are used.

42

Genomic Solutions may not have adequate insurance, and if it is subject to product liability claims, it may experience reduced demand for its products or be required to pay damages that exceed its insurance limitations.

Product liability claims asserted against Genomic Solutions, regardless of their merit or potential outcome, may adversely affect Genomic Solutions' reputation, result in reduced demand for its products and make it more difficult for Genomic Solutions to expand its business. Also, Genomic Solutions cannot assure you that its current insurance policies will adequately protect it or that it can or will maintain its insurance policies on commercially acceptable terms, or at all.

Genomic Solutions' former independent public accountant, Arthur Andersen LLP, has been found guilty of federal obstruction of justice charges and you are unlikely to be able to exercise effective remedies against them in any legal action.

Although Genomic Solutions has dismissed Arthur Andersen LLP as its independent public accountants and engaged KPMG LLP, its consolidated financial statements as of and for the fiscal years ended December 31, 2001, 2000, 1999, 1998 and 1997 were audited by Arthur Andersen LLP. On March 14, 2002, Arthur Andersen was indicted on federal obstruction of justice charges arising from the government's investigation of Enron Corporation. On June 15, 2002, a jury in Houston, Texas found Arthur Andersen guilty of these federal obstruction of justice charges. In light of the jury verdict and the underlying events, Arthur Andersen has informed the Securities and Exchange Commission that it will cease practicing before the Securities and Exchange Commission by August 31, 2002, unless the Securities and Exchange Commission determines another date is appropriate. A substantial number of Arthur Andersen LLP's personnel have already left the firm, including the individuals responsible for auditing Genomic Solutions' audited consolidated financial statements included in this proxy statement and prospectus, and substantially all remaining personnel are expected to do so in the near future. Because it is unlikely that Arthur Andersen LLP will survive, you are unlikely to be able to exercise effective remedies or collect judgments against them. In addition, Arthur Andersen LLP has not consented to the inclusion of their report in this proxy statement and prospectus, and the requirement to file their consent has been dispensed with in reliance on Rule 437a under the Securities Act. Because Arthur Andersen LLP has not consented to the inclusion of their report in this prospectus, you will not be able to recover against Arthur Andersen LLP under Section 11 of the Securities Act for any untrue statement of a material fact contained in the consolidated financial statements audited by Arthur Andersen LLP or any omissions to state a material fact required to be stated in those consolidated financial statements.

Moreover, as a public company, Genomic Solutions is required to file with the Securities and Exchange Commission periodic consolidated financial statements audited or reviewed by an independent public accountant. The Securities and Exchange Commission has said that it will continue accepting financial statements audited by Arthur Andersen LLP on an interim basis without a reissued audit report so long as a reasonable effort is made to have Arthur Andersen LLP reissue its reports and to obtain a manually signed accountant's report from Arthur Andersen LLP. Arthur Andersen LLP is no longer able to reissue its audit reports on Genomic Solutions because both the partner and the audit manager who were assigned to Genomic Solutions' account have left the firm. In addition, Arthur Andersen LLP is unable to perform procedures to assure the continued accuracy of its report on Genomic Solutions' audited consolidated financial statements incorporated by reference in this proxy statement and prospectus. Arthur Andersen LLP will also be unable to perform such procedures or to provide other information or documents that would customarily be received by Genomic Solutions or underwriters in connection with financings or other transactions, including consents and "comfort" letters. As a result, Genomic Solutions may encounter delays, additional expense and other difficulties in future financings. Any resulting delay in accessing or inability to access the public capital markets could have a material adverse effect on Genomic Solutions.

CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS IN THIS PROXY STATEMENT AND PROSPECTUS

This proxy statement and prospectus and the documents incorporated by reference into this proxy statement and prospectus contain forward-looking statements about Harvard Bioscience within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended. Statements about Harvard Bioscience containing the words "believes," "anticipates," "estimates," "expects" and words of similar import, constitute forward-looking statements that involve risks and uncertainties. Such statements are based on current expectations and are subject to risks, uncertainties and changes in condition, significance, value and effect, including those discussed in the section entitled "Risk Factors" beginning on page 21 of this proxy statement and prospectus, and reports filed by Harvard Bioscience with the Securities and Exchange Commission, specifically forms 8-K, 10-K and 10-Q. Such risks, uncertainties and changes in condition, significance, value and effect could cause Harvard Bioscience's actual results to differ materially from those anticipated events. In evaluating the merger agreement and the merger, you should carefully consider the discussion of risks and uncertainties discussed in the section entitled "Risk Factors" beginning on page 21 of this proxy statement and prospectus.

This proxy statement and prospectus also contains forward-looking statements about Genomic Solutions, Genomic Solutions' financial condition, plans, objectives, future performance, results of operations and business. Words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates," "will," "may," "should," "would," "projects," "predicts," "continues" and similar expressions or the negative of these terms identify these forward-looking statements. This proxy statement and prospectus also includes forward-looking statements about the consummation and anticipated timing of the merger, the actual conversion ratio for Genomic Solutions common stock in the merger and the tax-free nature of the merger.

Although Genomic Solutions believes that its plans, intentions and expectations as reflected in or suggested by these forward-looking statements are reasonable, it can give no assurance that the plans, intentions or expectations will be achieved. Genomic Solutions stockholders are cautioned that all forward-looking statements involve risks and uncertainties and actual results may differ materially from those discussed as a result of various risk factors described in the section entitled "Risk Factors Risks Related to Genomic Solutions" beginning on page 34 of this proxy statement and prospectus. Listed below and discussed elsewhere in this proxy statement and prospectus are some important risks, uncertainties and contingencies which could cause Genomic Solutions' actual results, performances or achievements to be materially different from the forward-looking statements made in this proxy statement and prospectus, particularly if the merger with Harvard Bioscience is not completed. These risks, uncertainties and contingencies include, but are not limited to, the following:

anticipated revenues and expenses;

possible price competition and erosion;

expansion into new markets;

future sales mix;

gross margins;

customers;

future developments involving certain investments;

future availability of financings; and

the receipt of stockholder and other approvals of the merger with Harvard Bioscience.

In addition, events may occur in the future that Genomic Solutions is not able to accurately predict or control and that may cause actual results to differ materially from the expectations described in these forward-looking statements.

Readers should not place undue reliance on Genomic Solutions' forward-looking statements contained in this proxy statement and prospectus. These forward-looking statements speak only as of the date on which the statements were made. In evaluating forward-looking statements, you should consider these risks and uncertainties, together with the other risks described from time to time in Genomic Solutions' reports and documents filed with the Securities and Exchange Commission.

THE SPECIAL MEETING OF GENOMIC SOLUTIONS STOCKHOLDERS

Genomic Solutions is furnishing this proxy statement and prospectus to all stockholders of record of Genomic Solutions common stock in connection with the solicitation of proxies by the Genomic Solutions board of directors for use at the special meeting of Genomic Solutions stockholders to be held on October 24, 2002, and at any adjournment or postponement of the special meeting. This proxy statement and prospectus also is being furnished by Harvard Bioscience to Genomic Solutions stockholders as a prospectus for Harvard Bioscience common stock to be issued in connection with the merger.

Date, Time and Place of the Special Meeting

The special meeting will be held at The Crowne Plaza Hotel, 610 Hilton Boulevard, Ann Arbor, Michigan 48108 on October 24, 2002, at 9:00 a.m., local time.

Purpose of the Special Meeting

At the special meeting, and any adjournment or postponement of the special meeting, Genomic Solutions stockholders will be asked:

1. to consider and vote upon a proposal to adopt and approve the merger agreement and approve the merger; and
2. to transact any other business that may properly come before the special meeting and any adjournment or postponement of the special meeting.

A copy of the merger agreement is attached to this proxy statement and prospectus as Annex A. Genomic Solutions stockholders are encouraged to read the merger agreement in its entirety and the other information contained in this proxy statement and prospectus carefully before deciding how to vote.

Record Date

The Genomic Solutions board of directors has fixed the close of business on September 19, 2002, as the record date for determination of Genomic Solutions stockholders entitled to notice of and to vote at the special meeting.

Vote Required for Adoption and Approval of the Merger Agreement and Approval of the Merger

As a condition to completion of the merger, the Delaware General Corporation Law and the merger agreement require that the holders of a majority of the outstanding voting shares of Genomic Solutions as of the record date must vote to adopt and approve the merger agreement and approve the merger. Each share of Genomic Solutions common stock entitles the holder to one vote per share with respect to the merger agreement and the merger. There are no other voting securities of Genomic Solutions.

As of the close of business on September 16, 2002, the most recent practicable date prior to the date of this proxy statement and prospectus, 31,257,198 shares of Genomic Solutions common stock were outstanding, and held by approximately 141 stockholders of record.

As of the close of business on September 16, 2002, the most recent practicable date prior to the date of this proxy statement and prospectus, directors and executive officers of Genomic Solutions (and their respective affiliates) collectively owned approximately 38% of the outstanding shares of Genomic Solutions common stock entitled to vote at the special meeting on the merger agreement and the merger.

All of Genomic Solutions' directors and certain of its affiliates and executive officers have entered into voting agreements and delivered irrevocable proxies, pursuant to which they have agreed to vote their Genomic Solutions shares in favor of adoption and approval of the merger agreement and approval of the merger, in favor of any matter that would be expected to facilitate the merger, and against any matter that would be expected to result in a breach by Genomic Solutions of the merger agreement or that would be expected to result in Genomic Solutions' obligations under the merger agreement not being fulfilled. At the close of business on September 16, 2002, these directors, officers and affiliates collectively owned approximately 38% of the outstanding shares of Genomic Solutions common stock entitled to vote at the special meeting, all of which are subject to the voting agreements.

Quorum, Abstentions and Broker Non-Votes

A majority of all voting shares of Genomic Solutions issued and outstanding as of the record date, represented in person or by proxy, constitutes a quorum for the transaction of business at the special meeting. Genomic Solutions has appointed Steven J. Richvalsky, Genomic Solutions' Chief Financial Officer, to function as the inspector of elections of the special meeting. The inspector of elections will ascertain whether a quorum is present, tabulate votes and determine the voting results on all matters presented to Genomic Solutions stockholders at the special meeting. If a quorum is not obtained, or fewer voting shares of Genomic Solutions are voted for the adoption and approval of the merger agreement and the approval of the merger than a majority of the voting shares eligible to vote at the special meeting in person or by proxy, the special meeting may be postponed or adjourned for the purpose of allowing additional time for obtaining additional proxies or votes. At any subsequent reconvening of the special meeting, all proxies will be voted in the same manner as the proxies would have been voted at the original convening of the special meeting, except for any proxies that have been effectively revoked or withdrawn prior to the subsequent reconvening of the special meeting.

If you submit a proxy that indicates an abstention from voting on all matters presented at the special meeting, your shares will be counted as present for the purpose of determining the existence of a quorum at the special meeting, but will not be voted on any matter presented at the special meeting. Consequently, your abstention will have the same effect as a vote against the proposal to adopt and approve the merger agreement and to approve the merger. In addition, the failure of a Genomic Solutions stockholder to return a proxy will have the effect of a vote against the proposal to adopt and approve the merger agreement and to approve the merger.

Under the rules that govern brokers who have record ownership of shares that are held in "street name" for their clients who are the beneficial owners of the shares, brokers have discretion to vote these shares on routine matters but not on non-routine matters. The adoption and approval of the merger agreement and the approval of the merger at the special meeting are not considered routine matters. Accordingly, brokers will not have discretionary voting authority to vote your shares at the special meeting. A "broker non-vote" occurs when brokers do not have discretionary voting authority and have not received instructions from the beneficial owners of the shares. At the special meeting, broker non-votes will be counted for the purpose of determining the presence of a quorum but will not be counted for the purpose of determining the number of votes cast on the merger agreement and the merger. Accordingly, at the special meeting, broker non-votes will have the same effect as a vote against the proposal to adopt and approve the merger agreement and to approve the merger. Consequently, **Genomic Solutions stockholders are urged to return the enclosed proxy card marked to indicate their vote.**

Solicitation of Proxies and Expenses

Genomic Solutions will bear its own expenses in connection with the solicitation of proxies for the special meeting, except that Genomic Solutions will pay one-half of all costs and expenses incurred in

connection with the printing and mailing of this proxy statement and prospectus, and Harvard Bioscience will pay the other half of those costs and expenses.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

In addition to solicitation by mail, directors, officers and employees of Genomic Solutions may solicit proxies from stockholders by telephone, facsimile, e-mail or in person. No additional compensation will be paid to these individuals for those services. Some of these individuals may have interests in the merger that are different from, or in addition to, the interests of Genomic Solutions stockholders generally. For more information regarding these interests, see the section entitled "The Merger and Related Transactions Consideration of the Merger by Genomic Solutions' Board of Directors Interests of Genomic Solutions' Directors and Officers in the Merger" beginning on page 64 of this proxy statement and prospectus. Genomic Solutions may retain outside agencies for the purpose of soliciting proxies, in which case Genomic Solutions will pay the fees and expenses of those agencies. Record holders such as brokerage houses, nominees, fiduciaries and other custodians will be requested to forward soliciting materials to beneficial owners and to request authority for the exercise of proxies, and, upon the request of such record holders, they will be reimbursed for their reasonable expenses incurred in sending proxy materials to beneficial owners, which Genomic Solutions anticipates will not exceed \$1,000 in the aggregate.

Voting of Proxies at the Special Meeting and Revocation of Proxies

Genomic Solutions requests that all holders of Genomic Solutions common stock on the record date complete, date and sign the accompanying proxy card and promptly return it in the accompanying envelope or otherwise mail it to Genomic Solutions. Brokers holding voting shares in "street name" may vote the shares only if the beneficial owner provides instructions on how to vote. Brokers will provide directions to beneficial owners on how to instruct your broker to vote the shares. Please note, however, that if the holder of record of your shares is your broker, bank or other nominee and you wish to vote at the special meeting, you must bring a letter from the broker, bank or other nominee confirming that you are the beneficial owner of the shares. All properly executed proxies that Genomic Solutions receives prior to the vote at the special meeting, and that are not revoked, will be voted in accordance with the instructions indicated on the proxy card. If no direction is indicated on such proxies, such proxies will be voted in favor of adoption and approval of the merger agreement and approval of the merger (except for broker non-votes, which are discussed above).

A Genomic Solutions stockholder may revoke a previously submitted proxy at any time prior to its use by:

delivering to the Secretary of Genomic Solutions a later-dated signed notice of revocation;

delivering to the Secretary of Genomic Solutions a later-dated, signed proxy (which will automatically replace any earlier dated proxy card that you returned); or

attending the special meeting and voting in person.

Attendance at the special meeting does not in itself constitute the revocation of a previously submitted proxy.

If your shares are held in "street name," your broker or nominee may permit you to vote by telephone or electronically. Please check your proxy card or contact your broker or nominee to determine whether either of these methods of voting is available to you.

Dissenters' Rights of Appraisal

Under Section 262 of the Delaware General Corporation Law, holders of Genomic Solutions common stock are entitled to dissent from the merger, request a judicial appraisal of the fair value of their shares of Genomic Solutions common stock and, if the merger is consummated and all

requirements of Section 262 are satisfied by Genomic Solutions stockholders seeking to exercise dissenters' rights, to receive payment equal to the fair value of their shares of Genomic Solutions common stock, as determined in the manner set forth under Section 262. Failure to strictly follow the procedures set forth in Section 262 on a timely basis may result in a termination or loss of appraisal rights.

Under Section 262, not less than 20 days prior to the special meeting of Genomic Solutions stockholders to be held on October 24, 2002, at which the merger agreement and the merger will be considered and voted upon, Genomic Solutions must notify each of its stockholders entitled to appraisal rights as of the record date of the special meeting that appraisal rights are available, and include in that notice a copy of Section 262. This proxy statement and prospectus constitutes such notice to the Genomic Solutions stockholders and includes a copy of Section 262 which is attached as Annex C to this proxy statement and prospectus.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Dissenting stockholders who do not wish to accept the merger consideration and who wish to assert their rights to an appraisal of their shares of Genomic Solutions common stock must so notify Genomic Solutions before the taking of the vote on the merger agreement and the merger, by delivering a written demand for appraisal of his or her shares of Genomic Solutions common stock to: Genomic Solutions Inc., 4355 Varsity Drive, Suite E, Ann Arbor, Michigan 48108, Attention: Gary A. Kendra, Secretary. Any written notice from a dissenting stockholder wishing to demand appraisal must be executed by or on behalf of the stockholder of record and must reasonably inform Genomic Solutions of the identity of the stockholder of record and his or her intention to demand appraisal of his or her shares of Genomic Solutions common stock. A proxy or vote against the merger agreement and the merger will not constitute this demand.

Under Section 262, the procedures to obtain appraisal rights must be carried out by and in the name of holders of record of shares of Genomic Solutions common stock. Stockholders who are the beneficial but not the record owners of shares of Genomic Solutions common stock (such as shares held by a broker in "street name" rather than in the name of the beneficial owner thereof) and who wish to exercise such appraisal rights are advised to consult promptly with the record owners as to the timely exercise of appraisal rights and to cause the record owner to make the appropriate demand.

Within 120 days of the effective time of the merger, any dissenting stockholder who has complied with the requirements of Section 262 and who is otherwise entitled to appraisal rights may file a petition in the Delaware Court of Chancery demanding a determination of the "fair" value of the shares of all dissenting stockholders of Genomic Solutions. If a petition for an appraisal is timely filed, the Court of Chancery will hold a hearing, determine which stockholders are entitled to appraisal rights and appraise the shares of Genomic Solutions common stock owned by those stockholders, determining the fair value of their shares, exclusive of any element of value arising from the accomplishment or expectation of the merger, together with a fair rate of interest to be paid, if any, upon the amount determined to be the fair value.

Any dissenting stockholder who has duly demanded an appraisal in compliance with Section 262 will not, after the effective time, be entitled to vote the shares of Genomic Solutions common stock subject to the demand for appraisal for any purpose. The shares of Genomic Solutions common stock subject to the demand for appraisal will not be entitled to dividends or other distributions other than those, if any, payable or deemed to be payable to stockholders of record as of a date prior to the effective time.

For a more detailed discussion of the appraisal rights of Genomic Solutions stockholders and Section 262, see the section entitled "The Merger and Related Transactions Dissenters' Rights of Appraisal" beginning on page 87 of this proxy statement and prospectus and Section 262 of the Delaware General Corporation Law, a copy of which is attached as Annex C to this proxy statement and prospectus.

49

Other Matters to be Voted on

Genomic Solutions knows of no matters that will be presented for consideration at the special meeting other than those stated in this proxy statement and prospectus. However, if any other matters do properly come before the special meeting, the proxy holders will vote proxies in accordance with their best judgment regarding such matters.

Recommendation of Genomic Solutions' Board of Directors

The Genomic Solutions board of directors has unanimously determined that the merger is advisable, in the best interests of Genomic Solutions stockholders and on terms that are fair to the stockholders of Genomic Solutions. **Accordingly, the Genomic Solutions board of directors has unanimously approved the merger agreement and the merger and recommends that stockholders vote FOR adoption and approval of the merger agreement and approval of the merger.** In considering such recommendation, Genomic Solutions stockholders should be aware that some Genomic Solutions directors and officers have interests in the merger that are different from, or in addition to, those of Genomic Solutions stockholders. For more information about these interests, see the section entitled "The Merger and Related Transactions Consideration of the Merger by Genomic Solutions' Board of Directors Interests of Genomic Solutions' Directors and Officers in the Merger" beginning on page 64 of this proxy statement and prospectus.

The matters to be considered at the special meeting are of great importance to the stockholders of Genomic Solutions. Accordingly, you are urged to read and carefully consider the information presented in this proxy statement and prospectus, and to complete, date, sign and promptly return the enclosed proxy card in the enclosed postage-paid envelope.

Stockholders should not send any stock certificates with their proxy cards. A transmittal form with instructions for the surrender of Genomic Solutions common stock certificates will be mailed to you promptly following completion of the merger. If you send your stock certificates to either Harvard Bioscience or Genomic Solutions, neither Harvard Bioscience nor Genomic Solutions will assume the risk of loss. For more information regarding the procedures for exchanging Genomic Solutions stock certificates for Harvard Bioscience

stock certificates and cash, see the section entitled "The Merger and Related Transactions The Merger Agreement Exchange of Genomic Solutions Stock Certificates For Harvard Bioscience Stock Certificates and Cash" beginning on page 69 of this proxy statement and prospectus.

THE MERGER AND RELATED TRANSACTIONS

The following is a description of the material aspects of the merger and related transactions, including the merger agreement and certain other agreements entered into in connection with the merger agreement. While we believe that the following description covers the material terms of the merger, the merger agreement and the related transactions and agreements, the description may not contain all of the information that is important to you. You should read this entire proxy statement and prospectus and the other documents we refer to carefully for a more complete understanding of the merger and the related transactions. In particular, the following summary of the merger agreement is not complete and is qualified in its entirety by reference to the copy of the merger agreement attached to this proxy statement and prospectus as Annex A and incorporated by reference into this proxy statement and prospectus. You should read the merger agreement carefully and in its entirety for a complete understanding of the terms of the merger and related transactions.

Background of the Merger

The respective management groups of Harvard Bioscience and Genomic Solutions review, on a regular basis, the strategic focus of their companies in light of the rapidly changing competitive environment of the biotechnology industry. An objective of these strategic reviews is to identify opportunities to enhance stockholder value.

On February 7, 2002, the Genomic Solutions board of directors held an informal strategy meeting in Chicago. Among the discussion items were the difficult financial markets, macroeconomic conditions and industry specific conditions, all of which seemed to point to potential consolidation in the life sciences tools industry. The board discussed seeking a merger partner to dramatically improve critical mass as a strong possibility to improve stockholder value.

At the Genomic Solutions quarterly board of directors meeting on March 6, 2002, Edward Lagerstrom, Scott Beardsley and C. Jason Moran of U.S. Bancorp Piper Jaffray ("Piper Jaffray") made a presentation to the board. Piper Jaffray advised the board on market conditions in the life sciences tools industry and presented a list of candidates that potentially would be a good strategic fit for the company in a merger or sale transaction.

On April 16, 2002, the Genomic Solutions board of directors met telephonically to discuss engaging a financial advisor. At that meeting, the Genomic Solutions board of directors established a committee of the board consisting of Jeffrey S. Williams, Genomic Solutions' President and Chief Executive Officer, Damion E. Wicker and Robert G. Shepler to identify possible candidates and make a recommendation to the full board regarding the engagement of a financial advisor.

On April 17, 2002, Chane Graziano, Harvard Bioscience's Chief Executive Officer, and David Green, Harvard Bioscience's President, met with Mr. Lagerstrom of Piper Jaffray to discuss strategic acquisitions of other companies engaged in the life sciences instrumentation fields. Mr. Lagerstrom presented Harvard Bioscience with a list of companies, which included Genomic Solutions. Harvard Bioscience management asked Mr. Lagerstrom to arrange a meeting with the management of Genomic Solutions in order to learn more about the company.

Also on April 17, 2002, the Genomic Solutions board committee met telephonically to discuss possible candidates to serve as Genomic Solutions' financial advisor. The board committee determined that only two candidates had the requisite familiarity with the industry and the Genomic Solutions business.

On April 22, 2002, Messrs. Graziano and Green visited Genomic Solutions' headquarters in Ann Arbor, Michigan. On this visit, the parties entered into a mutual confidentiality agreement to permit the exchange of confidential information for the purpose of evaluating the merits of a possible acquisition of Genomic Solutions by Harvard Bioscience. Mr. Williams discussed with Messrs. Graziano

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

and Green the business of Genomic Solutions and its financial prospects and business model. Also in attendance at the discussion from Genomic Solutions were Steven J. Richvalsky, Executive Vice President and Chief Financial Officer, and Andrew A. Jakimcius, Executive Vice President Operations. Mr. Green presented an overview of Harvard Bioscience. The meeting was introductory in nature and the parties generally discussed possible joint opportunities. The parties agreed to have further discussions.

On April 29, 2002, the Genomic Solutions board committee met telephonically to interview the two financial advisor candidates, one of which was Piper Jaffray. At that meeting, the committee decided to recommend engaging Piper Jaffray.

At the Genomic Solutions quarterly board of directors meeting on May 1, 2002, Mr. Lagerstrom and Robert DeSutter of Piper Jaffray gave a presentation on potential strategic partners for Genomic Solutions, including those companies engaged in the life sciences field that might be interested in acquiring Genomic Solutions. Because of the prior contact with Harvard Bioscience, Messrs. Lagerstrom and DeSutter provided an overview of Harvard Bioscience in their presentation. They also identified 13 other potential investors in, or acquirors of, Genomic Solutions. Piper Jaffray also discussed several other companies identified by Mr. Williams and the management team. At that meeting, the Genomic Solutions board of directors agreed to retain Piper Jaffray to serve as its financial advisor based upon the board committee's recommendation. The Genomic Solutions board of directors authorized Piper Jaffray to contact the most likely candidates to explore a possible transaction. The board of directors also authorized the engagement of JRW Technology, Inc. to assess Genomic Solutions' business and operations and to recommend alternatives for achieving profitability. Genomic Solutions subsequently entered into a consulting agreement with JRW.

On May 2, 2002, Messrs. Williams and Graziano met telephonically to discuss a potential combination of Harvard Bioscience and Genomic Solutions. Mr. Williams agreed to provide certain business and financial information to Mr. Graziano regarding Genomic Solutions and its operations. That day, Mr. Williams sent to Harvard Bioscience various materials including those which described Genomic Solutions' business and financial position, its products, intellectual property, corporate structure and current financial prospects. On May 3, 2002, Mr. Williams sent additional historical financial information on Genomic Solutions to Messrs. Graziano and Green.

On May 7, 2002, Messrs. Graziano and Green visited the offices of Genomic Solutions' subsidiary, Cartesian Technologies, Inc., in Irvine, California and met with Thomas C. Tisone, Ph.D., and the senior management team at Cartesian. Among other things, the parties discussed possible market synergies between the two companies. Also on May 7, Susan M. Luscinski, Chief Financial Officer of Harvard Bioscience, sent a preliminary due diligence request list to Mr. Williams.

On May 10, 2002, Gary A. Kendra, Genomic Solutions' Executive Vice President and General Counsel, sent certain preliminary due diligence information to Ms. Luscinski.

On May 14 and 15, 2002, Ms. Luscinski visited Genomic Solutions' headquarters in Ann Arbor, Michigan to gain an overview of Genomic Solutions' financial condition and accounting and financial systems. Ms. Luscinski met with Messrs. Williams, Richvalsky and Kendra to discuss the business and operations of the company. Ms. Luscinski also reviewed certain contracts and agreements to which Genomic Solutions was a party and continued to work on preliminary due diligence concerning Genomic Solutions.

On May 15, 2002, Messrs. Williams and Lagerstrom visited Harvard Bioscience's headquarters located in Holliston, Massachusetts. On that visit, Mr. Green gave a presentation about Harvard Bioscience's business and financial prospects and business model.

52

On May 17, 2002, Mr. Williams wrote Messrs. Graziano and Green a letter suggesting that a combination of the businesses could have strategic value and benefit the stockholders of Genomic Solutions and Harvard Bioscience and that, in Mr. Williams' view, further discussions should occur.

During May and June 2002, Piper Jaffray had communications with 10 possible acquirors, including Harvard Bioscience. In addition to Harvard Bioscience, Piper Jaffray received a verbal indication of interest from only one other company. After conducting preliminary due diligence and receiving a management presentation, the other company decided not to pursue a potential transaction.

On May 22, 2002, Mr. Williams met telephonically with a representative of White Pines Ventures, LLC, a stockholder of Genomic Solutions, to request that White Pines assist JRW in the performance of its consulting services to Genomic Solutions. On May 29, 2002, by letter to Mr. Kendra, White Pines agreed to render such assistance and to be bound by all of the terms and conditions of the May 22, 2002, consulting agreement between JRW and Genomic Solutions.

On May 28, 2002, Messrs. Williams and Green conferred by telephone and discussed potential terms of a transaction.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

During the first week of June, Messrs. Graziano and Green and Ms. Luscinski engaged in numerous discussions amongst themselves concerning the terms of an offer to acquire Genomic Solutions. Messrs. Graziano and Green discussed preliminary terms of a business combination transaction with Genomic Solutions' financial advisor. Also during this period, Mr. Green spoke with Messrs. Williams and Richvalsky regarding the recent financial and operating results of Genomic Solutions.

On June 5, 2002, Mr. Graziano visited Genomic Solutions' facilities in the United Kingdom.

On June 7, 2002, Messrs. Graziano and Green verbally indicated to Mr. Lagerstrom that they were prepared to negotiate the acquisition of Genomic Solutions for \$10,000,000 cash plus 3,000,000 shares of Harvard Bioscience common stock. On June 11, 2002, Mr. Green provided Messrs. Williams and Lagerstrom with a summary of the business rationale for Harvard Bioscience's proposal to acquire Genomic Solutions at this price. The proposal took into account Genomic Solutions' intention to implement a cost reduction restructuring plan prior to the time of the transaction. Mr. Lagerstrom subsequently informed Harvard Bioscience that this offer was not acceptable to Genomic Solutions.

Subsequently, Messrs. Green and Lagerstrom engaged in several discussions regarding the terms of the proposal. On June 20, 2002, the Genomic Solutions board of directors met to review the proposed terms of the acquisition by Harvard Bioscience. Messrs. Green and Graziano gave a telephonic presentation to the board on the potential synergies between the two companies and the reasons a transaction with Harvard Bioscience would be in the interests of Genomic Solutions' stockholders. The board took no action at the meeting other than to authorize Mr. Williams to continue to negotiate with Harvard Bioscience to maximize the amount of consideration to be received in any transaction with Harvard Bioscience.

After the board meeting, on the afternoon of June 20, 2002, Messrs. Lagerstrom, Williams, Graziano and Green engaged in further negotiations regarding the consideration to be paid in the proposed transaction. During these discussions, Messrs. Graziano and Green proposed a purchase price of 3,200,000 shares of Harvard Bioscience common stock and \$10,000,000 cash. On the evening of June 20, 2002, Mr. Williams advised the Genomic Solutions board of directors of this proposal and provided the directors with the general terms of the proposed transaction.

As a result of discussions on June 20 and 21, 2002, Messrs. Graziano, Green and Williams reached a tentative agreement on the principal economic terms of the proposed transaction. Thereafter, management of Genomic Solutions and Harvard Bioscience and their financial and legal advisors undertook a due diligence review of the respective companies and businesses.

53

On June 24, 2002, Messrs. Williams, Kendra and Richvalsky traveled to Massachusetts and attended a dinner with Messrs. Graziano and Green and Ms. Luscinski and Mr. Lagerstrom. On June 25, 2002, Messrs. Williams, Kendra and Richvalsky visited Harvard Bioscience at its headquarters in Holliston, Massachusetts. There they met with Messrs. Graziano and Green and Ms. Luscinski to discuss various due diligence issues and business items. Messrs. Kendra and Richvalsky remained in Holliston and continued due diligence on June 26, 2002.

On June 25, 2002, counsel to Genomic Solutions sent Harvard Bioscience and its counsel a draft merger agreement. Counsel to Harvard Bioscience indicated that they would provide an initial draft merger agreement and subsequently commenced preparation of the merger agreement, voting agreements and ancillary documents for the proposed transaction.

On June 26, 2002, Harvard Bioscience and Genomic Solutions entered into an exclusivity letter, pursuant to which Genomic Solutions agreed to cease all acquisition negotiations with all other parties and to negotiate exclusively with Harvard Bioscience until the close of business on July 12, 2002.

On June 28, 2002, the Genomic Solutions board of directors met telephonically to discuss the status of the negotiations with Harvard Bioscience. Management of Genomic Solutions advised the board on principal negotiation issues, including the proposed structure of the transaction and preliminary due diligence issues.

During the period from June 28 through July 15, 2002, members of Harvard Bioscience's management team and representatives of Goodwin Procter LLP, Harvard Bioscience's legal counsel, and KPMG LLP, Harvard Bioscience's independent auditors, conducted business, financial, accounting, tax and legal due diligence and participated in discussions with Genomic Solutions, its legal counsel and management team on various issues. Also during this period, third party representatives of Harvard Bioscience and Genomic Solutions separately talked with select customers of Harvard Bioscience and Genomic Solutions.

On July 2, 2002, the Genomic Solutions board of directors met telephonically for an update on the status of negotiations with Harvard Bioscience and on-going due diligence. Also on July 2, 2002, Harvard Bioscience's counsel circulated their first draft of the proposed merger

agreement between the parties.

On July 3, 2002, Mr. Graziano informed Messrs. Lagerstrom and Williams that, based on Harvard Bioscience's due diligence review of Genomic Solutions, the economic terms of the proposed transaction needed to be revisited. After a lengthy discussion, Harvard Bioscience proposed a purchase price of 3,200,000 shares of Harvard Bioscience common stock and \$9,000,000 cash.

On July 8, 2002, the board of directors of Genomic Solutions met to review the most recent proposal by Harvard Bioscience. At the meeting, the board of Genomic Solutions discussed with Piper Jaffray certain financial aspects of the proposed transaction. Genomic Solutions' executive team reviewed its due diligence findings to date and Genomic Solutions' legal counsel commented on the initial draft of the definitive merger agreement.

On July 11, 2002 the board of directors of Genomic Solutions met again telephonically to review the status of the Harvard Bioscience transaction and discuss the progress of the due diligence and negotiations on the definitive agreement. At the meeting, the board discussed with Genomic Solutions' legal counsel and its financial advisor aspects of the proposed transaction. Legal counsel reviewed the terms of the voting agreements to which Genomic Solutions board members would be a party and discussed the proposed treatment of stock options. Piper Jaffray gave a summary of its financial analysis of the transaction terms. In addition, Genomic Solutions' executive team and legal counsel reviewed their due diligence findings. At the invitation of the Genomic Solutions board, Messrs. Graziano and Green also briefly telephonically joined the board meeting to express their views on the progress of the negotiations and the need to extend the exclusivity letter. After extensive

discussion of the terms of the definitive agreement, the board expressed concern that the draft of the definitive agreement contained too many conditions to closing that if not satisfied would permit Harvard Bioscience to not close the transaction. The directors expressed their inclination to not approve the transaction unless significant progress could be made in reducing the number of conditions to closing. As such, the board agreed to extend the exclusivity letter only until July 15, 2002. The board established a committee of the board consisting of Messrs. Williams and Shepler and Daniel J. Mitchell to review the draft of the definitive agreement to be provided on July 13, 2002 and determine whether enough progress had been made to warrant an extension of the term of the exclusivity letter through July 17, 2002. The board authorized the committee to extend the exclusivity letter through that date only if all three members agreed that enough progress had been made to justify the extension in light of the board's concern.

On July 12, 2002, Harvard Bioscience and Genomic Solutions executed an extension of the exclusivity letter until 12:01 p.m. on July 15, 2002.

On July 15, 2002, the board of directors of Harvard Bioscience held a meeting at which the directors discussed the terms of the proposed transaction between Harvard Bioscience and Genomic Solutions and the rationale for the transaction. At the meeting, the board determined that it was advisable and in the best interests of Harvard Bioscience and its stockholders to enter into the merger agreement and authorized Harvard Bioscience's management to enter into the merger agreement and related documents.

Also on July 15, 2002, Mr. Williams met telephonically with each of Messrs. Shepler and Mitchell separately to discuss the July 13, 2002 draft of the definitive agreement. Genomic Solutions' outside legal counsel was present during each of the calls to discuss the progress made on the negotiation of the definitive agreement. Each of the directors agreed that management and legal counsel had made significant progress on reducing the number and significance of the closing conditions in the definitive agreement. As a result, Mr. Williams, on behalf of Genomic Solutions, executed an extension of the exclusivity letter with Harvard Bioscience until midnight on July 17, 2002.

On July 16, 2002, the Genomic Solutions board of directors met to consider the final terms of the merger. At the meeting, Piper Jaffray presented summaries of financial analyses it had conducted and delivered and discussed its written fairness opinion regarding the merger consideration. Counsel for Genomic Solutions discussed with the board the legal due diligence review of Harvard Bioscience, presented an analysis of the legal and regulatory aspects of the proposed transaction, reviewed the fiduciary obligations of the Genomic Solutions directors and described the terms of the merger agreement and related documents, including Mr. Williams' employment agreement with Harvard Bioscience. The directors discussed their views of the presentations and the transaction, including the potential advantages and risks associated with the merger. After extensive discussion, the board unanimously determined that the merger was advisable, in the best interests of the Genomic Solutions stockholders, and on terms that are fair to the stockholders. The board unanimously approved the merger and the merger agreement and recommended that stockholders vote their shares in favor of adopting and approving the merger agreement and approving the merger, and further authorized the officers to execute and deliver the merger agreement to Harvard Bioscience.

After the close of business on July 17, 2002, the parties executed the merger agreement, certain voting agreements and an employment agreement for Mr. Williams and issued a joint press release announcing the transaction before the opening of business on July 18, 2002.

Consideration of the Merger by Genomic Solutions' Board of Directors

Genomic Solutions' Reasons for the Merger

Genomic Solutions' board of directors consulted with senior management and Genomic Solutions' financial and legal advisors and considered a number of factors, including those set forth below, in reaching its decision to approve the merger agreement and the transactions contemplated by the merger agreement, and to **recommend that Genomic Solutions' stockholders vote FOR adoption and approval of the merger agreement and approval of the merger.**

The following discussion of Genomic Solutions' reasons for the merger contains a number of forward-looking statements that reflect the current views of Genomic Solutions with respect to future events that may have an effect on its future financial performance. Forward-looking statements are subject to risks and uncertainties. Actual results and outcomes may differ materially from the results and outcomes discussed in the forward-looking statements. Cautionary statements that identify important factors that could cause or contribute to differences in results and outcomes include those discussed in the section entitled "Cautionary Statements Regarding Forward-Looking Statements in this Proxy Statement and Prospectus" beginning on page 44 of this proxy statement and prospectus, and the section entitled "Risk Factors" beginning on page 21 of this proxy statement and prospectus.

Merger Consideration. In addition to the analyses and presentations by Genomic Solutions' financial advisor summarized in the section entitled "Opinion of Genomic Solutions' Financial Advisor" beginning on page 58 of this proxy statement and prospectus, the Genomic Solutions board of directors looked at the premium represented by the consideration to be offered to the holders of Genomic Solutions common stock in the merger, based upon the same day price of Harvard Bioscience common stock and cash consideration compared to the price of Genomic Solutions common stock of \$0.47 on July 15, 2002 (an 82.3% premium), \$0.65 on July 8, 2002 (a 31.8% premium), and \$0.70 on June 17, 2002 (a 22.4% premium). Genomic Solutions' board of directors also considered the ability of Genomic Solutions' stockholders to continue to participate in the growth of the combined company since a portion of the consideration to be received by Genomic Solutions' stockholders consists of shares of Harvard Bioscience common stock.

Advice from Genomic Solutions' Financial Advisor. Genomic Solutions' board of directors considered the detailed presentations made by Piper Jaffray, Genomic Solutions' financial advisor, with respect to the proposed consideration to be offered to the holders of Genomic Solutions' common stock in the merger. The Genomic Solutions board also considered Piper Jaffray's oral opinion, which was subsequently confirmed in writing, that, as of the date of its opinion, the merger consideration set forth in the merger agreement was fair, from a financial point of view, to the holders of Genomic Solutions common stock. The full text of this opinion is attached to this proxy statement and prospectus as Annex B.

Review of Prospects in Remaining Independent. Genomic Solutions' board of directors considered Genomic Solutions' financial condition, results of operations and business and earnings prospects if it were to remain an independent entity.

Effect on Employees and Facilities. The board of directors of Genomic Solutions considered the possible effect of the merger on the current facilities and employees of Genomic Solutions.

Certain Terms of the Merger Agreement Relating to Alternative Transactions. In evaluating the adequacy of the consideration to be received, the Genomic Solutions board of directors determined that the merger agreement did not preclude a third party offer for Genomic Solutions. In particular, in connection with an acquisition proposal more favorable from a financial point of view than the merger, subject to restrictions discussed more fully in the section entitled "The Merger Agreement and Related Transactions The Merger Agreement" beginning on page 67 of this proxy statement and prospectus,

the merger agreement permits the Genomic Solutions board of directors, if required by its fiduciary duties, to:

provide information to, and engage in discussion or negotiations with, a third party that makes an unsolicited superior proposal (as defined in the merger agreement); and

withdraw its recommendation that the stockholders vote in favor of adopting and approving the merger agreement and approving the merger.

Genomic Solutions' board of directors also considered that the merger agreement:

permits Harvard Bioscience to terminate the merger agreement if the board of directors withdraws its recommendation in favor of the merger with Harvard Bioscience or recommends another proposal; and

requires Genomic Solutions to pay a termination fee to Harvard Bioscience if the merger agreement is terminated under some circumstances.

The Genomic Solutions board of directors noted that the termination payment provisions of the merger agreement could have the effect of discouraging alternative proposals for a business combination between Genomic Solutions and a third party. However, the board of directors concluded that the amount of the fee that Genomic Solutions may be obligated to pay, and the circumstances under which it may be payable, are typical for transactions of this size and type, are not likely to discourage any such proposals and were necessary to induce Harvard Bioscience to enter into the merger agreement.

Limited Closing Conditions. The Genomic Solutions board of directors considered the limited nature of the closing conditions included in the merger agreement, and the likelihood that the merger agreement would be adopted and approved and the merger approved by Genomic Solutions' stockholders.

Realization of Liquidity. The Genomic Solutions board of directors considered the recent relative illiquidity of Genomic Solutions' common stock. The Genomic Solutions board believes that some of this lack of liquidity is due to the absence of material market analyst coverage and the relatively small market capitalization of Genomic Solutions. By providing for the exchange of Genomic Solutions common stock for Harvard Bioscience common stock and cash, the merger may enable existing Genomic Solutions stockholders to experience the advantages of a more liquid investment, as Harvard Bioscience common stock has historically experienced higher average trading volumes than Genomic Solutions common stock.

The Genomic Solutions board also identified and considered a number of other factors in its deliberations concerning the merger, including:

risks associated with fluctuations in Harvard Bioscience's stock price prior to the merger;

the risk of disruption of sales momentum as a result of uncertainties created by the announcement of the merger;

the risk that the voting agreements may have the effect of discouraging alternative proposals for a business combination with another third party;

the payment that would be paid to Mr. Williams as a result of the merger;

the new employment agreement between Mr. Williams and the surviving corporation which becomes effective upon the closing of the merger and which includes a nomination for a seat on the board of directors of Harvard Bioscience;

the interests of the directors and officers that are different from, or in addition to, those of Genomic Solutions' stockholders generally, including the receipt of change in control payments under the employment agreements with certain executive officers of Genomic Solutions; and

other applicable risks described in the section of this proxy statement and prospectus entitled "Risk Factors" on page 21.

The Genomic Solutions board of directors believed that these risks and potential negative factors were outweighed by the potential benefits of the merger.

The foregoing discussion of the information and factors considered by Genomic Solutions' board of directors, while not exhaustive, includes the material factors considered by the board of directors. In view of the variety of factors considered in connection with its evaluation of the merger, Genomic Solutions' board of directors did not find it practicable to, and did not, quantify or otherwise assign relative or specific weight or values to any of these factors, and individual directors may have given different weights to different factors.

Recommendation of Genomic Solutions' Board of Directors

The Genomic Solutions board of directors has unanimously determined that the merger is advisable, in the best interests of Genomic Solutions stockholders and on terms that are fair to the stockholders of Genomic Solutions. **Accordingly, the Genomic Solutions board of directors has unanimously approved the merger agreement and the merger and recommends that stockholders vote FOR adoption and approval of the merger agreement and approval of the merger.**

Opinion of Genomic Solutions' Financial Advisor

Genomic Solutions retained U.S. Bancorp Piper Jaffray Inc. to act as its financial advisor and, if requested, to render to the board of directors of Genomic Solutions an opinion as to the fairness, from a financial point of view, of the consideration to be received by Genomic Solutions stockholders in the merger.

On July 16, 2002, Piper Jaffray delivered to the board of directors of Genomic Solutions its opinion, as of that date and based upon and subject to the assumptions, factors and limitations set forth in the written opinion and described below, that the merger consideration to be received by holders of Genomic Solutions common stock in the merger pursuant to the merger agreement was fair, from a financial point of view, to the holders of common stock of Genomic Solutions. A copy of Piper Jaffray's written opinion is attached to this proxy statement and prospectus as Annex B and is incorporated into this proxy statement and prospectus by reference.

While Piper Jaffray rendered its opinion and provided certain analyses to Genomic Solutions' board of directors, Piper Jaffray was not requested to and did not make any recommendation to Genomic Solutions' board of directors as to the specific form or amount of the consideration to be received by Genomic Solutions stockholders in the proposed merger, which was determined through negotiations between Genomic Solutions and Harvard Bioscience. Piper Jaffray's written opinion, which was directed to the Genomic Solutions board of directors, addresses only the fairness, from a financial point of view, of the merger consideration to be received by Genomic Solutions stockholders in the proposed merger, does not address Genomic Solutions' underlying business decision to proceed with or effect the merger, or the relative merits of the merger compared to any alternative business strategy or transaction in which Genomic Solutions might engage and does not constitute a recommendation to any Genomic Solutions stockholder as to how to vote in the merger.

In arriving at its opinion, Piper Jaffray's review included:

a draft dated July 13, 2002 of the merger agreement;

58

selected publicly available financial and other information related to Harvard Bioscience and Genomic Solutions;

certain publicly available market and securities data of Harvard Bioscience and Genomic Solutions;

to the extent publicly available, certain financial and securities data of selected other companies whose securities are traded in public markets;

to the extent publicly available, information relating to selected acquisition transactions involving companies operating in industries deemed similar to the industry in which Genomic Solutions operates; and

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

internal financial forecasts of Genomic Solutions prepared and furnished by Genomic Solutions' management and giving effect to Genomic Solutions' previously-announced restructuring.

In addition, Piper Jaffray visited the headquarters of Genomic Solutions and conducted discussions with members of senior management concerning the financial condition, current operating results and business outlook of Genomic Solutions and the combined company following the merger. Piper Jaffray also visited Harvard Bioscience's headquarters and had informal discussions with members of Harvard Bioscience's senior management.

In delivering its opinion to the board of directors of Genomic Solutions, Piper Jaffray prepared and delivered to Genomic Solutions' board of directors written materials containing various analyses and other information material to the opinion. The following is a summary of the analyses contained in the materials:

Implied Consideration. Based on the 3,200,000 shares of Harvard Bioscience common stock to be received by Genomic Solutions stockholders in the merger, and the value of Harvard Bioscience stock consideration (based on the five-day trading average of Harvard Bioscience immediately prior to July 16, 2002 of \$5.78 per share), Piper Jaffray calculated the aggregate implied value of the stock consideration payable in the transaction for Genomic Solutions common stock to be approximately \$18.48 million. Piper Jaffray also calculated that stockholders of Genomic Solutions would be issued an aggregate of 10.4% of the total Harvard Bioscience common stock and common stock equivalents outstanding after the merger. Giving effect to the implied value of the stock consideration and the aggregate cash consideration of \$9.0 million, as well as to Genomic Solutions' estimated outstanding debt and cash at the closing of the merger, Piper Jaffray calculated an implied company value (equity value plus debt less cash) for Genomic Solutions of \$29.16 million.

Market Analysis. Piper Jaffray calculated the assumed exchange ratio that would result for the merger if all the consideration paid to Genomic Solutions stockholders was in the form of Harvard Bioscience common stock by dividing the per share consideration of \$0.87 by the five-day trading average of Harvard Bioscience immediately prior to July 16, 2002 of \$5.78 per share. This assumed exchange ratio of 0.1515 was measured against the "implied" exchange ratio based on historical stock prices for Harvard Bioscience. Piper Jaffray examined the exchange ratios implied by the 30, 60, 90, 180 day and one year trading median stock prices for Harvard Bioscience. This analysis produced the following implied historical exchange ratios:

	Transaction	Historical Exchange Ratio (Median)
30 Day Period	0.1515x	0.1252
60 Day Period	0.1515x	0.1154
90 Day Period	0.1515x	0.1287
180 Day Period	0.1515x	0.1860
One Year Period	0.1515x	0.2058

59

Piper Jaffray presented selected price and volume distribution data of Harvard Bioscience and Genomic Solutions and illustrated the relative stock price performance of Harvard Bioscience and Genomic Solutions against the Nasdaq Stock Market and the S&P 500 composite index. Piper Jaffray also presented ownership data for both Harvard Bioscience and Genomic Solutions and summaries of the published estimates by securities market research analysts for both Harvard Bioscience and Genomic Solutions.

Genomic Solutions Comparable Public Company Analysis. Piper Jaffray compared financial information and valuation ratios of Genomic Solutions to corresponding data and ratios from seven publicly traded companies deemed comparable to Genomic Solutions. This group included Aclara Biosciences, Inc., Argonaut Technologies, Inc., Bruker AXS Inc., CIPHERGEN Biosystems, Inc., Nanogen, Inc., Orchid Biosciences, Inc. and Transgenomic, Inc. This group was selected from instrumentation companies operating in the life sciences enabling technology industry with a market capitalization below \$100 million that were expected to be unprofitable or marginally profitable in 2002 based on publicly available estimates, and were companies otherwise deemed comparable by Piper Jaffray.

This analysis produced multiples of selected valuation data as follows:

		Comparable Companies			
Genomic Solutions(1)	Transaction(2)	Low	Mean	Median	High

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	Comparable Companies										
Market capitalization (in millions)	\$	14.7	\$	27.5	15.9	\$	58.3	\$	59.8	\$	70.9
Share price as percentage of 52-week high		11.7%		21.8%	\$	15.3%		22.0%		19.1%	34.8%
Company value to latest twelve months revenue		0.8x		1.4x		0.3x		0.9x		0.7x	2.1x
Company value to estimated calendar 2002 revenue		0.7x		1.2x		0.3x		0.6x		0.4x	1.1x
Company value to estimated calendar 2003 revenue		0.6x		1.1x		0.2x		0.3x		0.3x	0.5x

(1) Based on July 15, 2002 closing price.

(2) Based on the five-day trading average of Harvard Bioscience immediately prior to July 16, 2002.

Selected Transaction Analysis. Piper Jaffray reviewed 12 merger and acquisition transactions that it deemed comparable to the merger. It selected these transactions by searching Securities and Exchange Commission filings, public company disclosures, press releases, industry and popular press reports, databases and other sources and by applying the following criteria:

transactions involving target companies in the life sciences enabling technology industry that were primarily instrumentation companies;

transactions in which the target company had an enterprise value between \$5.0 million and \$650.0 million; and

transactions that were announced or completed after January 1, 1998.

Piper Jaffray compared the resulting multiples of company value to the latest 12 months revenues to the multiples for Genomic Solutions derived from the implied value payable in the merger based on the five-day trading average of Harvard Bioscience immediately prior to July 16, 2002.

Selected Transactions			
Low	Mean	Median	High

Company value to latest 12 months revenue	1.4x	0.7x	2.0x	1.8x	3.9x
---	------	------	------	------	------

Premiums Paid Analysis. Piper Jaffray reviewed publicly available information for 65 merger and acquisition transactions involving public companies to determine the implied premiums payable in these transactions over recent trading prices. It selected these transactions by searching Securities and

Exchange Commission filings, public company disclosures, press releases, industry and popular press reports, databases and other sources and by applying the following criteria:

transactions involving target companies with SIC codes in the life sciences industry;

transactions in which at least 50% of a public target company was acquired; and

transactions announced or completed after January 1, 2000.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

The table below shows a comparison of those premiums to the premium that would be paid to Genomic Solutions stockholders based on the implied value payable in the merger. The premium calculations for Genomic Solutions stock are based upon an assumed announcement date of July 16, 2002:

	Implied Premium (Discount)				
	Transaction	Comparable Transactions			
		Low	Mean	Median	High
One day before announcement	86.1%	(45.4%)	32.2%	28.6%	121.0%
One week before announcement	34.6%	(34.0%)	40.4%	31.0%	127.3%
Four weeks before announcement	25.0%	(47.8%)	52.1%	48.2%	216.2%

Discounted Cash Flow Analysis. Piper Jaffray performed a discounted cash flow analysis of Genomic Solutions in which it calculated the present value of the projected hypothetical future cash flows of Genomic Solutions using estimates and financial forecasts prepared by Genomic Solutions' management. Piper Jaffray estimated a range of theoretical values for Genomic Solutions based on the net present value of its implied annual cash flows and a terminal value for Genomic Solutions in 2007 calculated based upon a multiple of EBIT (earnings before interest and taxes). Piper Jaffray applied a range of discount rates of 20% to 30% and a range of terminal value multiples of 8.0x to 12.0x of forecasted 2007 EBIT. This analysis yielded the following results:

Aggregate Enterprise Value of Genomic Solutions

(in thousands)

Low	\$ 18,167
Mid	26,239
High	37,413

Aggregate Equity Value of Genomic Solutions

(in thousands)

Low	\$ 18,320
Mid	26,757
High	38,473

Per Share Equity Value of Genomic Solutions

Low	\$ 0.59
Mid	0.86
High	1.23

Contribution Analysis. Piper Jaffray analyzed the expected contributions of each of Genomic Solutions and Harvard Bioscience to revenue, gross profit, EBIT and pretax income of the combined company for the fiscal year ended 2001 and the fiscal years ending 2002 and 2003 based, in the case of Genomic Solutions, on management estimates for Genomic Solutions provided by Genomic Solutions' management and, in the case of Harvard Bioscience, on consensus estimates of securities market analysts providing research coverage of Harvard Bioscience. This contribution analysis was performed by assuming a transaction where all the consideration paid to Genomic Solutions stockholders was in the form of Harvard Bioscience common stock and without including any synergies that the combined

entity may realize following consummation of the transaction. The total number of shares of Harvard Bioscience common stock paid as consideration in the assumed transaction involving only stock was implied by applying the exchange ratio calculated by dividing the per share consideration to be paid in the merger by the five-day trading average of Harvard Bioscience to all of the outstanding shares of Genomic Solutions common stock. The analysis indicated that, during these periods, Genomic Solutions would contribute to the combined entity revenue ranging from 26.7% to 30% and gross profit ranging from 23.1% to 29.7%. The analysis also indicated that, during the fiscal year ending 2003, Genomic Solutions would contribute to the combined entity EBIT of 6.2%. Due to Genomic Solutions' negative EBIT for the fiscal years ending 2001 and 2002, an analysis of EBIT for such periods was not meaningful. In addition, the analysis indicated that Genomic Solutions would contribute to the combined entity in the fiscal year ending 2003 pretax income of 0.2%. Due to Genomic Solutions' negative pretax income during the fiscal years ending 2001 and 2002 an analysis of pretax income during these periods was not meaningful.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Pro Forma Accretion/Dilution Analysis. Piper Jaffray analyzed pro forma effects resulting from the impact of the transaction on the projected earnings per share of the combined company for the fiscal year ending 2003 using financial forecasts provided by Genomic Solutions management in the case of Genomic Solutions and consensus estimates of securities market analysts providing research coverage of Harvard Bioscience in the case of Harvard Bioscience. Piper Jaffray performed this analysis taking into account operational synergies of approximately \$800,000 that Genomic Solutions management estimates the combined company may realize following consummation of the transaction. Piper Jaffray determined that the transaction could be accretive in the fiscal year ending 2003 to the projected stand-alone earnings per share of Harvard Bioscience.

Harvard Bioscience Comparable Public Company Analysis. Piper Jaffray compared financial information and valuation ratios of Harvard Bioscience to corresponding data and ratios from six publicly traded companies deemed comparable to Harvard Bioscience. This group included Biacore International AB, Biosource International, Inc., Bruker AXS Inc., Bruker Daltonics Inc., Molecular Devices Corporation and Tripos, Inc. This group was selected from instrumentation and consumables companies with a market capitalization between \$60 million and \$300 million that operate in the life sciences enabling technology industry, that were estimated to be profitable in 2002 and have 2002 revenues between \$35 million and \$120 million and were companies otherwise deemed comparable by Piper Jaffray.

This analysis produced multiples of selected valuation data as follows:

	Harvard Bioscience(1)	Comparable Companies			
		Low	Mean	Median	High
Estimated revenue growth in 2002	41.2%	12.0%	13.3%	13.3%	14.6%
Company value to estimated calendar 2002 revenue	2.2x	0.3x	1.4x	1.2x	3.0x
Company value to estimated calendar 2003 revenue	1.7x	0.3x	1.2x	1.1x	2.4x
Company value to estimated calendar 2002 EBIT	12.0x	8.8x	22.9x	18.0x	57.2x
Company value to estimated calendar 2003 EBIT	8.7x	6.1x	10.8x	12.0x	15.7x
Share price to estimated calendar 2002 net income per share	20.7x	20.3x	30.6x	30.7x	44.0x
Share price to estimated calendar 2003 net income per share	15.1x	13.1x	17.2x	16.5x	23.1x

(1)

Based on a July 15, 2002 closing price

In reaching its conclusion as to the fairness of the merger consideration payable in the merger and in its presentation to Genomic Solutions' board of directors, Piper Jaffray did not rely on any single analysis or factor described above, assign relative weights to the analyses or factors considered by it, or make any conclusion as to how the results of any given analysis, taken alone, supported its opinion.

62

The preparation of a fairness opinion is a complex process and not necessarily susceptible to partial analysis or summary description. Piper Jaffray believes that its analyses must be considered as a whole and that selection of portions of its analyses and of the factors considered by it, without considering all of the factors and analyses, would create a misleading view of the processes underlying the opinion.

The analyses of Piper Jaffray are not necessarily indicative of actual values or future results, which may be significantly more or less favorable than suggested by the analyses. Analyses relating to the value of companies do not purport to be appraisals or valuations or necessarily reflect the price at which companies may actually be sold. No company or transaction used in any analysis for purposes of comparison is identical to Genomic Solutions, Harvard Bioscience or the merger. Accordingly, an analysis of the results of the comparisons is not mathematical; rather, it involves complex considerations and judgments about differences in the companies to which Genomic Solutions and Harvard Bioscience were compared and other factors that could affect the public trading value of the companies.

For purposes of its opinion, Piper Jaffray relied upon and assumed the accuracy and completeness of the financial statements and other information provided to it by Genomic Solutions and Harvard Bioscience or otherwise made available to it and did not assume responsibility for the independent verification of that information. Estimates and financial forecasts of management of Genomic Solutions were not prepared with the expectation of public disclosure. Piper Jaffray relied upon the assurances of Genomic Solutions' management that the information provided was prepared on a reasonable basis in accordance with industry practice, and, with respect to estimates and financial forecast data, reflects the best currently available estimates and judgment of Genomic Solutions' management, was based on reasonable judgments and that they were not

aware of any information or facts that would make the information provided to Piper Jaffray incomplete or misleading. Harvard Bioscience did not disclose internal financial information to Piper Jaffray. Accordingly, Piper Jaffray relied on published reports of securities market analysts in connection with its consideration of forward-looking financial information of Harvard Bioscience. Piper Jaffray did not have access to the management of Harvard Bioscience for the purpose of confirming the accuracy or completeness of any information in such published reports or for the purpose of preparation of any financial information regarding the combined company.

In arriving at its opinion, Piper Jaffray did not perform any appraisals or valuations of any specific assets or liabilities of Genomic Solutions or Harvard Bioscience, and was not furnished with any such appraisals or valuations. Without limiting the generality of the foregoing, Piper Jaffray undertook no independent analysis of any pending or threatened litigation, possible unasserted claims or other contingent liabilities, to which Genomic Solutions or any of its affiliates is a party or may be subject and, with Genomic Solutions' consent, Piper Jaffray's opinion makes no assumption concerning, and therefore does not consider, the possible assertion of claims, outcomes or damages arising out of any such matters. For purposes of its opinion, Piper Jaffray assumed that the merger will constitute a reorganization for federal income tax purposes.

Piper Jaffray's opinion addresses solely the fairness, from a financial point of view, of the consideration to be received in the merger by holders of Genomic Solutions common stock and does not address any other terms or agreements relating to the transaction. Piper Jaffray's opinion does not address, nor should it be construed to address, the relative merits of the transaction with Harvard Bioscience, on the one hand, or any alternative business strategies or alternative transactions that may be available to Genomic Solutions, on the other hand. Piper Jaffray analyzed each of Genomic Solutions and Harvard Bioscience as going concerns and, accordingly, expressed no opinion as to the liquidation value of either entity. Piper Jaffray expressed no opinion as to the price at which shares of Genomic Solutions or Harvard Bioscience common stock have traded or at which the shares of Genomic Solutions, Harvard Bioscience or the combined company may trade at any future time. The opinion is based on information available to Piper Jaffray and the facts and circumstances as they existed and were subject to evaluation on the date of the opinion. Events occurring after that date

63

could materially affect the assumptions used in preparing the opinion. Piper Jaffray has not undertaken to and is not obligated to affirm or revise its opinion or otherwise comment on any events occurring after the date it was given.

Piper Jaffray, as a customary part of its investment banking business, evaluates businesses and their securities in connection with mergers and acquisitions, underwritings and secondary distributions of securities, private placements and valuations for estate, corporate and other purposes. The board of directors of Genomic Solutions selected Piper Jaffray because of its expertise, reputation and familiarity with the life sciences industry. In the ordinary course of its business, Piper Jaffray and its affiliates may actively trade securities of Genomic Solutions or Harvard Bioscience for their own accounts or the accounts of their customers and, accordingly, may at any time hold a long or short position in those securities.

Under the terms of the engagement letter with Genomic Solutions, Genomic Solutions has agreed to pay Piper Jaffray a customary fee upon consummation of the transaction for Piper Jaffray's financial advisory services. Genomic Solutions has also agreed to pay Piper Jaffray a customary fee for rendering its opinion, which will be credited against payment of the fee for financial advisory services. The opinion fee is not contingent upon consummation of the merger. The contingent nature of the financial advisory fee may have created a potential conflict of interest in that Genomic Solutions would be unlikely to consummate the transaction unless it had received the opinion of Piper Jaffray. Whether or not the transaction is consummated, Genomic Solutions has agreed to pay the reasonable out-of-pocket expenses of Piper Jaffray and to indemnify Piper Jaffray against liabilities incurred. These liabilities include liabilities under the federal securities laws in connection with the engagement of Piper Jaffray by Genomic Solutions' board of directors.

Interests of Genomic Solutions' Directors and Officers in the Merger

When you are considering the recommendation of Genomic Solutions' board of directors with respect to approving the merger agreement and the merger, you should be aware that some of the directors and executive officers of Genomic Solutions have interests in the merger and participate in arrangements that are different from, or are in addition to, those of Genomic Solutions stockholders generally. The Genomic Solutions board of directors was aware of these interests and considered them, among other matters, when it approved the merger agreement and the merger. These interests include the following:

Accelerated Vesting of Options

The vesting restrictions on certain outstanding options held by the current directors and officers of Genomic Solutions to purchase Genomic Solutions common stock will accelerate, which will cause those stock options to become fully vested and exercisable immediately prior to the closing of the merger. The aggregate number of shares of Genomic Solutions common stock issuable upon the exercise of unvested options that

are subject to acceleration as a result of the merger and that are held by the current directors and executive officers as of July 17, 2002, the date of the merger agreement, was 362,214 shares. At July 17, 2002, options covering 9,200 of these shares had an exercise price that was less than the market price of the Genomic Solutions common stock on that date. Genomic Solutions believes that holders of options that have an exercise price below the market price of Genomic Solutions common stock on the date immediately prior to closing are likely to exercise those options. Pursuant to the terms of the merger agreement, all options to purchase Genomic Solutions common stock will be terminated or exercised prior to the consummation of the merger with specified limited exceptions. For further discussion about the treatment of Genomic Solutions options in the merger, see the section entitled " The Merger Agreement Treatment of Genomic Solutions Stock Options and Warrants" on page 69 of this proxy statement and prospectus.

Arrangements with Jeffrey S. Williams

On January 1, 2000, Genomic Solutions entered into a three-year employment agreement with Jeffrey S. Williams, Genomic Solutions' President and Chief Executive Officer. Under the employment agreement, Mr. Williams receives an annual base salary of \$345,000 and is eligible to receive an annual performance bonus not to exceed 35% of his annual base salary based upon criteria established by the Compensation Committee of Genomic Solutions' board of directors. The employment agreement provides for a payment to be made to Mr. Williams in an amount equal to two times his base salary paid in the previous twelve months in the event there is a change in control of Genomic Solutions and Mr. Williams does not accept employment with the surviving corporation.

In addition, as a condition to the execution of the merger agreement, Harvard Bioscience required that Mr. Williams enter into an employment agreement with the surviving corporation to serve as President of the surviving corporation. In the course of the negotiations and in order to induce him to terminate his prior employment agreement and accept employment with the surviving corporation, Harvard Bioscience, Genomic Solutions and Mr. Williams agreed that Mr. Williams would receive a new employment agreement with the surviving corporation and a one-time payment of \$690,000. The new employment agreement will become effective and will replace and supersede Mr. Williams' prior employment agreement with Genomic Solutions upon the effectiveness of the merger. The new agreement continues for a term of twelve months thereafter, and it provides that it is to be automatically extended on each anniversary date for additional twelve month periods, unless either Mr. Williams or the surviving corporation gives notice that it intends to terminate the agreement. The agreement provides that Mr. Williams will be paid an annual base salary of \$225,000 and be eligible to receive a bonus of up to 100% of his base salary. The amount of the bonus will be based on the surviving corporation's achievement of annual operating profit and/or revenue targets to be established by the surviving corporation for each calendar year of the agreement. The agreement provides that Mr. Williams will be entitled to certain benefits and will receive a grant of an option to purchase 100,000 shares of Harvard Bioscience common stock at an exercise price equal to the fair market value of Harvard Bioscience's common stock on the grant date. The option will vest ratably over four years. The new employment agreement includes severance provisions that are effective upon the termination of Mr. Williams' employment under certain circumstances. In the event that, within twelve months after a change in control of Harvard Bioscience, Mr. Williams is terminated without cause or Mr. Williams terminates his employment for good reason, Mr. Williams will be entitled to, in HAG Acq. Corp.'s sole discretion, either (a) written notice at least 120 days prior to such termination, or (b) a lump sum payment in cash in an amount equal to 120 days pay based on his then current base salary. See " Other Material Agreements Relating to the Merger Employment Agreement."

In the new employment agreement, Harvard Bioscience agreed to effect the nomination of Mr. Williams to Harvard Bioscience's board of directors, effective on the next business day following the effective time of the merger. Mr. Williams will serve as a Class III director for a term expiring at the annual meeting of stockholders in 2003. Mr. Williams has also agreed to resign his board seat upon termination of his employment with the surviving corporation for any reason.

In connection with Mr. Williams' service as a director of Harvard Bioscience after the merger, the following biographical and compensation information is included in this proxy statement and prospectus.

Mr. Williams, 36, joined Genomic Solutions' predecessor in March 1997 as its President, Chief Executive Officer and a director. From 1995 until joining Genomic Solutions, Mr. Williams served as the Executive Vice President and Chief Operating Officer of International Remote Imaging Systems, Inc., a publicly-traded company specializing in digital imaging products for the clinical diagnostics and research marketplaces. Mr. Williams' prior employment included various positions at Boehringer Mannheim GmbH, a global healthcare company, most recently as Vice President and Global Business Manager. He also served in various sales and marketing capacities with the Organon

Pharmaceutical division of Akzo Nobel and the University of Michigan's Intellectual Properties Office. Mr. Williams received a BS in Biology from Alma College and an MBA from the University of Michigan.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

The following table shows the compensation paid to Mr. Williams by Genomic Solutions for services rendered to Genomic Solutions in 2001, 2000 and 1999:

Name	Fiscal Year	Annual Compensation			Long-Term Compensation
		Salary	Bonus	All Other Compensation(1)	Securities Underlying Options
Jeffrey S. Williams	2001	\$ 345,000	\$ 64,500	\$ 14,234	150,000
	2000	\$ 225,000	\$ 277,450	\$ 14,954	
	1999	\$ 200,000	\$ 104,000	\$ 7,619	

(1)

Other compensation includes (a) the use of a company automobile for Mr. Williams valued at \$8,918 for fiscal year 2001, \$9,662 for fiscal year 2000 and \$7,400 for 1999, (b) the value of the insurance premiums paid by Genomic Solutions with respect to term life insurance for the benefit of Mr. Williams in the amount of \$216 for 2001, \$192 for 2000, and \$219 for 1999, and (c) \$5,100 of Genomic Solutions matching contributions to Mr. Williams' 401(k) for 2001 and 2000.

In April 2001, Genomic Solutions loaned Mr. Williams \$500,000 pursuant to a two year term note that bears interest at an annual rate equal to 6.5%. The loan was secured by a pledge of approximately 500,000 shares of Genomic Solutions common stock owned by Mr. Williams. In June 2001, Mr. Williams repaid the loan in full.

In 1998 and 2000, Genomic Solutions made loans to Mr. Williams which he used to exercise options to acquire shares of Genomic Solutions common stock. The principal amount outstanding is \$47,250 for the 1998 loan and \$40,000 for the 2000 loan. Both loans are due five years after the dates they were made, are unsecured and provide for full recourse against Mr. Williams. Each note bears interest at an annual rate equal to the medium term applicable federal rate which is 5.93% for the 1998 note and 6.56% for the 2000 note.

Arrangements with Other Directors and Executive Officers

Genomic Solutions is responsible for change in control payments to Messrs. Richvalsky, Kendra, and Thomas C. Tisone, Ph.D., under their respective employment agreements with Genomic Solutions. If any of Messrs. Richvalsky, Kendra, or Dr. Tisone is terminated as a result of any acquisition of Genomic Solutions by means of merger or other form of corporate reorganization, he is entitled to a change in control payment in the amount of six months' salary. Under their respective employment agreements, if any of them remains employed by Genomic Solutions or the acquiring company, he is entitled to a change in control payment in the amount of three months' salary.

Indemnification and Directors and Officers Insurance

Genomic Solutions' officers and directors are entitled to continuing indemnification against liabilities for matters occurring prior to the merger (including matters arising as a result of the merger) by virtue of provisions contained in Genomic Solutions' certificate of incorporation and bylaws and in the merger agreement. The merger agreement also provides that prior to the completion of the merger Genomic Solutions will purchase an extended reporting period endorsement or "tail" policy under Genomic Solutions' existing director and officer insurance policy to provide the currently covered directors and officers of Genomic Solutions with liability insurance coverage for six years following the completion of the merger for actions and omissions prior to the completion of the merger.

Consideration of the Merger by Harvard Bioscience's Board of Directors

The Harvard Bioscience board of directors approved the merger agreement and the merger because it determined that the combined company would have the potential to realize a stronger competitive position and improved long-term operating and financial results which it believed would inure to the benefit of the stockholders of Harvard Bioscience. In particular, the Harvard Bioscience board of directors believes that the merger will allow the combined company:

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

to leverage Genomic Solutions' direct sales force for selling Harvard Bioscience's products,

to use Harvard Bioscience's database and direct marketing expertise to generate leads for the Genomic Solutions product line,

to use Harvard Bioscience's foreign subsidiaries to give Genomic Solutions a stronger presence in continental Europe, and

to leverage Harvard Bioscience's relationship with Amersham Biosciences and Genomic Solutions' relationship with PerkinElmer.

After taking into account these and other factors, the Harvard Bioscience board of directors determined that the merger agreement and the merger were in the best interests of Harvard Bioscience and its stockholders and that Harvard Bioscience should enter into the merger agreement and complete the merger.

The Merger Agreement

Structure of the Merger

Under the terms of the merger agreement, Genomic Solutions will be merged with and into HAG Acq. Corp., and HAG Acq. Corp. will survive the merger as a wholly-owned subsidiary of Harvard Bioscience.

Completion and Effectiveness of the Merger

Harvard Bioscience and Genomic Solutions expect to complete the merger when all of the conditions to completion of the merger contained in the merger agreement have been satisfied or waived. The merger will become effective upon the filing of a certificate of merger with the State of Delaware or at a subsequent date or time as specified in the certificate of merger. Genomic Solutions and Harvard Bioscience expect to file the certificate of merger shortly following the special meeting of Genomic Solutions stockholders at which the merger agreement and the merger will be considered and voted upon.

Harvard Bioscience and Genomic Solutions are working toward satisfying these conditions and completing the merger as quickly as possible. Harvard Bioscience and Genomic Solutions currently plan to complete the merger in the fourth quarter of 2002, following the special meeting of Genomic Solutions stockholders assuming the Genomic Solutions stockholders adopt and approve the merger agreement and approve the merger and the other merger conditions are satisfied. Because the merger is subject to specified conditions, some of which are beyond Harvard Bioscience's and Genomic Solutions' control, the exact timing cannot be predicted.

Conversion of Genomic Solutions Common Stock in the Merger

At the effective time of the merger, each outstanding share of Genomic Solutions common stock issued and outstanding immediately prior to the effective time, other than as described below, will

67

automatically be converted into the right to receive the following, which we sometimes refer to in this proxy statement and prospectus as the merger consideration:

the number of shares of Harvard Bioscience common stock which is equal to the quotient (which we sometimes refer to in this proxy statement and prospectus as the conversion ratio) determined by dividing 3,200,000 shares of Harvard Bioscience common stock by the number of shares of outstanding Genomic Solutions common stock immediately prior to the effective time of the merger; and

cash in an amount equal to the quotient determined by dividing \$9,000,000 by the number of shares of outstanding Genomic Solutions common stock immediately prior to the effective time of the merger.

Possible Adjustments to the Merger Consideration

Extraordinary Stock Events. The stock portion of the merger consideration may be adjusted either upwards or downwards if Harvard Bioscience splits or combines its common stock, pays a dividend in its common stock or effects a similar event affecting its common stock

before the completion of the merger. In these circumstances, the number of shares of Harvard Bioscience common stock issued in the merger will be adjusted either upwards or downwards to appropriately reflect that split, combination, dividend or similar event. For example, if Harvard Bioscience were to conduct a two-for-one stock split prior to closing, Genomic Solutions stockholders would receive twice as many shares in the merger.

To Maintain Tax Treatment. In order to maintain the intended tax-free nature of the merger with respect to the stock portion of the merger consideration, the parties have agreed that the value of the Harvard Bioscience shares to be issued in the merger must be at least 40% of the value of the total merger consideration (which includes the aggregate value of the payments made for dissenting shares). If, on the closing date, the aggregate value of the total Harvard Bioscience shares to be delivered to Genomic Solutions stockholders is less than 40% of the value of the total merger consideration to be delivered to Genomic Solutions stockholders and all other conditions to the closing set forth in the merger agreement have been satisfied (or waived), then the merger consideration will be adjusted by increasing the value of the stock consideration and decreasing the cash consideration so that the shares of Harvard Bioscience common stock to be issued in the merger will constitute 40% of the value of the total merger consideration. In any event, after giving effect to any such adjustments, the parties have agreed that the aggregate value of the total merger consideration will remain the same as before any adjustments.

Fractional Shares

No fractional shares of Harvard Bioscience common stock will be issued in connection with the merger. In lieu of a fraction of a share of Harvard Bioscience common stock each holder of Genomic Solutions common stock who would otherwise be entitled to receive a fraction of a share of Harvard Bioscience common stock will receive an amount of cash, without interest, and rounded to the nearest cent, determined by multiplying that fraction by the average closing price of a share of Harvard Bioscience common stock for the five most recent days that Harvard Bioscience common stock has traded ending on the trading day immediately prior to the effective date of the merger, as reported on the Nasdaq National Market.

68

Rights of Holders of Genomic Solutions Common Stock at the Effective Time of the Merger

At the effective time of the merger, holders of Genomic Solutions common stock will cease to be, and will have no rights as, Genomic Solutions stockholders, other than:

the right to receive any dividend or other distribution, if any, with respect to Genomic Solutions common stock with a record date occurring prior to the effective time of the merger, and

the right to receive the merger consideration.

After the merger occurs, there will be no transfers on Genomic Solutions' stock transfer books of any shares of its common stock.

Exchange of Genomic Solutions Stock Certificates for Harvard Bioscience Stock Certificates and Cash

Promptly after the effective time of the merger, if you are the holder of a Genomic Solutions stock certificate, Registrar and Transfer Company, the exchange agent for the merger, will mail to you a letter of transmittal and instructions for surrendering your Genomic Solutions stock certificates in exchange for Harvard Bioscience stock certificates, cash and any dividends or other distributions, if any, to which you are or may be entitled. When you deliver your Genomic Solutions stock certificates to the exchange agent for the merger, along with a properly completed and executed letter of transmittal and any other required documents, you will receive Harvard Bioscience stock certificates representing the number of full shares of Harvard Bioscience common stock, cash consideration, less any applicable withholding, and cash in lieu of fractional shares, to which you are entitled under the merger agreement. **You should not submit your Genomic Solutions stock certificates for exchange until you receive instructions from the exchange agent for the merger.**

You are not entitled to receive any dividends or other distributions on Harvard Bioscience common stock until you have surrendered your Genomic Solutions stock certificates in exchange for Harvard Bioscience stock certificates and the cash consideration. Promptly after your Harvard Bioscience stock certificates are issued, you will receive payment for any dividend or other distribution on Harvard Bioscience common stock with a record date after the merger and a payment date prior to the date you surrender your Genomic Solutions stock certificates.

Harvard Bioscience will only issue a Harvard Bioscience stock certificate in a name other than the exact name in which a surrendered Genomic Solutions stock certificate is registered if you present the exchange agent with all documents required to show and effect the unrecorded transfer of ownership of the shares of Genomic Solutions common stock formerly represented by the Genomic Solutions stock

certificate, and show that you paid any applicable stock transfer taxes.

If your stock certificate has been lost, stolen or destroyed, you may be required to deliver an affidavit and a lost certificate bond as a condition to receiving your Harvard Bioscience stock certificate and cash consideration.

Treatment of Genomic Solutions Stock Options and Warrants

Stock Options

With respect to any options to purchase shares of Genomic Solutions common stock which have not been exercised and which do not terminate in accordance with their terms upon completion of the merger, Genomic Solutions has agreed to exercise reasonable efforts prior to the completion of the merger to obtain the written consent of the holder of each such option providing for, among other things, the termination of the stock option on or prior to completion of the merger.

If any holder of an option that has not been exercised or terminated refuses to give its consent to termination of that option on or prior to completion of the merger, Genomic Solutions will take all actions within its power reasonably necessary to cause each such stock option to be automatically converted at the effective time into an option to purchase that number of shares of Harvard Bioscience

69

common stock equal to the number of shares of Genomic Solutions common stock issuable immediately prior to the effective time upon exercise of the option multiplied by the option exchange ratio (as described below), rounded down to the nearest whole share and Harvard Bioscience will assume such options, subject to the limitations described below. The per share exercise price of each Genomic Solutions stock option will be adjusted to an exercise price per share of Harvard Bioscience common stock equal to the original exercise price per Genomic Solutions share of the stock option divided by the option exchange ratio, rounded up to the nearest whole cent.

The option exchange ratio means the sum of:

the conversion ratio in the merger; and

the quotient of:

(A)

the per share cash merger consideration divided by

(B)

the closing price of a share of Harvard Bioscience common stock on the Nasdaq National Market on the last full trading day immediately prior to the closing date, rounded to the nearest third decimal place.

However, under the merger agreement, Harvard Bioscience is only required to assume options to purchase Genomic Solutions common stock which convert into options to purchase not more than an aggregate of:

20,000 shares of Harvard Bioscience common stock held by persons who as of the effective time are not employees of Genomic Solutions; and

100,000 shares of Harvard Bioscience common stock held by persons who as of the effective time are employees of Genomic Solutions.

In addition, Harvard Bioscience is not required to close the merger unless Genomic Solutions has taken all actions necessary to cause the Genomic Solutions stock options to be treated as described above. However, if all of the other conditions to closing in the merger agreement have been satisfied or waived, and the aggregate number of shares of Harvard Bioscience common stock subject to converted options held by persons who as of the effective time are not employees of Genomic Solutions is greater than 20,000, Harvard Bioscience will either:

waive the requirement that the aggregate number of shares of Harvard Bioscience common stock subject to converted options held by persons who as of the effective time are not employees of Genomic Solutions is no more than 20,000; or

extend the closing date to October 18, 2002 or later.

Warrants

It is a condition to the merger that each warrant to purchase shares of Genomic Solutions common stock which was outstanding immediately prior to the effective time that remains unexercised, whether vested or unvested, will be terminated. With respect to any Genomic Solutions warrant that has not been exercised and does not terminate in accordance with its terms, Genomic Solutions has agreed, prior to the merger, to obtain the written consent of each warrant holder providing for, among other things, the termination of the warrant.

Termination of Rights under the Genomic Solutions Employee Stock Purchase Plan

Under the terms of the merger agreement, the Genomic Solutions employee stock purchase plan will be terminated as of the effective time of the merger. Except as provided below, outstanding

70

purchase rights under the Genomic Solutions employee stock purchase plan will be exercised on the effective date of the merger, and will be converted into the right to receive:

the number of whole shares of Genomic Solutions common stock as the employee's accumulated payroll deductions on such date will purchase; and

cash in the amount of any remaining balance in such participant's account.

Any participant in the plan that has given notice to Genomic Solutions prior to the third to last business day before the effective date of the merger that he or she requests the distribution of his or her entire credit balance in cash will receive cash in the amount of the balance instead of purchasing Genomic Solutions common stock as provided above.

Genomic Solutions' Representations and Warranties

Genomic Solutions has made a number of customary representations and warranties to Harvard Bioscience in the merger agreement regarding aspects of its business, financial condition, structure and other facts pertinent to the merger. These representations and warranties include representations as to:

the corporate organization, existence, good standing and qualification to do business of Genomic Solutions and its subsidiaries;

compliance with applicable laws by Genomic Solutions and its subsidiaries;

permits required to conduct Genomic Solutions' and its subsidiaries' business and compliance with those permits;

the certificates of incorporation and bylaws of Genomic Solutions and its subsidiaries;

authorization of the merger agreement by Genomic Solutions;

approvals by the Genomic Solutions board of directors in connection with the merger;

Genomic Solutions' capitalization;

Genomic Solutions' subsidiaries;

consents and approvals required to complete the merger;

Genomic Solutions' filings and reports with the Securities and Exchange Commission;

Genomic Solutions' consolidated financial statements;

litigation involving Genomic Solutions and its subsidiaries;

changes in Genomic Solutions' and its subsidiaries' business since December 31, 2001 and actions taken by Genomic Solutions since December 31, 2001;

Genomic Solutions' and its subsidiaries' liabilities;

Genomic Solutions' and its subsidiaries' taxes;

Genomic Solutions' and its subsidiaries' properties;

intellectual property matters pertaining to Genomic Solutions and its subsidiaries;

environmental matters pertaining to Genomic Solutions and its subsidiaries;

Genomic Solutions' and its affiliates' employee benefit plans;

Genomic Solutions' and its subsidiaries' labor relations;

payments required to be made by Genomic Solutions and its subsidiaries to brokers and agents in connection with the merger;

the fairness opinion received by Genomic Solutions from Piper Jaffray;

71

the vote of Genomic Solutions stockholders required to approve the merger;

the inapplicability of anti-takeover laws to the merger;

Genomic Solutions' and its subsidiaries' material contracts;

the nature of the accounts receivables and inventories of Genomic Solutions and its subsidiaries;

Genomic Solutions' and its subsidiaries' accounting policies;

the status of Genomic Solutions' and its subsidiaries' backlog;

the nature of specified relationships with customers of Genomic Solutions and its subsidiaries;

Genomic Solutions' restructuring plan;

customer warranties and product liability matters;

the absence of specified business practices;

Genomic Solutions' and its subsidiaries' insurance coverage;

Genomic Solutions' and its subsidiaries' ability to treat the merger as a "reorganization" for federal income tax purposes;

the fact that neither Genomic Solutions nor any of its affiliates owns any Harvard Bioscience common stock;

the absence of contracts with affiliates; and

the accuracy of the information supplied by Genomic Solutions in this proxy statement and prospectus.

Harvard Bioscience's Representations and Warranties

Harvard Bioscience and HAG Acq. Corp. have made a number of customary representations and warranties to Genomic Solutions in the merger agreement regarding aspects of Harvard Bioscience's business, financial condition, structure and other facts pertinent to the merger. These representations and warranties include representations as to:

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

the corporate organization, existence, good standing and qualification to do business of Harvard Bioscience and its subsidiaries;

compliance with applicable laws by Harvard Bioscience and its subsidiaries;

permits required to conduct Harvard Bioscience's and its subsidiaries' business and compliance with those permits;

the certificate of incorporation and bylaws of Harvard Bioscience and its subsidiaries;

authorization of the merger agreement by Harvard Bioscience and HAG Acq. Corp.;

Harvard Bioscience's and HAG Acq. Corp.'s capitalization;

consents and approvals required to complete the merger;

Harvard Bioscience's filings and reports with the Securities and Exchange Commission;

Harvard Bioscience's consolidated financial statements;

litigation involving Harvard Bioscience and HAG Acq. Corp.;

changes in Harvard Bioscience's and its subsidiaries' business since March 31, 2002;

Harvard Bioscience's and its subsidiaries' liabilities;

intellectual property matters pertaining to Harvard Bioscience and its subsidiaries;

72

environmental matters pertaining to Harvard Bioscience;

Harvard Bioscience's and its affiliates' employee benefit plans;

Harvard Bioscience's labor relations;

payments required to be made by Harvard Bioscience and its subsidiaries to brokers and agents in connection with the merger;

the fact that no vote of Harvard Bioscience's stockholders is required to approve the merger;

the inapplicability of anti-takeover laws to the merger;

the material contracts of Harvard Bioscience and its subsidiaries;

the accounting policies of Harvard Bioscience and its subsidiaries;

the absence of specified business practices;

Harvard Bioscience's ability to treat the merger as a "reorganization" for federal income tax purposes; and

the fact that neither Harvard Bioscience nor any of its affiliates owns any Genomic Solutions common stock.

None of the representations and warranties made by either party survive the effective time of the merger. The representations and warranties contained in the merger agreement are complicated and not easily summarized. You are urged to carefully read Articles 5 and 6 of the merger agreement entitled "Representations and Warranties of the Company" and "Representations and Warranties of Parent and MergerCo," respectively, of the merger agreement attached to this proxy statement and prospectus.

Genomic Solutions' Conduct of Business Before Completion of the Merger

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Under the terms of the merger agreement, Genomic Solutions agreed that, unless Harvard Bioscience otherwise consents in writing, until the earlier of the completion of the merger or termination of the merger agreement, Genomic Solutions and its subsidiaries will, among other things:

carry on its business in the usual, regular and ordinary course, in compliance with their past practices and the requirements of Genomic Solutions' existing contracts; and

use reasonable best efforts to preserve in tact their business organizations, employee base and relationships with third parties, such as customers, suppliers and licensors.

Genomic Solutions has also agreed that, unless Harvard Bioscience otherwise consents in writing, and except as provided below, until the earlier of the completion of the merger or termination of the merger agreement, Genomic Solutions will comply with specified restrictions relating to the operation of its business, including restrictions relating to the following:

splitting, combining, reclassifying, repurchasing, redeeming or otherwise acquiring any shares of its capital stock or other securities, except for dividends paid by a subsidiary to Genomic Solutions or another subsidiary, and except for any reverse stock split declared for the purpose of complying with the Nasdaq listing qualifications;

issuing or selling any of its stock or any other securities or equity equivalents, other than outstanding options;

making any equipment purchases or capital expenditures in excess of \$25,000 in each instance or \$100,000 in the aggregate;

acquiring, selling, leasing, licensing, encumbering, transferring or disposing of any of its material assets outside the ordinary course;

73

entering into, modifying or amending any agreement related to the licensing of its intellectual property assets outside the ordinary course;

incurring any indebtedness or making any loan or advance outside the ordinary course;

paying, discharging or satisfying any claim, liability or obligation, outside the ordinary course;

changing its accounting policies;

making any material tax elections or settling any material tax liability;

adopting or amending any employee benefit plan or any agreement between Genomic Solutions or its subsidiaries and their directors, officers or employees other than consistent with past practice;

increasing the compensation of any director, officer or employee;

amending its organizational documents;

authorizing a liquidation, dissolution, merger, consolidation, restructuring, recapitalization or reorganization;

settling any pending or threatened material litigation;

amending the term of any outstanding security;

modifying or amending any existing or entering into any new material contract;

licensing, assigning or otherwise transferring any rights to its intellectual property assets outside the ordinary course;

permitting any of its or its subsidiaries' insurance policies to be cancelled;

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

terminating the employment of any officer of Genomic Solutions or its subsidiaries;

discouraging customers, employees, suppliers, lessors, and other associates of Genomic Solutions and its subsidiaries from maintaining the materially same business relationships;

entering into any agreement with any customer or distributor related to the offering of discounts, extended warranties, service contracts, bundling of any products, rights of return or any other agreements or arrangements outside the ordinary course;

amending or restating any of its Securities and Exchange Commission reports;

engaging in any action that could reasonably be expected to cause the merger to fail to qualify as a reorganization under the Internal Revenue Code;

taking any action which would make any of the representations and warranties made by Genomic Solutions or its subsidiaries in the merger agreement untrue or incorrect; and

agreeing to take any of the actions described above.

However, Genomic Solutions is not required to comply with the above restrictions if the action taken in connection with the operation of its business is expressly permitted by the restructuring plan that Genomic Solutions implemented immediately following the signing of the merger agreement.

In addition, Harvard Bioscience has agreed to permit Genomic Solutions to obtain up to \$5,000,000 in financing, either by issuing its common stock or warrants (which by their terms must terminate upon closing of the merger if not exercised), or by receiving a loan, which loan, among other things, may be prepaid or assumed by Harvard Bioscience without penalty.

The agreements relating to the conduct of Genomic Solutions' business in the merger agreement are complicated and not easily summarized. You are urged to carefully read Article 7 of the merger agreement attached as Annex A to this proxy statement and prospectus.

74

Solicitations by Genomic Solutions; Withdrawal of Recommendation by Genomic Solutions Board of Directors

Except as expressly permitted in connection with a superior proposal, until the merger is completed or the merger agreement is terminated, Genomic Solutions has agreed not to, and not to authorize or permit any of its subsidiaries or any officer, director or employee or professional representative of Genomic Solutions or its subsidiaries to:

solicit, initiate or encourage, including by way of furnishing non-public information, or take any other action to facilitate any inquiries or the making of any proposal that constitutes an acquisition proposal;

participate in any discussion with, or otherwise communicate in any way with, any person relating to any acquisition proposal; or

enter into any agreement regarding an acquisition proposal.

Genomic Solutions further agreed to cease and cause to be terminated any existing activities, negotiations or discussions with any persons related to such activities.

Any violation of any of the restrictions described in the preceding paragraph by any officer or director or employee of Genomic Solutions or any of its subsidiaries, or any professional representative of Genomic Solutions or any of its subsidiaries is deemed to be a breach of the relevant restriction by Genomic Solutions.

Under the terms of the merger agreement, Genomic Solutions has agreed to promptly advise Harvard Bioscience of any acquisition proposal or any request or inquiry received by Genomic Solutions with respect to or that could reasonably be expected to lead to an acquisition

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

proposal, including the terms and conditions of such request, acquisition proposal or inquiry, and the identity of the person making any such request, acquisition proposal or inquiry and to provide to Harvard Bioscience any written materials received in connection with the request, acquisition proposal or inquiry. Genomic Solutions further agreed to keep Harvard Bioscience fully informed of the status and of the discussions including by promptly providing Harvard Bioscience with all related written materials.

Furthermore, except as discussed below in connection with a superior proposal, Genomic Solutions' board of directors is not permitted to:

adversely withdraw or modify, or propose to withdraw or modify, its approval or recommendation of the merger agreement or the merger;

approve or recommend, or propose to approve or recommend, any other acquisition proposal;

approve or recommend, or propose to approve or recommend, or execute or enter into a letter of intent or agreement relating to an acquisition proposal; or

resolve to do any of the foregoing.

For these purposes, an acquisition proposal is a proposed or actual:

tender offer, merger, consolidation or similar transaction involving Genomic Solutions; or

sale, lease or other disposition, directly or indirectly, by merger, consolidation, share exchange or otherwise, of any material assets or securities of Genomic Solutions.

Genomic Solutions is expressly permitted, however, to furnish non-public information regarding Genomic Solutions and its subsidiaries to, and to enter into a confidentiality agreement with or

75

participate in discussions or negotiations with, any person in response to an unsolicited superior proposal, if all of the following conditions are met:

the stockholders of Genomic Solutions have not yet adopted and approved the merger agreement and approved the merger;

the non-solicitation provisions described in this section have not been breached by Genomic Solutions or its representatives; and

the Genomic Solutions board of directors determines in good faith, after consultation with its outside legal counsel and financial advisor, that failing to take such action would constitute a breach of its fiduciary duties under applicable law.

Under the terms of the merger agreement, a superior proposal is an unsolicited, bona fide written offer made by a third party to consummate an acquisition proposal, which acquisition proposal is reasonably likely to be consummated, and that:

the Genomic Solutions board of directors determines in good faith, after consulting with its outside legal counsel and its financial advisor, would, if consummated, be reasonably likely to result in a transaction that is more favorable to the stockholders of Genomic Solutions than the merger;

is not conditioned on obtaining financing;

is for all of Genomic Solutions' common stock; and

the Genomic Solutions board of directors determines is, based on the advice of Piper Jaffray (or any other nationally recognized investment banking firm), more favorable to the stockholders of Genomic Solutions, from a financial point of view, than the merger.

Under the terms of the merger agreement, and subject to other terms of the merger agreement (including the payment of a termination fee in specified circumstances), the Genomic Solutions board of directors is permitted to adversely withdraw or modify its recommendation in favor of the merger only if:

a superior proposal is made and not withdrawn;

neither Genomic Solutions nor any of its representatives has breached the non-solicitation provisions of the merger agreement described above; and

the board of directors of Genomic Solutions concludes in good faith, after consultation with its outside legal counsel and financial advisor that, in light of the superior proposal, the withdrawal or modification of its recommendation is required in order for the Genomic Solutions board of directors to comply with its fiduciary duties to Genomic Solutions' stockholders under applicable law.

Genomic Solutions must give Harvard Bioscience at least 48 hours notice of the Genomic Solutions board of directors' intention to take such action, and provide Harvard Bioscience with the opportunity to meet with Genomic Solutions and its legal counsel and financial advisor.

Regardless of whether there has been a superior proposal, and regardless of whether the Genomic Solutions board of directors withdraws or modifies its recommendation in favor of the merger, Genomic Solutions is obligated, under the terms of the merger agreement, to hold and convene the special meeting of Genomic Solutions stockholders at which the merger agreement and the merger will be considered and voted upon and the directors and officers of Genomic Solutions who signed voting agreements are obligated (in their capacities as stockholders) to vote in favor of the adoption and approval of the merger agreement and approval of the merger at the special meeting.

76

Under certain circumstances, including in the event that Genomic Solutions accepts a superior proposal and terminates the merger agreement, it will be obligated to pay Harvard Bioscience a termination fee of \$1,300,000. For a description of Genomic Solutions' right to terminate the merger agreement in these circumstances and this termination fee, see the sections of this proxy statement and prospectus entitled " Termination of the Merger Agreement," " Payment of Termination Fee and Expenses" and Article 9 of the merger agreement attached as Annex A to this proxy statement and prospectus.

Genomic Solutions is not prohibited from taking and disclosing to its stockholders a position in conjunction with sections 14d-9 or 14e-2 of the Exchange Act related to a tender or exchange offer.

Other Material Covenants

Nasdaq Listing

In the merger agreement, Harvard Bioscience has agreed to use its reasonable best efforts to cause the shares of its common stock which are to be issued in the merger to be approved for listing on the Nasdaq National Market. It is a condition to the completion of the merger that these shares are in fact so approved for listing.

Officers and Directors Indemnification

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

After the merger is completed, Harvard Bioscience will preserve all rights to indemnification existing as of July 17, 2002, the date of the merger agreement, in favor of any director, officer, employee or agent of Genomic Solutions and its subsidiaries for a period of at least six years following the merger. Prior to the completion of the merger, Genomic Solutions will purchase an extended reporting period endorsement or "tail" policy under Genomic Solutions' existing director and officer insurance policy to provide the currently covered directors and officers of Genomic Solutions with liability insurance coverage for six years following the completion of the merger for actions and omissions prior to the completion of the merger.

Access to Information; Confidentiality

Genomic Solutions has agreed to, and to cause each of its subsidiaries and each of its and its subsidiaries' officers, employees and agents to, afford to Harvard Bioscience and Harvard Bioscience's officers, employees and agents, complete access at all reasonable times to such officers, employees, agents, properties, books, records and contracts, and shall furnish to Harvard Bioscience other such financial, operating and other data and information as Harvard Bioscience may reasonably request. Prior to the effective time, Harvard Bioscience has agreed to hold in confidence all such information.

Notification of Specified Event

Each of Harvard Bioscience and Genomic Solutions agreed that it will promptly advise the other party of:

any change or event which it believes could reasonably be expected to cause any of its representations or warranties contained in the merger agreement to be untrue in any material respect; and

any material failure of such party to comply with any covenant under the merger agreement.

Publicity

Harvard Bioscience and Genomic Solutions have agreed to consult with each other before issuing any press release or otherwise making any public statement with respect to the merger and to not issue

77

any press release or make any public statement generally without the prior consent of the other party, which consent will not be unreasonably withheld.

Employee Benefits

Harvard Bioscience and Genomic Solutions have agreed that, after the merger, Genomic Solutions' employees will be eligible to participate in the employee benefit plans of Harvard Bioscience, one of its affiliates or the surviving corporation. Until the time of such eligibility, Genomic Solutions' employees will continue to be eligible to participate in the employee benefit plans of Genomic Solutions. For purposes of determining eligibility and vesting under these plans, Harvard Bioscience will generally recognize Genomic Solutions' employees' years of service with Genomic Solutions to the extent Genomic Solutions recognized their service.

Delisting

Each of Genomic Solutions and Harvard Bioscience have agreed to cooperate with each other in taking, or causing to be taken, all actions necessary to delist Genomic Solutions' common stock from the Nasdaq stock market after the completion of the merger. The Nasdaq stock market has notified Genomic Solutions that Genomic Solutions currently fails to meet the maintenance standards for continued listing on the Nasdaq National Market and that Genomic Solutions common stock is subject to delisting. Genomic Solutions is in the process of filing an appeal with Nasdaq and will continue to be listed on the Nasdaq National Market pending the resolution of this appeal.

Conditions to Completion of the Merger

The obligations of Harvard Bioscience and Genomic Solutions to complete the merger and the other transactions contemplated by the merger agreement are subject to the satisfaction or waiver of each of the following conditions:

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

the merger agreement must have been adopted and approved, and the merger must have been approved, by the requisite vote of the stockholders of Genomic Solutions;

no statute, order, decree, ruling or injunction may have been enacted or issued which prohibits completion of the merger;

Harvard Bioscience's registration statement on Form S-4 of which this proxy statement and prospectus forms a part must have been declared effective by the Securities and Exchange Commission, no stop order suspending its effectiveness may be in effect and no proceedings for suspension of its effectiveness may be pending before or threatened by the Securities and Exchange Commission; and

the shares of Harvard Bioscience common stock to be issued in the merger must have been approved for listing on the Nasdaq National Market, subject to official notice of issuance.

Genomic Solutions' obligation to complete the merger and the other transactions contemplated by the merger agreement are subject to the satisfaction or waiver of each of the following additional conditions:

each of Harvard Bioscience's and HAG Acq. Corp.'s representations and warranties must have been true and correct as of July 17, 2002, and must continue to be true and correct on and as of the date the merger is to be completed as if made on such date, except:

- (1) to the extent Harvard Bioscience's and HAG Acq. Corp.'s representations and warranties address matters only as of a particular date, they must be true and correct only as of that date; or

78

- (2) to the extent that any inaccuracies of such representations and warranties do not in any case, or in the aggregate have, and could not reasonably be expected to have a material adverse effect on Harvard Bioscience and its subsidiaries;

Harvard Bioscience must have performed in all material respects all of the obligations required by the merger agreement to be performed or complied with by it;

Harvard Bioscience and HAG Acq. Corp. must have obtained all consents and approvals required to be obtained in connection with the merger agreement; and

Genomic Solutions must have received from its tax counsel an opinion to the effect that the merger will constitute a tax-free reorganization within the meaning of Section 368(a) of the Internal Revenue Code. If Genomic Solutions' tax counsel is unwilling or unable to render an opinion, Harvard Bioscience's tax counsel may render the opinion.

Harvard Bioscience's obligation to complete the merger and the other transactions contemplated by the merger agreement are subject to the satisfaction or waiver of each of the following additional conditions:

each of Genomic Solutions' representations and warranties must have been true and correct as of July 17, 2002, and must continue to be true and correct on and as of the date the merger is to be completed as if made on such date, except:

- (1) to the extent Genomic Solutions' representations and warranties address matters only as of a particular date, they must be true and correct only as of that date; or

- (2) to the extent that any inaccuracies of such representations and warranties do not individually, or in the aggregate, have or could not reasonably be expected to have a material adverse effect on Genomic Solutions and its subsidiaries, as further described below;

Genomic Solutions must have performed in all material respects all of the obligations required by the merger agreement to be performed by it;

no event that could reasonably be expected to have a material adverse effect on Genomic Solutions may have occurred, as further described below;

Genomic Solutions must have obtained all consents and approvals required by specific contracts identified in the merger agreement;

each of the affiliate letters contemplated by the merger agreement, as described below, must have been delivered;

Genomic Solutions must have taken all action necessary to cause its stock options, warrants, and the shares underlying its stock purchase plan to be treated as provided for in the merger agreement, unless all other conditions to closing in the merger agreement have been satisfied or waived, and the aggregate number of shares of Harvard Bioscience common stock subject to converted options held by persons who as of the effective time are not employees of Genomic Solutions is greater than 20,000, in which case Harvard Bioscience will either:

- (1) waive the requirement that the aggregate number of shares of Harvard Bioscience common stock subject to converted options held by persons who as of the effective time are not employees of Genomic Solutions is no more than 20,000; or
- (2) extend the closing date to October 18, 2002 or later;

adoption and approval of the merger agreement and approval of the merger by Genomic Solutions stockholders, with receipt of notice of fewer than 5% of the outstanding common stock exercising appraisal rights;

Genomic Solutions must have taken all action necessary to terminate all outstanding registration rights with respect to its common stock; and

Genomic Solutions must have taken all action necessary to terminate all indemnification agreements with continuing officers of Genomic Solutions with respect to actions or events occurring after the effective time of the merger.

For purposes of clause (2) in the first bullet point above, and the third bullet point above, a change, effect, event, occurrence, condition or development that is or is reasonably likely to be materially adverse to the business, operations, assets, liabilities, properties, results of operations, prospects or condition (financial or otherwise) of Genomic Solutions and its subsidiaries taken as a whole that is reasonably capable of monetization will not be deemed to have a "material adverse effect," unless and until it has or is reasonably likely to have at least one of the following effects:

a reduction in net worth of Genomic Solutions of \$1,000,000 or more excluding any non-cash charge or adjustment made solely as a result of an impairment test or assessment made in accordance with SFAS 142 (Goodwill and Other Intangible Assets) but only to the extent that such charge or adjustment was not the result of an inaccurate representation or warranty

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

made by Genomic Solutions in the merger agreement; or

a reduction in historical revenues for any year or prospective revenues for 2002 or any subsequent year of Genomic Solutions of \$1,000,000 or more.

Termination of the Merger Agreement

The merger agreement may be terminated in accordance with its terms at any time prior to completion of the merger, whether before or after the adoption and approval of the merger agreement and approval of the merger by Genomic Solutions' stockholders:

by mutual written consent of Harvard Bioscience and Genomic Solutions;

by Harvard Bioscience or Genomic Solutions, if Genomic Solutions' stockholders fail to adopt and approve the merger agreement and approve the merger at the Genomic Solutions special meeting or at any adjournment of that meeting, except that the right to terminate the merger agreement under this provision is not available to Genomic Solutions where the failure to obtain stockholder approval was caused by Genomic Solutions' action or failure to act which constitutes a breach by Genomic Solutions of the merger agreement;

by Harvard Bioscience or Genomic Solutions, if any governmental authority has issued a final and nonappealable injunction, which prohibits the completion of merger;

by Harvard Bioscience or Genomic Solutions, if the merger is not completed before October 31, 2002 (or in the event that the registration statement on Form S-4 is reviewed by the Securities and Exchange Commission, the earlier of the date which is the same number of days after October 31, 2002 as the number of days from the date of the initial filing of the registration statement on Form S-4 to the date of the receipt of notification from the Securities and Exchange Commission that the registration statement on Form S-4 has been cleared and December 31, 2002), except that either party's right to terminate the merger agreement under this provision will not be available to any party who is in material breach of the merger agreement or because of an injunction;

80

by Genomic Solutions, upon a breach of any representation, warranty, covenant or agreement on the part of Harvard Bioscience or HAG Acq. Corp. in the merger agreement, if the breach has not been cured within 10 business days after delivery of written notice to Harvard Bioscience of the breach. If the breach is cured during those 10 business days, or if the breach has not and is not reasonably likely to have a material adverse effect on Harvard Bioscience, Genomic Solutions may not terminate the merger agreement under this provision;

by Harvard Bioscience, upon a breach of any representation, warranty, covenant or agreement on the part of Genomic Solutions set forth in the merger agreement, if the breach has not been cured within 10 business days after delivery of written notice to Genomic Solutions of the breach. If the breach is cured during those 10 business days, or if the breach has not had and is not reasonably likely to have a material adverse effect on Genomic Solutions, as further described below, Harvard Bioscience may not terminate the merger agreement under this provision;

by Harvard Bioscience, if Genomic Solutions has breached the provisions of the merger agreement that prohibit the solicitation of, and discussions and negotiations with respect to, acquisition proposals;

by Harvard Bioscience, if any of the persons who signed voting agreements has breached any representation, warranty, covenant or other agreement contained in the voting agreements and as a result Genomic Solutions has not obtained the required vote of its stockholders;

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

by Harvard Bioscience, if:

- (1) Genomic Solutions' board of directors withdraws or modifies in a manner adverse to Harvard Bioscience or HAG Acq. Corp. its recommendation in favor of the adoption and approval of the merger agreement or the approval of the merger;
- (2) Genomic Solutions' board of directors approves or recommends any other acquisition proposal;
- (3) Genomic Solutions' board of directors approves, recommends, executes or enters into any agreement relating to any other acquisition proposal; or
- (4) a tender or exchange offer relating to the securities of Genomic Solutions is commenced by a person unaffiliated with Harvard Bioscience, and Genomic Solutions does not send to its securityholders within 10 business days after such tender or exchange offer is first published, sent or given, a statement disclosing that Genomic Solutions recommends rejection of such tender or exchange offer.

For purposes of the sixth bullet point above, a change, effect, event, occurrence, condition or development that is or is reasonably likely to be materially adverse to the business, operations, assets, liabilities, properties, results of operations, prospects or condition (financial or otherwise) of Genomic Solutions and its subsidiaries taken as a whole that is reasonably capable of monetization will not be deemed to have a "material adverse effect," unless and until it has or is reasonably likely to have at least one of the following effects:

a reduction in net worth of Genomic Solutions of \$1,000,000 or more excluding any non-cash charge or adjustment made solely as a result of an impairment test or assessment made in accordance with SFAS 142 (Goodwill and Other Intangible Assets) but only to the extent that such charge or adjustment was not the result of an inaccurate representation or warranty made by Genomic Solutions in the merger agreement; or

a reduction in historical revenues for any year or prospective revenues for 2002 or any subsequent year of Genomic Solutions of \$1,000,000 or more.

81

If the merger agreement is terminated because of any of the reasons listed above:

it will become null and void and, except in the limited circumstances described below, have no effect, without any liability by any party to the merger agreement or its affiliates, directors, officers or stockholders; and

all rights and obligations of any party to the merger agreement other than specified agreements will cease.

However, regardless of the reason for termination of the merger agreement, none of the parties will be relieved from liability for fraud or willful breach of the merger agreement. Additionally, in limited circumstances, as described below, Genomic Solutions may be obligated to pay Harvard Bioscience a termination fee or to reimburse Harvard Bioscience's out-of-pocket expenses.

Payment of Termination Fee and Expenses

The merger agreement requires Genomic Solutions to pay Harvard Bioscience a termination fee of \$1,300,000 in cash if Harvard Bioscience terminates the merger agreement because:

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Genomic Solutions has breached the provisions of the merger agreement that prohibit the solicitation of, and discussions and negotiations with respect to, acquisition proposals; or

Genomic Solutions' board of directors:

- (1) withdraws or modifies in a manner adverse to Harvard Bioscience or HAG Acq. Corp., its recommendation in favor of the adoption and approval of the merger agreement or the approval of the merger;
- (2) approves or recommends any other acquisition proposal; or
- (3) approves, recommends, executes or enters into any agreement relating to any other acquisition proposal; or

a tender or exchange offer relating to the securities of Genomic Solutions is commenced by a person unaffiliated with Harvard Bioscience, and Genomic Solutions does not send to its securityholders within 10 business days after such tender or exchange offer is first published, sent or given, a statement disclosing that Genomic Solutions recommends rejection of such tender or exchange offer.

Furthermore, the merger agreement requires Genomic Solutions to reimburse Harvard Bioscience for its out-of-pocket expenses (including, without limitation, legal, accounting, investment banking and printing fees) incurred in connection with pursuing the merger if Harvard Bioscience terminates the merger agreement because:

Genomic Solutions breaches any representation, warranty, covenant or agreement set forth in the merger agreement, the breach has had or is reasonably likely to have a material adverse effect on Genomic Solutions, as further described below, and the breach has not been cured within 10 business days after delivery of written notice to Genomic Solutions of the breach; or

any of the persons who signed voting agreements breaches any representation, warranty, covenant or other agreement contained in the voting agreements and as a result Genomic Solutions has not obtained the required vote of its stockholders.

For purposes of the first bullet point above, a change, effect, event, occurrence, condition or development that is or is reasonably likely to be materially adverse to the business, operations, assets, liabilities, properties, results of operations, prospects or condition (financial or otherwise) of Genomic Solutions and its subsidiaries taken as a whole that is reasonably capable of monetization will not be

82

deemed to have a "material adverse effect," unless and until it has or is reasonably likely to have at least one of the following effects:

a reduction in net worth of Genomic Solutions of \$1,000,000 or more excluding any non-cash charge or adjustment made solely as a result of an impairment test or assessment made in accordance with SFAS 142 (Goodwill and Other Intangible Assets) but only to the extent that such charge or adjustment was not the result of an inaccurate representation or warranty made by Genomic Solutions in the merger agreement; or

a reduction in historical revenues for any year or prospective revenues for fiscal year 2002 or any subsequent year of Genomic Solutions of \$1,000,000 or more.

Except with respect to the termination fee and expense reimbursement described above, each party will pay all fees and expenses it incurs in the merger, except that Harvard Bioscience and Genomic Solutions will split equally all fees and expenses incurred in connection with the filing with the Securities and Exchange Commission of the registration statement on Form S-4 of which this proxy statement and prospectus forms a part, the printing and mailing of this proxy statement and prospectus and any antitrust filing fees.

Extension, Waiver and Amendment of the Merger Agreement

Harvard Bioscience and Genomic Solutions may amend the merger agreement before completion of the merger by mutual written consent.

Either Harvard Bioscience or Genomic Solutions may extend the other party's time for the performance of any of the obligations or other acts under the merger agreement, waive any inaccuracies in the other's representations and warranties and waive compliance by the other party with any of the agreements or conditions contained in the merger agreement.

Definition of Material Adverse Effect

Under the terms of the merger agreement, a *material adverse effect* on either Genomic Solutions or Harvard Bioscience is defined to mean any change, effect, event, occurrence, condition or development that is or is reasonably likely to be materially adverse to:

the business, operations, assets, liabilities, properties, results of operations, prospects or condition (financial or otherwise) of such entity and its subsidiaries as a whole; or

the ability of such entity to perform its obligations under the merger agreement.

However, only for purposes of:

Harvard Bioscience's obligation to complete the merger if each of Genomic Solutions' representations and warranties are true and correct as of July 17, 2002 and as of the date the merger is to be completed, except to the extent that any inaccuracies of such representations and warranties do not individually, or in the aggregate, have or could not reasonably be expected to have a material adverse effect on Genomic Solutions and its subsidiaries;

Harvard Bioscience's obligation to complete the merger unless any event that could reasonably be expected to have a material adverse effect on Genomic Solutions has occurred between July 17, 2002 and the closing date; and

Harvard Bioscience's right to terminate the merger agreement if Genomic Solutions breaches any of its representations, warranties, covenants or agreements set forth in the merger agreement (and which have not been cured), other than breaches which have not had and are not reasonably likely to have a material adverse effect on Genomic Solutions;

83

a change, effect, event, occurrence, condition or development that is or is reasonably likely to be materially adverse to the business, operations, assets, liabilities, properties, results of operations, prospects or condition (financial or otherwise) of Genomic Solutions and its subsidiaries taken as a whole that is reasonably capable of monetization will not be deemed to have a "material adverse effect," unless and until it has or is reasonably likely to have at least one of the following effects:

a reduction in net worth of Genomic Solutions of \$1,000,000 or more excluding any non-cash charge or adjustment made solely as a result of an impairment test or assessment made in accordance with SFAS 142 (Goodwill and Other Intangible Assets) but only to the extent that such charge or adjustment was not the result of an inaccurate representation or warranty made by Genomic Solutions in the merger agreement; or

a reduction in historical revenues for any year or prospective revenues for 2002 or any subsequent year of Genomic Solutions of \$1,000,000 or more.

Material United States Federal Income Tax Consequences of the Merger

The following is a discussion of the material federal income tax consequences of the merger to holders of Genomic Solutions common stock. The discussion is based upon the Internal Revenue Code of 1986, as amended, Treasury Regulations, Internal Revenue Service rulings,

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

and judicial and administration decisions in effect as of the date of this proxy statement and prospectus and assumes that the transaction will qualify as a tax free reorganization under Section 368(a) of the Internal Revenue Code. This discussion assumes that Genomic Solutions' common stock is a capital asset in the hands of Genomic Solutions stockholders. In addition, this discussion does not address any non-income tax consequences, any state, local, or non-U.S. tax consequences, or any tax consequences that may be relevant to Genomic Solutions in light of your particular circumstances or to stockholders subject to special rules, such as:

non-U.S. persons;

tax-exempt organizations;

partnerships, sub-chapter S corporations and other pass-through entities;

mutual funds;

small business investment companies;

regulated investment companies;

dealers in securities or foreign currencies;

insurance companies and other financial institutions;

traders who mark-to-market or insurance companies;

persons who acquired their common stock as compensation; and

persons who are subject to the federal alternative minimum tax.

The opinion of counsel referred to in this section will be based on facts existing on the closing date of the merger. In rendering its opinion, counsel will require and rely upon representations contained in certificates of Genomic Solutions officers and those of Harvard Bioscience.

It is a condition to the obligation of Genomic Solutions and Harvard Bioscience to complete the merger that Genomic Solutions receive an opinion from Jaffe, Raitt, Heuer & Weiss, P.C., dated as of the closing date of the merger, that the merger will be treated as a reorganization within the meaning of the Internal Revenue Code. If Genomic Solutions' tax counsel is unable or unwilling to render a tax opinion, Harvard Bioscience's tax counsel may render the tax opinion. If the merger is treated as a

reorganization, neither Genomic Solutions nor Harvard Bioscience will recognize any gain or loss as a result of the merger.

The tax opinion to be delivered to Genomic Solutions in connection with the merger is not binding on the Internal Revenue Service or the courts, and neither Genomic Solutions nor Harvard Bioscience intends to request a ruling from the Internal Revenue Service with respect to the merger.

The tax consequences of the merger to you vary depending upon your particular circumstances. Therefore, you should consult your tax advisor to determine the particular federal, state, local, and non-U.S. tax consequences of the merger to you.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

In the merger, each of Genomic Solutions' stockholders (other than those properly exercising appraisal rights) will exchange his or her Genomic Solutions common stock for Harvard Bioscience common stock and cash. Genomic Solutions stockholders will not be permitted to recognize any loss for federal income tax purposes from the exchange, except with respect to cash in lieu of a fractional share of Harvard Bioscience common stock as described below. Apart from any gain recognized on the receipt of cash in lieu of a fractional share of Harvard Bioscience common stock, Genomic Solutions stockholders will recognize gain, if any, on the exchange of their shares of Genomic Solutions stock equal to the lesser of:

the amount of cash received in the exchange of that share, excluding cash received in lieu of a fractional share of Harvard Bioscience, and

the sum of the cash received in the exchange of that share, excluding any cash received in lieu of a fractional share of Harvard Bioscience common stock, plus the fair market value at the effective time of the merger of the Harvard Bioscience common stock received in exchange for that share, less the basis in a Genomic Solutions stockholder's shares to be surrendered in exchange for the Harvard Bioscience common stock and cash.

Generally, any recognized gain will be capital gain. Capital gain recognized by Genomic Solutions stockholders will be treated as long-term capital gain if the holding period of such share exceeds one year. The capital gain will be short-term capital gain if the holding period of such share does not exceed one year. The tax basis of the shares of Harvard Bioscience common stock received by Genomic Solutions stockholders, including a fractional share of Harvard Bioscience common stock for which cash is received, will be the same as the basis of the shares of Genomic Solutions common stock surrendered in exchange for the shares of Harvard Bioscience common stock, reduced by the amount of cash received, other than any cash received in lieu of a fractional share of Harvard Bioscience common stock, and increased by the amount of gain recognized in the exchange, other than gain recognized in connection with cash received in lieu of a fractional share. The holding period for shares of Harvard Bioscience common stock received by Genomic Solutions stockholders will include that stockholder's holding period of Genomic Solutions common stock surrendered in exchange for Harvard Bioscience common stock.

Genomic Solutions stockholders' federal income tax consequences will also depend on whether that stockholder's shares of Genomic Solutions common stock were purchased at different prices or otherwise have different tax bases. If they were, that stockholder could realize gain with respect to some of the shares of Genomic Solutions common stock and loss with respect to those shares in which that stockholder's adjusted basis is less than the amount of cash plus the fair market value at the effective time of the merger of Harvard Bioscience common stock received, but that stockholder would not be allowed to recognize loss with respect to those shares in which his or her adjusted basis is greater than the amount of cash plus the fair market value at the effective time of the merger of the Harvard Bioscience common stock received. As set forth above, any disallowed loss would be included in the adjusted basis of the Harvard Bioscience common stock. You are urged to consult your own tax advisor with respect to the tax consequences of the merger to you.

85

If a stockholder receives cash in lieu of a fractional share of Harvard Bioscience common stock, that stockholder will be treated as having received the fractional share in the merger and as having that fractional share subsequently redeemed by Harvard Bioscience. A Genomic Solutions stockholder generally will recognize gain or loss in the amount equal to the difference between the amount of cash received for the fractional share and the portion of his or her adjusted tax basis in his or her newly received Harvard Bioscience common stock that is allocated to the fractional share. The gain or loss generally will be treated as capital gain or loss.

Backup Withholding

Backup withholding of U.S. federal income tax at a 30% rate (for 2002) may apply to cash payments received by you in connection with the merger if you are not an "exempt recipient" and fail to provide Harvard Bioscience with certain identifying information (such as your federal taxpayer identification number) and certification in the manner required by the Internal Revenue Code and Treasury Regulations. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against your federal income tax liability, provided that the required information is timely furnished to the Internal Revenue Service.

The foregoing is a summary discussion of the material federal income tax consequences of the merger and does not purport to be a complete analysis or discussion of all potential tax effects relevant to the merger. Thus, you are urged to consult your own tax advisors as to the specific tax consequences to you of the merger, including tax return requirements, the applicability and effect of federal, state, local, foreign and other tax laws and the effect of any proposed changes in the tax laws.

Accounting Treatment of the Merger

The merger will be accounted for using the "purchase" method of accounting and Harvard Bioscience will be considered the acquiror of Genomic Solutions for accounting purposes. Accordingly, the historical financial statements of Harvard Bioscience will become the historical financial statements of the combined company following the merger.

Regulatory Filings and Approvals Required to Complete the Merger

Neither Harvard Bioscience nor Genomic Solutions is aware of any material governmental or regulatory approval required for completion of the merger, other than compliance with applicable corporate law of the State of Delaware and federal and state securities laws.

Restrictions on Sales of Harvard Bioscience Common Stock by Affiliates of Genomic Solutions

The shares of Harvard Bioscience common stock to be issued in connection with the merger have been registered under the Securities Act and will be freely transferable under the Securities Act, except for shares of Harvard Bioscience common stock issued to any person who is deemed to be an "affiliate" of either Harvard Bioscience or Genomic Solutions and shares subject to other contractual restrictions. Persons who may be deemed to be affiliates include individuals or entities that control, are controlled by, or are under common control of either of Harvard Bioscience or Genomic Solutions and may include some of Genomic Solutions' officers and directors, as well as its principal stockholders. Affiliates may resell their shares of Harvard Bioscience common stock acquired in connection with the merger only in transactions permitted by Rule 145 under the Securities Act or as otherwise permitted under the Securities Act.

86

As a condition to the obligations of Harvard Bioscience and HAG Acq. Corp. to effect the merger, each director, executive officer and 5% stockholder of Genomic Solutions is required to enter into an affiliate agreement with Harvard Bioscience. Under the terms of the affiliate agreements, such affiliates have agreed not to make any sale, transfer or other disposition of any shares of Harvard Bioscience common stock except in certain specified situations, including:

pursuant to an effective registration statement under the Securities Act covering the resale of those shares;

in compliance with Rule 145 under the Securities Act;

in compliance with Rule 144 under the Securities Act; or

in compliance with any other applicable exemption under the Securities Act.

The affiliate agreements also allow Harvard Bioscience to place appropriate legends on the certificates evidencing any shares of Harvard Bioscience common stock received by the affiliates in the merger, and to issue stop transfer instructions to the transfer agent for such Harvard Bioscience common stock received by the affiliates.

This proxy statement and prospectus does not cover the resale of shares of Harvard Bioscience common stock to be received by any person in the merger, and no person is authorized to make any use of this proxy statement and prospectus in connection with any such resale.

Listing on the Nasdaq National Market of Harvard Bioscience Common Stock to be Issued in the Merger

Harvard Bioscience has agreed to cause the shares of Harvard Bioscience common stock to be issued in the merger to be approved for listing on the Nasdaq National Market before the completion of the merger, subject to official notice of issuance. Such approval is a condition to the consummation of the merger.

Delisting and Deregistration of Genomic Solutions Common Stock after the Merger

When the merger is completed, Genomic Solutions common stock will be delisted from the Nasdaq stock market and will be deregistered under the Exchange Act.

Dissenters' Rights of Appraisal

Under Section 262 of the Delaware General Corporation Law, instead of receiving the merger consideration, holders of Genomic Solutions common stock are entitled to dissent from the merger, request a judicial appraisal of the fair value of their shares of Genomic Solutions common stock and, if the merger is consummated and all requirements of Section 262 are satisfied by Genomic Solutions stockholders seeking to exercise appraisal rights, to receive payment equal to the fair value of their shares of Genomic Solutions common stock, as determined in the manner set forth under Section 262. The Genomic Solutions stockholders who are eligible to, and do, exercise their appraisal rights with respect to the merger are referred to as dissenting stockholders, and the shares of Genomic Solutions common stock with respect to which appraisal rights are exercised are referred to as dissenting shares. The following is a summary of Section 262 which sets forth the procedures that Genomic Solutions stockholders must follow in order to object to the proposal to adopt and approve the merger agreement and approve the merger and to demand statutory appraisal rights. This summary is qualified in its entirety by reference to the full text of Section 262 which is included as Annex C to this proxy statement and prospectus. Section 262 should be reviewed carefully and in its entirety by any Genomic Solutions stockholder who wishes to exercise appraisal rights or preserve the right to do so. Failure to

87

strictly follow the procedures set forth in Section 262 on a timely basis may result in a termination or loss of appraisal rights.

Notice of Appraisal Rights

Under Section 262, not less than 20 days prior to the special meeting of Genomic Solutions stockholders to be held on October 24, 2002, at which the merger agreement and the merger will be considered and voted upon, Genomic Solutions must notify each of its stockholders entitled to appraisal rights as of the record date of the special meeting that appraisal rights are available, and include in that notice a copy of Section 262. This proxy statement and prospectus constitutes notice to the Genomic Solutions stockholders and includes a copy of Section 262 which is attached as Annex C to this proxy statement and prospectus.

Perfecting Appraisal Rights

To perfect appraisal rights, a dissenting stockholder shall, before the taking of the vote on the merger agreement and the merger, deliver a written demand for appraisal of his or her shares of Genomic Solutions common stock to: Genomic Solutions Inc., 4355 Varsity Drive, Suite E, Ann Arbor, Michigan 48108, Attention: Gary A. Kendra, Secretary. Genomic Solutions recommends that this written demand be sent by registered or certified mail, with return receipt requested. Pursuant to Section 262, the written demand for appraisal must reasonably inform Genomic Solutions of the identity of the stockholder of record and his or her intention to seek appraisal of his or her shares of Genomic Solutions common stock. A proxy or vote against the merger agreement and the merger will not constitute this demand.

Only Record Holders May Demand Appraisal Rights

A demand for appraisal must be executed by and in the name of the holder of record, fully and correctly, as that holder's name appears on the stock certificate(s) representing the holder's shares. A holder of shares of Genomic Solutions common stock wishing to exercise appraisal rights must be the holder of record of those shares on the date written demand for appraisal is made, must continue to hold those shares until the effective date and must not vote in favor of, or consent in writing to, the merger agreement and the merger. If shares are owned of record in a fiduciary capacity, such as by a trustee, guardian or custodian, the demand must be executed by the fiduciary. If shares are owned of record by more than one person, as in a joint tenancy or tenancy in common, the demand must be executed by all joint owners. An authorized agent, including an agent for two or more joint owners, may execute the demand for appraisal for a holder of record; however, the agent must identify the record owner and expressly disclose that, in exercising the demand, he or she is acting as agent for the record owner. A record owner, such as a broker, who holds shares as a nominee for others, may exercise appraisal rights with respect to the shares held for all or less than all beneficial owners of shares as to which the holder is the record owner. In that case the written demand must set forth the number of shares covered by the demand. Where the number of shares is not expressly stated, the demand will be presumed to cover all shares outstanding in the name of the record owner. Beneficial owners who are not record owners and who intend to exercise appraisal rights should instruct the record owner to comply strictly with the statutory requirements with respect to the exercise of appraisal rights.

Where shares are held in "street name," a holder who desires appraisal rights with respect to his or her shares must take such actions as may be necessary to ensure that a timely and proper demand for appraisal is made by the record owner of those shares. Shares held through brokerage firms, banks and other financial institutions are frequently deposited with and held of record in the name of a nominee of a central security depository, such as The Depository Trust Company. Any holder desiring appraisal rights with respect to his or her shares held of record by a brokerage firm, bank or other

financial institution is responsible for ensuring that the demand for appraisal is made by the record holder. The holder should instruct such firm, bank or institution that the demand for appraisal must be made by the record holder of the shares, which might be the nominee of a central security depository if the shares have been so deposited. As required by Section 262, a demand for appraisal must reasonably inform the surviving corporation of the identity of the record holder (which might be a nominee as described above) and of the holder's intention to seek appraisal of his or her shares.

Notice of Effective Date

Within 10 days after the effective date of the merger, the surviving corporation shall notify each of the dissenting stockholders who has complied with Section 262 and has not voted in favor of or consented to the merger agreement and the merger of the date that the merger became effective.

Appraisal Proceeding by Delaware Court of Chancery

Within 120 days after the effective time, the surviving corporation or any dissenting stockholder who has complied with the requirements of Section 262 and who is otherwise entitled to appraisal rights may file a petition in the Delaware Court of Chancery demanding a determination of the fair value of the shares of the dissenting stockholders. HAG Acq. Corp., as the surviving corporation in the merger, is under no obligation to and has no present intention to file a petition with respect to the appraisal of the fair value of the shares of Genomic Solutions common stock. Accordingly, it is the obligation of Genomic Solutions' stockholders to initiate all necessary action to perfect appraisal rights within the time prescribed in Section 262.

Within 120 days after the effective time, any dissenting stockholder who has complied with the requirements for exercise of appraisal rights will be entitled, upon written request, to receive from the surviving corporation a statement setting forth the aggregate number of shares of Genomic Solutions common stock with respect to which demands for appraisal have been received and the aggregate number of holders of those shares. This statement must be mailed to holders of Genomic Solutions common stock within 10 days after a written request has been received by the surviving corporation or within 10 days after expiration of the period for delivery of demands for appraisal by holders of Genomic Solutions common stock outlined above, whichever is later.

If a petition for an appraisal is timely filed, the Court of Chancery will hold a hearing, determine which stockholders are entitled to appraisal rights and appraise the shares owned by those stockholders, determining the fair value of their shares, exclusive of any element of value arising from the accomplishment or expectation of the merger, together with a fair rate of interest to be paid, if any, upon the amount determined to be the fair value. Genomic Solutions stockholders considering seeking appraisal of their shares should be aware that the fair value of their shares determined under Section 262 could be more than, the same as, or less than the merger consideration they are entitled to receive pursuant to the merger agreement if they do not seek appraisal of their shares and that opinions of investment banking firms as to fairness from a financial point of view are not necessarily opinions as to fair value under Section 262.

In determining fair value, the Court of Chancery is to take into account all relevant factors. In *Weinberger v. UOP, Inc., et al.*, the Delaware Supreme Court discussed the factors that could be considered in determining fair value in an appraisal proceeding, stating that "proof of value by any techniques or methods which are generally considered acceptable in the financial community and otherwise admissible in court" should be considered, and that "[f]air price obviously requires consideration of all relevant factors involving the value of a company." The Delaware Supreme Court stated that, in making this determination of fair value, the court must consider "market value, asset value, dividends, earnings prospects, the nature of the enterprise and any other facts which were known or which could be ascertained as of the date of merger which throw any light on future prospects of the

merged corporation." The Delaware Supreme Court construed Section 262 to mean that "elements of future value, including the nature of the enterprise, which are known or susceptible of proof as of the date of the merger and not the product of speculation, may be considered." The Delaware Supreme Court noted that Section 262 provides that fair value is to be determined "exclusive of any element of value arising from the accomplishment or expectation of the merger." In addition, Delaware courts have decided that the statutory appraisal remedy, depending on factual circumstances, may or may not be a dissenting stockholder's exclusive remedy.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

The cost of the appraisal proceeding may be determined by the Delaware Court of Chancery and taxed upon the parties as the Court of Chancery deems equitable in the circumstances. Upon application of a dissenting stockholder, the Court of Chancery may order that all or a portion of the expenses incurred by any dissenting stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorneys' fees and the fees and expenses of experts, be charged pro rata against the value of all shares entitled to appraisal. In the absence of such a determination or assessment, each party bears its own expenses.

Effect of Appraisal Demand on Voting and Right to Dividends

Any stockholder who has duly demanded an appraisal in compliance with Section 262 will not, after the effective time, be entitled to vote the shares subject to the demand for appraisal for any purpose. The shares subject to the demand for appraisal will not be entitled to dividends or other distributions other than those payable or deemed to be payable to stockholders of record as of a date prior to the effective time.

Loss, Waiver or Withdrawal of Appraisal Rights

At any time within 60 days after the effective time, any dissenting stockholder shall have the right to withdraw his or her demand for appraisal and to accept the terms offered in the merger. After this period, a dissenting stockholder may withdraw his or her demand for appraisal only with the consent of the surviving company. If no petition for appraisal is filed with the Court of Chancery within 120 days after the effective time, all stockholders' rights to appraisal will be lost (although such stockholders will remain entitled to receive the merger consideration, without interest, pursuant to the merger agreement). However, no petition timely filed in the Court of Chancery demanding appraisal shall be dismissed as to any stockholder without the approval of the Court of Chancery, and such approval may be conditioned upon such terms as the Court of Chancery deems just.

Other Material Agreements Relating to the Merger

Voting Agreements

As a condition to the willingness of Harvard Bioscience and HAG Acq. Corp. to enter into the merger agreement, directors and certain of their affiliates, and specified officers of Genomic Solutions, who together held approximately 38% of the outstanding shares of Genomic Solutions common stock as of July 17, 2002, each executed a voting agreement with Harvard Bioscience dated as of July 17, 2002.

In the voting agreements, these Genomic Solutions stockholders agreed to:

vote their shares and any newly acquired shares in favor of adoption and approval of the merger agreement and approval of the merger and any matter necessary for consummation of the merger;

vote their shares and any newly acquired shares against approval of any acquisition proposal (including, without limitation, any superior proposal);

90

vote their shares and any newly acquired shares against any proposal for any action or agreement that would result in a breach of any covenant, representation or warranty or any other obligation or agreement of Genomic Solutions under the merger agreement or which could result in any of the conditions of Genomic Solutions' obligations under the merger agreement not being fulfilled;

vote their shares and any newly acquired shares against any action which could reasonably be expected to impede, interfere with, delay, postpone or materially adversely affect consummation of the transactions contemplated by the merger agreement;

vote their shares and any newly acquired shares in favor of any other matter necessary for consummation of the transactions contemplated by the merger agreement, and in connection therewith to execute any documents which are necessary or appropriate in order to effectuate the foregoing; and

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

grant, and did grant, Harvard Bioscience irrevocable proxies to vote their shares and any newly acquired shares as required by the voting agreement.

Furthermore, each of these stockholders agreed not to:

sell, tender, transfer, pledge, encumber, assign or otherwise dispose of any of its shares or newly acquired shares (except with respect to certain stockholders who are permitted to transfer or sell, and grant participation interests in, their shares of Genomic Solutions common stock to their affiliates so long as the transferee affiliate is required to comply with the documents related to the merger as if it were a record owner of Genomic Solutions' common stock and a direct party to the merger);

deposit any shares or newly acquired shares into a voting trust or enter into a voting agreement or arrangement with respect to such shares or grant any proxy or power of attorney with respect thereto;

enter into any contract, option or other arrangement or undertaking with respect to the direct or indirect sale, transfer, pledge, encumbrance, assignment or other disposition of any shares or newly acquired shares (except with respect to certain stockholders who are permitted to transfer or sell, and grant participation interests in, their shares of Genomic Solutions common stock to their affiliates so long as the transferee affiliate is required to comply with the documents related to the merger as if it were a record owner of Genomic Solutions' common stock and a direct party to the merger); or

take any action that would make any representation or warranty of such stockholder contained in the voting agreement untrue or incorrect or have the effect of preventing or disabling such stockholder from performing such stockholder's obligations under the voting agreement.

The voting agreements terminate upon the earliest to occur of:

the effective time of the merger; and

such date and time as the merger agreement is terminated in accordance with its terms.

The voting agreements are substantially in the form attached to this proxy statement and prospectus as Annex D, and you are urged to read Annex D in its entirety.

Employment Agreement

On January 1, 2000, Genomic Solutions entered into a three year employment agreement with Jeffrey S. Williams, Genomic Solutions' President and Chief Executive Officer. Under this employment agreement, Mr. Williams receives an annual base salary of \$345,000 and is eligible to receive an annual

91

performance bonus not to exceed 35% of his annual base salary based upon criteria established by the Compensation Committee of Genomic Solutions' board of directors. The employment agreement provides for a payment to be made to Mr. Williams in an amount equal to two times his base salary paid in the previous twelve months in the event there is a change in control of Genomic Solutions and Mr. Williams does not accept employment with the surviving corporation. In the course of the negotiation of the transactions and in order to induce Mr. Williams to terminate his prior employment agreement and accept employment with the surviving corporation, Harvard Bioscience, Mr. Williams and Genomic Solutions agreed that Mr. Williams would receive the following:

a new employment agreement with the surviving corporation which provides for a reduced base salary; and

a one-time payment of \$690,000 (an amount equal to two times his base salary for fiscal year 2001) payable at the closing of the merger.

Upon the effectiveness of the merger and receipt by Mr. Williams of a \$690,000 payment, Mr. Williams' new employment agreement will become effective and will replace and supersede his prior employment agreement with Genomic Solutions, which will be of no further force or effect at such time. The following summary description of Mr. Williams' new employment agreement is qualified in its entirety by reference to the new employment agreement itself, which is attached as Annex E to this proxy statement and prospectus.

The new employment agreement provides that Mr. Williams will serve as President of HAG Acq. Corp. for a term of 12 months, with such employment agreement automatically extending thereafter for consecutive one-year terms unless otherwise terminated pursuant to the provisions thereof. On the business day following effectiveness of the merger, Harvard Bioscience will take proper corporate action to effect the nomination of Mr. Williams to Harvard Bioscience's board of directors. Under the new employment agreement, Mr. Williams agrees to resign such director position immediately upon termination of his employment with HAG Acq. Corp. for any reason.

Pursuant to the new employment agreement, Mr. Williams will receive a base salary of \$225,000 per year during the term of the employment agreement, which base salary shall be reviewed annually for possible increase or, in limited circumstances, decrease. In addition, Mr. Williams will have the opportunity to earn an annual bonus of up to 100% of his base salary based upon achievement by HAG Acq. Corp. of annual operating profit and/or revenue targets established by HAG Acq. Corp. Within a reasonable period of time following the date of the new employment agreement, Harvard Bioscience will enter into an incentive stock option agreement pursuant to which Harvard Bioscience will grant to Mr. Williams an option to purchase 100,000 shares of Harvard Bioscience's common stock at an exercise price equal to the fair market value of Harvard Bioscience's common stock on the date of grant. The option will vest ratably over four years.

The new employment agreement includes severance provisions that are effective upon the termination of Mr. Williams' employment under certain circumstances. In the event that, within twelve months after a change in control of Harvard Bioscience, Mr. Williams is terminated without cause or Mr. Williams terminates his employment for good reason, Mr. Williams will be entitled to, in HAG Acq. Corp.'s sole discretion, either (a) written notice at least 120 days prior to such termination, or (b) a lump sum payment in cash in an amount equal to 120 days pay under Mr. Williams' then current base salary.

The new employment agreement contains specified restrictive covenants of Mr. Williams for the benefit of HAG Acq. Corp. and its predecessors, successors and affiliates, including but not limited to Harvard Bioscience, relating to (a) non-disclosure by Mr. Williams of confidential or proprietary information, (b) HAG Acq. Corp.'s and its affiliates' exclusive right to all processes, ideas and concepts described in such confidential or proprietary information, (c) HAG Acq. Corp.'s and its affiliates'

exclusive right to any products, inventions, discoveries or improvements made by Mr. Williams in the course and scope of his employment, (d) nonsolicitation of employees of HAG Acq. Corp. or its subsidiaries for the term of employment and a period ending on the later of first anniversary of (1) the effective date and (2) the date of termination of employment, and (e) noncompetition by Mr. Williams with the business of HAG Acq. Corp. or its subsidiaries for the term of employment and a period ending on the later of the first anniversary of (1) the effective date and (2) the date of termination of employment.

Operations After the Merger

Following the merger, HAG Acq. Corp. will change its name to Genomic Solutions Inc. and will operate as a wholly-owned subsidiary of Harvard Bioscience. Harvard Bioscience will nominate Mr. Williams to Harvard Bioscience's board of directors, the membership of which otherwise will remain unchanged as a result of the merger. The stockholders of Genomic Solutions will become stockholders of Harvard Bioscience, and their rights as stockholders will be governed by the Harvard Bioscience second amended and restated certificate of incorporation, as currently in effect, the Harvard Bioscience bylaws and the laws of the State of Delaware. See the section entitled "Comparison of Rights of Holders of Genomic Solutions Common Stock and Harvard Bioscience Common Stock" beginning on page 129 of this proxy statement and prospectus.

UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

The following unaudited pro forma condensed combined financial statements are presented for illustrative purposes only and do not purport to be indicative of the consolidated financial position and the results of operations for future periods or the results that actually would have been realized had Harvard Bioscience and Genomic Solutions been a consolidated company during the specified periods.

The following unaudited pro forma condensed combined financial statements are based on the respective audited and unaudited historical consolidated financial statements and the notes thereto of Harvard Bioscience and Genomic Solutions after giving effect to the acquisition of Genomic Solutions using the purchase method of accounting and the assumptions and adjustments described below. The estimated purchase price was allocated to the estimated fair value of the assets to be acquired and liabilities to be assumed based on the Genomic Solutions consolidated balance sheet at June 30, 2002. The estimated purchase price allocation is based on a preliminary independent appraisal and management estimates. A final allocation of the purchase price will be completed following the consummation of the merger. The following unaudited pro forma condensed combined statements of operations for the year ended December 31, 2001 and six months ended June 30, 2002 assumes the merger occurred on January 1, 2001. The unaudited pro forma condensed combined balance sheet at June 30, 2002 assumes the merger occurred on June 30, 2002.

The pro forma adjustments were based upon available information and upon certain assumptions as described in the notes to the unaudited pro forma statements that Harvard Bioscience's management believes are reasonable in the circumstances. In accordance with generally accepted accounting principals, the amount allocated to in-process technology will be expensed in the quarter in which the merger is consummated. The estimated in-process research and development ("IPR&D") adjustment has been excluded from the unaudited pro forma condensed combined statements of operations because it is a material, non-recurring charge. The effects of the IPR&D expense have been included in retained earnings in the June 30, 2002 unaudited pro forma condensed combined balance sheet.

The unaudited pro forma condensed combined financial statements and accompanying notes should be read in conjunction with the historical consolidated financial statements and accompanying notes thereto of Harvard Bioscience, Inc. included in its Annual Report on Form 10-K for the year ended December 31, 2001, and its quarterly report on Form 10-Q for the six months ended June 30, 2002, incorporated by reference in this proxy statement and prospectus, and the corresponding separate historical financial statements of Genomic Solutions, each of which is included in this proxy statement and prospectus.

UNAUDITED PRO FORMA CONDENSED COMBINED BALANCE SHEET

(in thousands)

	Historical As of June 30, 2002				As of June 30, 2002
	Harvard Bioscience	Genomic Solutions	Pro forma adjustments		Pro forma combined
Current assets:					
Cash and cash equivalents	\$ 27,025	\$ 5,266	\$ (9,000)	(2B)	\$ 23,291
Trade accounts receivable, net	8,563	7,156			15,719
Other receivable and other assets	572				572
Inventories	6,498	10,954	531	(2B)	17,983
Catalog costs	254				254
Prepaid expenses	1,077	1,027			2,104
Deferred tax assets	1,435				1,435
Total current assets	45,424	24,403	(8,469)		61,358
Property, plant and equipment, net	3,851	2,650			6,501

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	Historical As of June 30, 2002				As of June 30, 2002
Other assets:					
Deferred tax asset	256		2,100	(2F)	2,356
Goodwill and indefinite lived intangibles	20,757	9,671	(5,731)	(2B)	24,697
Other definite lived intangibles, net	12,501	3,908	1,566	(2B)	17,975
Other assets	749	1,361			2,110
Total other assets	34,263	14,940	(2,065)		47,138
Total assets	\$ 83,538	\$ 41,993	\$ (10,534)		\$ 114,997
Current liabilities:					
Line of credit	\$	\$ 2,500			\$ 2,500
Current installments of long-term debt	706	44			750
Trade accounts payable	3,182	3,813			6,995
Accrued income taxes payable	1,954				1,954
Accrued expenses	2,439	3,901	\$ 3,430	(2C, G, H)	9,770
Other liabilities	175				175
Deferred revenue	758	696			1,454
Total current liabilities	9,214	10,954	3,430		23,598
Long-term liabilities					
Long-term debt, less current portion	92	44			136
Deferred income tax liability	2,751	63	2,037	(2F)	4,851
Total long-term liabilities	2,843	107	2,037		4,987
Stockholders' equity:					
Common stock	314	31	1	(2B)	346
Additional paid-in capital	154,127	103,043	(86,507)	(2B, C)	170,663
Accumulated deficit	(81,797)	(72,018)	70,381	(2B, D)	(83,434)
Accumulated other comprehensive income (loss)	422	18	(18)	(2B)	422
Notes receivable	(917)	(142)	142	(2B)	(917)
Treasury stock at cost	(668)				(668)
Total stockholders' equity	71,481	30,932	(16,001)		86,412
Total liabilities and stockholders' equity	\$ 83,538	\$ 41,993	\$ (10,534)		\$ 114,997

The accompanying notes are an integral part of these unaudited pro forma condensed combined financial statements.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

(in thousands, except per share amounts)

For the six months ended June 30, 2002

	Harvard Bioscience	Genomic Solutions	Pro Forma Adjustments	Pro Forma Combined
Revenues	\$ 25,692	\$ 12,716	\$	\$ 38,408
Operating expenses:				
Cost of product and service revenues	12,405	6,657		19,062
Selling, marketing, general and administrative expenses	7,329	6,888		14,217
Research and development expenses	2,024	2,483		4,507
Stock compensation expense	655	13	(13) (2B)	655
Amortization of goodwill and other intangibles	612	410	(133) (2A)	889
Operating income (loss)	2,667	(3,735)	146	(922)
Other (expense) income:				
Interest, net	187	50		237
Other	95	(278)		(183)
Total other income (expense), net	282	(228)		54
Income (loss) before income taxes	2,949	(3,963)	146	(868)
Income taxes	1,158		(352) (2F)	806
Net income (loss)	\$ 1,791	\$ (3,963)	\$ 498	\$ (1,674)
Income (loss) per share:				
Basic and diluted	\$ 0.07			\$ (0.06)
Weighted average common shares:				
Basic	26,470		3,200 (3)	29,670
Diluted	27,061		2,609 (3)	29,670

The accompanying notes are an integral part of these unaudited pro forma condensed combined financial statements.

96

UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENTS OF OPERATIONS

(in thousands, except per share amounts)

For the year ended December 31, 2001

	Harvard Bioscience	Genomic Solutions	Pro Forma Adjustments	Pro Forma Combined
--	-----------------------	----------------------	--------------------------	-----------------------

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

For the year ended December 31, 2001

Revenues	\$	40,868	\$	16,840	\$		\$	57,708
Operating expenses:								
Cost of product and service revenues		20,179		11,792				31,971
Selling, marketing, general and administrative expense		11,841		13,757				25,598
Research and development		3,179		6,797				9,976
Stock compensation expense		2,679		26		(26)	(2B)	2,679
Amortization of goodwill and other intangibles		1,744		353		202	(2A)	2,299
In-process research and development expense		5,447		4,200				9,647
Restructuring costs		460		6,736				7,196
Operating income (loss)		(4,661)		(26,821)		(176)		(31,658)
Other (expense) income:								
Interest, net		1,352		941				2,293
Other		(109)		(220)				(329)
Total other income (expense), net		1,243		721				1,964
Income (loss) before income taxes		(3,418)		(26,100)		(176)		(29,694)
Income taxes		1,790				(81)	(2F)	1,709
Net income (loss)		(5,208)		(26,100)		(95)		(31,403)
Deemed dividend upon issuance to and subsequent repurchase of stock				(2,811)				(2,811)
Net income (loss) available to common stockholders	\$	(5,208)	\$	(28,911)	\$	(95)	\$	(34,214)
Income (loss) per share:								
Basic and diluted	\$	(0.20)						(1.18)
Weighted average common shares:								
Basic and diluted		25,785				3,200	(3)	28,985

The accompanying notes are an integral part of these unaudited pro forma condensed combined financial statements.

NOTES TO UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

Note 1. Basis of Presentation and Purchase Price

On July 17, 2002, Harvard Bioscience and Genomic Solutions entered into an Agreement and Plan of Merger pursuant to which Genomic Solutions will be acquired by Harvard Bioscience. The transaction will be accounted for using the purchase method of accounting. The total purchase price consideration is estimated to be \$27.0 million, and will include 3.2 million of Harvard Bioscience common shares with an estimated fair value of \$17.3 million using the weighted average price of Harvard Bioscience's common stock during the five day trading period ended July 22, 2002, or \$5.41 per share, and \$9 million of cash. In addition, Harvard Bioscience estimates that approximately \$730,000 of direct

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

acquisition costs will be incurred as well as \$770,000 of direct registration costs associated with costs of registering and issuing securities in connection with the acquisition.

The management of Genomic Solutions estimates that approximately \$1.1 million of direct acquisition costs will be incurred in connection with the acquisition. Furthermore, upon completion of the merger, certain of Genomic Solutions' officers will receive one-time payments aggregating \$830,000. The liability associated with these costs has been included in the estimated current liabilities assumed by Harvard Bioscience.

The unaudited pro forma condensed combined statement of operations for the year ended December 31, 2001 and the six months ended June 30, 2002 give effect to the acquisition as if the transaction had occurred as of January 1, 2001. The unaudited pro forma condensed combined balance sheet gives effect to the acquisition as if the transaction had occurred on June 30, 2002. The estimated allocation of estimated purchase price is based on a preliminary independent appraisal and management estimates. Below is a table of the estimated purchase price allocation, including estimated direct acquisition costs of \$730,000, and the assumption of Genomic Solutions' estimated direct acquisition costs of \$1.1 million, and one-time payments to certain officers aggregating \$830,000, net of cash acquired of \$5.3 million, in thousands:

Current assets	\$	19,668
Property, plant & equipment		2,650
Purchased intangibles with definite lives		5,474
In-process research & development		1,637
Trademarks		301
Goodwill		3,639
Other assets		1,361
Deferred tax assets		2,100
Current liabilities		(13,614)
Deferred tax liabilities		(2,100)
Other liabilities		(44)
		21,072
	\$	21,072

Note 2. Pro Forma Adjustments

The pro forma adjustments are based on an estimated allocation of purchase price to the assets to be acquired and liabilities to be assumed based on the consolidated balance sheet of Genomic Solutions as of June 30, 2002.

(A) Amortization of purchased intangibles with definite lives in the unaudited pro forma condensed combined statements of operations for the year ended December 31, 2001 and the six months ended June 30, 2002 is estimated to be \$555,000 and \$277,000, respectively. An adjustment has

been included to reflect this estimate. The estimated fair value, in thousands, of intangible assets at June 30, 2002, with estimated lives is as follows:

	Amount	Period
	(in thousands)	
Acquired technologies	\$ 5,474	7-10 years
Trademarks	301	Indefinite
	\$ 5,775	
Goodwill	3,639	Indefinite
Total intangible assets	\$ 9,414	

Amount	Period
_____	_____

The preliminary estimated value assigned to acquired technologies was determined by using a discounted cash flow approach which measures what a buyer will be willing to pay currently for the future cash stream potential of existing technologies. Forecasts of future cash flows were based on management's best estimate of expected market conditions and expected courses of action.

The preliminary estimated value assigned to the Genomic Solutions trade name and trademark was determined by applying the income approach, using the relief from royalty methodology, which estimates the royalty income that would be negotiated at an arms-length transaction if the asset were licensed from a third party. This method assumed that the acquired trademark and trade name had value to the extent that Harvard Bioscience was relieved of the obligation to pay royalties for the benefits received from the trademark and trade name.

(B) Adjustment to reflect the cash paid and the common stock issued in connection with the acquisition of Genomic Solutions, the elimination of the stockholders equity accounts of Genomic Solutions, and the allocation of purchase price to the estimated fair value of assets acquired and liabilities assumed as shown in Note 1.

(C) Adjustment to reflect the estimates for accruals of direct acquisition and registration costs of \$730,000 and \$770,000, respectively.

(D) Adjustment to reflect the effects of estimated acquired in-process research and development expense of approximately \$1.6 million included in accumulated deficit, see (E).

The estimated purchase price allocated to in-process research and development represents the estimated fair value of research and development projects that have no alternative future use. The estimated value assigned to in-process research and development was determined by applying a discounted cash flow approach, which considered estimations of the cost to develop in-process research and development into commercially and technologically feasible products, the percentage of completion at June 30, 2002 and estimations of the resulting net-risk adjusted cash flows from the projects and discounting their net cash flows to their present values. The forecasts used by management were based on assumptions that management believes are reasonable, but which are inherently uncertain and unpredictable.

(E) As required by Article 11 of Regulation S-X, the unaudited pro forma condensed combined statement of operations excludes material non-recurring charges that result directly from the merger and that will be recorded within twelve months of the merger. Accordingly, estimated in-process research and development expense of approximately \$1.6 million related directly to the merger was not included in the unaudited pro forma combined condensed statements of operations.

(F) Adjustment to reflect the estimated income tax effects of the merger, including the assumed realization of certain acquired tax benefits, assuming the companies were combined as of January 1, 2001.

(G) Upon completion of the merger, certain of Genomic Solutions officers will receive one-time payments. These one-time costs are estimated to aggregate \$830,000, and the adjustment is reflected as an acquisition cost.

(H) The management of Genomic Solutions estimates that it will incur approximately \$1.1 million of direct acquisition costs. This adjustment reflects the liability incurred as a direct result of the merger.

Note 3. Pro Forma Net Loss Per Share

The unaudited basic and diluted net loss per share is based on the weighted average number of Harvard Bioscience common shares outstanding prior to the merger plus the number of shares of Harvard Bioscience common stock issued upon the closing of the merger to existing Genomic Solutions security holders. For the year ended December 31, 2001 and the six months ended June 30, 2002, the combined unaudited pro forma diluted earnings per share does not include common stock equivalents resulting from stock options because to do so would have been anti-dilutive.

INFORMATION ABOUT GENOMIC SOLUTIONS

Description of Business

Genomic Solutions develops, manufactures and sells instruments, consumables and software for the life sciences research and drug discovery markets. Its market focus is based on three key areas: genomics, proteomics and microscale liquid handling. These areas comprise three of the major technologies used by researchers in studying disease and developing new drugs. Genomic Solutions' products allow researchers to perform high volume experiments, and analyze the resultant data, at lower costs and in less time than with traditional techniques. Genomic Solutions' products are distributed and sold to pharmaceutical and biotechnology companies, government agencies, academic institutions and private research organizations throughout the world.

The executive office of Genomic Solutions is located at 4355 Varsity Drive, Suite E, Ann Arbor, Michigan 48108 and its telephone number is (734) 975-4800.

Recent Developments

Acquisition

In December 2001, Genomic Solutions acquired Cartesian Technologies, Inc. through a wholly owned subsidiary. This acquisition extends Genomic Solutions' capabilities into high throughput screening and dispensing and strengthens its position as a global provider of comprehensive DNA analysis and drug discovery solutions. As consideration for the transaction, Genomic Solutions issued approximately 6,814,561 shares of common stock and cash to Cartesian's stockholders. The cash consideration was \$2.5 million less certain non-trade payable debts and transaction expenses of Cartesian, or approximately \$1.8 million. As a result of the transaction, former Cartesian stockholders acquired common stock or options to acquire common stock equal to approximately 23% of Genomic Solutions' outstanding common stock at the time of the transaction.

Restructuring

In September 2001, Genomic Solutions announced a restructuring of its operations to implement significant cost savings and to accelerate its plan to achieve profitability. As part of the restructuring, it closed its Lansing, Michigan manufacturing facility and relocated those operations to its headquarters in Ann Arbor. The restructuring reduced Genomic Solutions' workforce in the United States and the United Kingdom by approximately 25%. In connection with the Cartesian acquisition, Genomic Solutions closed its San Diego, California sales office and consolidated these activities with Cartesian's Irvine, California operations and Cartesian has closed its United Kingdom office and moved its operations to Genomic Solutions' Huntingdon facility.

As part of the restructuring, Genomic Solutions also sold certain assets used in connection with its proteomic contract research services business to Proteomic Research Services, Inc., a newly formed company owned and controlled by former employees of Genomic Solutions who were actively involved in providing proteomic-related services. Genomic Solutions owns 19.9% of Proteomic Research Services and has agreed to contract with it for assistance with certain proteomic projects. In return, Proteomic Research Services has agreed to purchase Genomic Solutions' instruments and consumables to the extent such items are required in connection with the operations of Proteomic Research Services.

In July 2002, Genomic Solutions announced a further restructuring of its operations. The restructuring is expected to result in a reduction of Genomic Solutions' operating cost structure. As part of the restructuring, Genomic Solutions reduced its workforce by approximately 30%, discontinued certain products and will close certain facilities.

101

Relationship with Proteometrics

In February 2002, Genomic Solutions entered into an exclusive worldwide software license with Proteometrics, LLC. Under this relationship, Genomic Solutions obtained the exclusive right to develop, support and license the Proteometrics bioinformatic software product line.

Genomic Solutions' Strategy

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

The past decade has witnessed tremendous scientific and technological breakthroughs in the study of genes and proteins and their role in determining the biological pathways of disease. Genomic and DNA microarray technology has allowed for large-scale studies of genes and their function. With the sequencing of the human genome and other organisms, attention is also focusing on proteomic technologies that allow researchers to identify, quantify and characterize proteins as well as study their role as potential drug targets or therapeutic agents. In addition, advances in automation have allowed for screening of potential drug candidates and micro-scale dispensing of biological compounds on a high throughput basis. Genomic Solutions' strategy is to participate in life science research and the drug discovery process by providing the systems, instruments, software and consumables used by researchers without assuming the inherent risks of drug development. Key elements of Genomic Solutions' strategy include:

Lead, proteomic, microscale liquid handling and DNA microarray instrumentation markets. Genomic Solutions intends to continue to strengthen its global position as a leading provider of tools for the DNA microarray, proteomics and microscale liquid handling markets. Genomic Solutions' product portfolio emphasizes instruments, software and consumables which are sold as part of its fully integrated systems, but have the capability to be used individually or in conjunction with components produced by other manufacturers.

Emphasize consumables complementary with Genomic Solutions instruments to generate recurring revenue. Genomic Solutions views consumable products that may be used in connection with its instruments as a source of valuable recurring revenue. Genomic Solutions will continue to develop and supply reagents, gels and other consumables for proteomics and is exploring consumable opportunities that complement its high speed screening and dispensing business.

Provide bioinformatic software solutions to analyze data generated by high throughput instruments. High throughput research generates significant amounts of data. Genomic Solutions believes the life science marketplace is demanding software solutions that enable instruments to communicate directly with one another and with the lab's informatics infrastructure. Genomic Solutions will continue to develop new sophisticated software that integrates with and enhances the value of its instruments by managing the data flow and assisting in data analysis.

Enhance product offerings through internal development and technology acquisitions. In order to stay on the cutting edge of technology, Genomic Solutions will continue to pursue strategic acquisitions, licensing and alliances that enhance its product offerings, build on its internal capabilities, and add to and support its growing intellectual property portfolio.

Genomic Solutions' Products

Genomic Solutions' products are aimed at three key areas in the life sciences market: genomics, proteomics, and microscale liquid handling.

Genomic Solutions' Product Offerings

Genomic Solutions' products in the genomics and functional genomics area are based principally on DNA microarray technology. Microarraying involves the depositing of small volumes of a sampled solution, such as DNA onto a glass slide or other substrate. Microarrays are used to compare gene

102

expression profiles of particular cell or tissue samples (e.g. compare diseased to normal cells) and to study the effects of different chemical and biological environments on gene function and expression.

Genomic System Product Offerings

Genomic Solutions' genomic system offering includes a broad line of instruments, consumables and software which create, process and analyze microarrays in a high throughput environment. Genomic Solutions' genomic and functional genomic offerings, marketed as part of the integrated GeneTAC Biochip System, include the following products which are sold on both an integrated and individual basis:

GeneTAC G3 Library Management System: The G3 is a high end instrument designed for DNA colony picking, library management, gridding and microarray production. This versatile instrument allows users to substitute different tool heads to

undertake multiple tasks. Genomic Solutions has sold approximately 180 G3's or its predecessor system since 1998.

GeneTAC Microarrays. The acquisition of Cartesian Technologies has allowed Genomic Solutions to expand its microarray product line to include new smaller footprint and tabletop arrayers. Genomic Solutions' microarrayers include the MicroSys , PixSys , ProSys and MegaSys microarraying instruments. These high precision robots offer different capacity and configurations depending on the needs of the particular researcher.

Hybridization. Genomic Solutions' patented GeneTAC HybStation is the first automated system for hybridizing microarrays. The HybStation provides increased reproducibility of hybridization and precision control, resulting in better hybridization specificity and more reliable data.

Scanning. The GeneTAC UC4 Microarray Scanner is a compact, easy to use microarray scanner that combines simplicity with performance. The recently introduced GeneTAC UC4x4 MicroarrayScanner is a walkaway system for high throughput scanning of microarrays. Both of these microarray scanners are shipped with software to provide seamless workflow between scanning and analysis.

Software. The GeneTAC Integrator Software automates the identification and quantification of microarray spots and fully integrates data from the GeneTAC Biochip System instrument line. The GeneTAC Array IQ Microanalysis Software is an interactive software package for the visualization, analysis, and mining of DNA expression data.

Proteomic Product Offerings

Genomic Solutions' product offerings in the proteomic area are designed for large scale protein identification and characterization. Proteomics involves the use of various technologies to characterize the identity, quantity, localization, function and structure of proteins present in a given biological sample. The most common approach used in high throughput proteomics is to prepare a sample for separation by 2D gel electrophoresis and to identify the proteins using mass spectrometry. Genomic Solutions' strategy is to be the premier supplier of systems for automating all steps in the protein isolation and identification process with the exception of the mass spectrometer. Rather than compete with major mass spectrometer manufacturers, Genomic Solutions' instrumentation, consumables and software are designed to work with mass spectrometer instruments from any major supplier to form a seamless system.

Newer techniques involve the use of protein chips to identify protein interactions and the use of complex instruments to determine the physical structure of proteins. Genomic Solutions is increasing its emphasis on the use and applications of protein chips and has validated its GeneTAC Biochip System's ability to produce, process, image and analyze protein chips. Another research area with

103

increased market attention is protein crystallography. This technique allows researchers to use small volume dispensing to form protein crystals and ultimately determine protein structure. Genomic Solutions' high throughput dispensing products are being increasingly used for protein crystallization applications.

Genomic Solutions' core proteomic applications are marketed and sold as part of the Investigator Proteomic System which includes the following offerings sold on an integrated and individual basis:

2-D Electrophoresis System. The Investigator 2-D Electrophoresis System is a laboratory system for creating 2-D gels. It includes a gel apparatus, second dimension running tank, power supply, chiller and a starter kit of consumables.

2-D Gel Imaging and Analysis. Genomic Solutions' ProImage product is a complete gel imaging system featuring visible and UV light capability through a 12-bit cooled CCD camera. The accompanying HT Analyzer software allows users to analyze gels, select protein spots and create a pick list for spot excision.

Protein Picking. The Investigator ProPic Robotic Workstation is an automated system for dependable spot excision from 2-D gels. System features include the ability to generate a pick list automatically or by point and click methods.

Protein Digestion. Genomic Solutions' Investigator ProGest completely automates protein digestion in gel plugs, from washing steps to enzyme addition and thermal incubation. The system offers high throughput processing capabilities and built in timers allowing for overnight digestion.

MALDI Target Preparation. Genomic Solutions' Investigator ProMS is an automated system for desalting, concentrating and spotting samples onto MALDI targets.

Digestion and Spotting. The Investigator ProPrep is a fully integrated proteomic system used for automated digestion and spotting. The system uses patented technology to free researchers from tedious, error-prone manual processes and enables more efficient use of expensive labor in pharmaceutical and private labs.

Software. The Investigator Protein Warehouse software integrates data from Genomic Solutions' instruments in a database that allows users to search for changes in protein abundance and expression. In addition, with Genomic Solutions' exclusive license of Proteometrics, LLC's proteomic software offerings, it now offers a suite of programs enabling automated analysis, storage and mining of mass spectral data, either as individual standalone components or integrated into an overall software solution. The software allows the user to interpret mass spectra, peak lists and database search results produced by any hardware manufacturer, search engine or database provider. When coupled with Protein Warehouse, the software package enables complete data storage and tracking from sample ID data to mass spectra database search results.

Microscale Liquid Handling Offerings

Genomic Solutions' product offerings for microscale liquid handling allow for the high speed screening of potential drug candidates for biological activity. Genomic Solutions' dispensing instrumentation is based on its patented SynQuad and patent pending Hummingbird technologies. SynQuad combines the high-precision displacement capabilities of syringe pumps with the high speed actuation of micro-solenoid valves. The Hummingbird technology is based on the use of small capillaries to aspirate a fixed volume and then using a pressure pulse to eject the fluid from the capillaries to provide a non-contact dispensing action. The result is the ability to perform high-volume

104

non-contact dispensing of small biological materials with exceptional accuracy. Genomic Solutions' high throughput screening and microscale dispensing offerings include the following:

Hummingbird. Hummingbird is a dispensing system that provides simultaneous 96 and 384 channel non-contact dispensing of reagents used for assembling assays with a proprietary patent-pending capillary technology. This technology was developed by and acquired from GlaxoSmithKline. These systems are used for reformatting reagent libraries from 96 or 384 microtiter plates to 96, 384 or 1536 assay plates. The reagent libraries can be small molecules, genomic materials, proteins, and other biological materials.

SynQuad. SynQuad is a programmable, non-contact dispensing system that provides high speed dispensing of reagents onto a wide range of substrates including microtiter plates, glass slides, and membranes. SynQuad is often used for non-contact high speed dispensing of common reagents, such as cells and buffers, into assay microtiter plates. It is particularly effective in low volume formats where the assay volume is less than 20 microliters. Another important SynQuad application is for arraying various types of library reagents including small molecules, genomic materials and proteins. The SynQuad can be incorporated onto the different motion systems such as MicroSys, PreSys and ProSys.

Marketing, Sales and Support

Marketing

Genomic Solutions markets its products to pharmaceutical and biotechnology companies, government agencies, universities and private research institutions. Genomic Solutions' marketing strategy emphasizes its integrated systems approach, sophisticated instrumentation, proprietary consumables and product support. Genomic Solutions markets its products through direct sales calls, advertising, marketing materials, participation in international, national and regional trade shows, on its website at www.genomicsolutions.com and through distributor

partners.

In January 2002, Genomic Solutions modified its strategic sales and marketing alliance with PerkinElmer, Inc. PerkinElmer previously had exclusive responsibility for marketing and distribution of Genomic Solutions' products internationally, excluding Japan. Under the modified arrangement, PerkinElmer has the non-exclusive right to market and sell most of Genomic Solutions' products outside of the United States and Japan and non-exclusive rights to distribute limited products in the United States and Japan. Genomic Solutions is currently enhancing its direct distribution efforts and undertaking negotiations with other distributors to supplement the efforts of PerkinElmer in select foreign markets.

Sales

Genomic Solutions maintains facilities and direct sales forces in the United States, Japan and Europe. It will continue to invest in expanding its sales presence in these markets. Product sales in these markets generated approximately 70% of Genomic Solutions' revenues during 2001.

PerkinElmer was the exclusive distributor of Genomic Solutions' products outside of the United States and Japan from December 1999 until January 2002, except for the United Kingdom, where they were the exclusive distributor from April 2001 to January 2002. For the year ended December 31, 2001 and for the six months ended June 30, 2002, sales generated by PerkinElmer accounted for approximately 30% and 12.2% of Genomic Solutions' revenue, respectively.

Support

Genomic Solutions considers product service and support to be a critical component of its growth strategy. It believes its existing customers provide opportunities for additional revenue through the

105

purchase of service contracts, software maintenance and support, product upgrades, training, consumables and additional instrument purchases and positive referrals. Service and support activities are conducted by in-house and field service personnel in the United States, certain European countries and Japan, and by PerkinElmer and other distributors in other markets.

Research and Development

Research and development is an essential component of Genomic Solutions' strategy to maintain and strengthen its global position in DNA microarray, proteomic and high throughput screening systems. As of August 13, 2002, Genomic Solutions had 23 employees working in research and development. In 2001, Genomic Solutions' research and development expenditures were \$6.8 million, representing 21.3% of total operating expenditures. As part of its restructuring initiatives, Genomic Solutions anticipates that research and development expenditures in 2002 will decrease when measured as a percentage of sales.

Genomic Solutions' research and development activities are focused on product development, including improvements to existing products and development of new products or applications that capitalize on its expertise. Particular areas of focus with respect to genomic products include a lower-cost hydration station and further integration and automation of the GeneTAC Biochip System. In proteomics, addressing the needs for higher throughput are being emphasized in new product development. In the areas of microscale dispensing, Genomic Solutions is focusing on proprietary non-contact liquid handling systems and emerging applications, such as protein crystallization. Instrumentation and consumables are actively being developed to augment the current product line.

Competition

The markets for Genomic Solutions' products are competitive and Genomic Solutions expects the intensity of competition to increase. Many of Genomic Solutions' existing competitors, alone or in conjunction with strategic partners, have greater financial, operational, sales, marketing and research and development experience than it does. These competitors and others may have developed products or technologies of which Genomic Solutions is unaware or may in the future develop technologies or products that render Genomic Solutions' products obsolete or non-competitive.

Genomic Solutions' GeneTAC system consists primarily of microarraying instruments, automated hybridization instruments and scanners. Primary competitors in the microarraying instrument market are GeneMachines, Genetix, Ltd., and BioRobotics, Ltd. (now owned by Apogent Technologies Inc.). Genomic Solutions' primary competitor in the automated hybridization area is Amersham Biosciences. Finally, primary competitors in the scanner business are Axon Instruments, Inc. and PerkinElmer, Inc. through its acquisition of Packard Biosciences.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Genomic Solutions' Investigator Proteomic System consists primarily of instruments for creating 2-D gels, imaging and analyzing gels, picking proteins from gels, digesting proteins and preparing protein samples for mass spectrometry. Primary competitors in the proteomic market are Bio-Rad Laboratories, Inc. and Amersham Biosciences.

Finally, primary competitors in the high throughput screening and material dispensing business are CyBio, Tecan AG, Robbins Scientific (now owned by Apogent Technologies), PerkinElmer, Inc. (Packard Bioscience Division), and Gilson, Inc.

Genomic Solutions' competitors may succeed in producing products that employ superior technologies or processes, obtain patents for these products or market their products more effectively than Genomic Solutions markets its products. Genomic Solutions believes its ability to compete effectively is dependent, in part, on its ability to continue to improve the technologies underlying its

106

products and systems to enable researchers to conduct gene expression and proteomic research with greater throughput and reproducibility at lower cost.

Manufacturing

Genomic Solutions has three production facilities. Most of Genomic Solutions' proteomic instrumentation and automated hybridization systems manufacturing occurs in its Huntingdon, England facility, microscale liquid handling equipment production occurs in its Irvine, California facility and imaging systems, application software, and consumable production occurs in its Ann Arbor, Michigan facility.

For its instrumentation products, Genomic Solutions focuses on manufacturing proprietary sub-assemblies, including electronic modules, mechanical fixtures, and optical assemblies, as well as final instrument assembly and testing. Genomic Solutions contracts labor intensive sub-assemblies of a non-proprietary nature to third party suppliers. This strategy minimizes labor overhead and maximizes quality control and space utilization. Genomic Solutions either manufactures critical components or obtains them from a limited number of third-party manufacturers with which it has developed strong relationships. For non-critical components, Genomic Solutions uses multiple redundant third-party suppliers to guard against part shortages and component cost increases. Purchasing and inventory is managed using a computerized material resource planning system that is linked via software to Genomic Solutions' accounting system.

Intellectual Property

Genomic Solutions relies on a combination of patents, copyrights, trademarks and trade secret laws, as well as confidentiality provisions in its contracts, to establish and protect its proprietary technologies and products.

Genomic Solutions currently holds six U.S. patents and one foreign patent. These patents generally relate to electrophoretic, imaging, proteomic processing, high throughput screening and hybridization technologies. In addition, Genomic Solutions' currently has on file 19 U.S. patent applications, six U.S. provisional patent applications, two Patent Cooperation Treaty patent applications, and 20 foreign patent applications. These applications generally relate to robotic, imaging, bioinformatic and microfluidic technologies incorporated into Genomic Solutions' products and may not result in issued patents. Further, issued patents may not provide Genomic Solutions with significant protections.

Generally, United States patents have a term of 17 years from the date of issue for patents issued from applications filed with the U.S. Patent Office prior to June 8, 1995, and 20 years from the application filing date or earlier claimed priority date in the case of patents issued from applications filed on or after June 8, 1995. Patents in most other countries have a term of 20 years from the date of filing the patent application. Genomic Solutions' issued United States patents will expire between 2007 and 2020. Genomic Solutions' success depends to a significant degree upon its ability to develop proprietary product technologies. It intends to continue to file patent applications as it develops new products and technologies.

Patents may provide a certain level of protection for intellectual property. However, the assertion of patent protection involves complex legal and factual determinations and is uncertain. In addition, the laws governing patentability and the scope of patent coverage continue to evolve, particularly in the areas of genomics. As a result, there can be no assurance that patents will issue from any patent applications. The scope of any of Genomic Solutions' issued patents may not be sufficiently broad to offer meaningful protection. In addition, Genomic Solutions' patents or patents licensed to it may be successfully challenged, invalidated, circumvented or unenforceable so that those patent rights would not create an effective competitive barrier. Moreover, the laws of foreign countries may not protect

107

proprietary rights to the same extent as do the laws of the United States and Canada. In light of these factors, Genomic Solutions' intellectual property positions bear some degree of uncertainty.

Genomic Solutions also relies in part on trade secret protection of its intellectual property. It attempts to protect its trade secrets by entering into confidentiality agreements with third parties, employees and consultants. Employees and consultants also sign agreements requiring that they assign to Genomic Solutions their interests in patents and copyrights arising from their work for Genomic Solutions. However, it is possible that these agreements may be breached or invalidated and if so, there may not be an adequate corrective remedy available. Despite the measures taken to protect intellectual property, there can be no assurance that third parties will not breach the confidentiality provisions in contracts or infringe or misappropriate patents, copyrights, trademarks, trade secrets and other proprietary rights. In addition, there can be no assurance that third parties will not independently discover or invent competing technologies or reverse engineer Genomic Solutions' trade secrets, or other technology. Therefore, the measures taken to protect Genomic Solutions' proprietary rights may not be adequate.

Genomic Solutions copyrights its software, software source code, applications protocols, operator and service manuals and other documents.

Although Genomic Solutions is not a party to any legal proceedings with regard to intellectual property rights, in the future, third parties may file claims asserting that Genomic Solutions' technologies or products infringe on or misappropriate their intellectual property. Genomic Solutions cannot predict whether third parties will assert these claims against it or against the licensors of technology licensed to it, or whether those claims will harm its business. If it is forced to defend against such claims, whether they are with or without merit, whether they are resolved in favor of or against it or its licensors, Genomic Solutions may face costly litigation and diversion of management's attention and resources. As a result of these disputes, Genomic Solutions may have to develop costly non-infringing technology, or enter into licensing agreements. These agreements, if necessary, may be unavailable on acceptable terms, or not at all, which could seriously harm Genomic Solutions' business or financial condition.

Government Regulation

Genomic Solutions is not presently subject to direct governmental regulation other than the laws and regulations generally applicable to businesses in the jurisdictions in which it operates.

Employees

As of September 16, 2002, Genomic Solutions had 123 full-time employees, 21 of whom hold Ph.D. or other advanced degrees. Approximately 18 employees are engaged in research and development, 43 in marketing, sales and support, 40 in manufacturing and 22 in intellectual property, finance and other administrative functions. None of Genomic Solutions' employees are represented by a labor union. Genomic Solutions believes its relationship with its employees is good.

Legal Proceedings

From time to time, Genomic Solutions is involved in routine legal matters that arise in the ordinary course of its business. Genomic Solutions is not currently a party to any such matters that it believes will have, individually or in the aggregate, a material adverse effect on its business, financial condition, or results of operations.

Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

On May 22, 2002, the board of directors of Genomic Solutions and its audit committee dismissed Arthur Andersen LLP as its independent public accountants and engaged Ernst & Young LLP to serve as its independent public accountants for the fiscal year 2002. Arthur Andersen LLP's reports on Genomic Solutions consolidated financial statements for the years ended 2001 and 2000 did not contain an adverse opinion or disclaimer of opinion, nor were they qualified or modified as to uncertainty, audit scope or accounting principles. During the years ended December 31, 2001 and 2000 and through May 22, 2002, there were no disagreements with Arthur Andersen LLP on any matter of accounting principle or practice, financial statement disclosure, or auditing scope or procedure which, if not resolved to Arthur Andersen LLP's satisfaction, would have caused them to make reference to the subject matter in connection with their report on Genomic Solutions' consolidated financial

statements for such years; and there were no reportable events as defined in Item 304(a)(1)(v) of Regulation S-K. During the years ended December 31, 2001 and 2000 and through the date of the board of directors' decision, Genomic Solutions did not consult Ernst & Young LLP with respect to the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered on Genomic Solutions' consolidated financial statements, or any other matters or reportable events as set forth in Items 304(a)(2)(i) and (ii) of Regulation S-K.

On July 23, 2002, Ernst & Young LLP notified Genomic Solutions that it was resigning as Genomic Solutions' independent public accountants as of that date. Ernst & Young LLP indicated that its resignation was not in any way related to a disagreement on any matter of Genomic Solutions' accounting principles or practices, financial statement disclosure or auditing scope or procedure. Ernst & Young LLP informed Genomic Solutions that it was resigning solely because, as a result of Genomic Solutions' recently announced merger with Harvard Bioscience, Ernst & Young LLP did not want to review a single quarter's financial statements that would be included in this proxy statement and prospectus and be dismissed when the transaction closed. Prior to its resignation, Ernst & Young LLP had not issued any reports or performed any review or audit procedures related to Genomic Solutions' financial statements. In addition, there were no "disagreements" or "reportable events" (as those terms are described in Items 304(a)(1)(iv) and (v) of Regulation S-K) during the period of Ernst & Young LLP's engagement.

On August 12, 2002, the board of directors of Genomic Solutions and its audit committee engaged KPMG LLP to serve as Genomic Solutions' independent public accountants for the fiscal year 2002. During the years ended December 31, 2001 and 2000 and through the date of the board's decision to engage KPMG LLP, Genomic Solutions did not consult KPMG LLP with respect to the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered on Genomic Solutions' consolidated financial statements, or any other matters or reportable events as set forth in Items 304(a)(2)(i) and (ii) of Regulation S-K.

Quantitative and Qualitative Disclosures about Market Risk

Interest Rates

The primary objective of Genomic Solutions' investment activities is to preserve capital until it is required to fund operations while at the same time maximizing the income received from investments without significantly increasing risk. To minimize this risk, Genomic Solutions maintains its cash and cash equivalents in money market funds. The average duration of all Genomic Solutions' investments in 2001 was less than 90 days. Due to the short-term nature of these investments, a 10% movement in market interest rates would not have a significant impact on the total value of Genomic Solutions' portfolio as of December 31, 2001.

109

Foreign currency rate fluctuations

The local currency for Genomic Solutions' subsidiary in the United Kingdom is the British pound sterling and the local currency for Genomic Solutions' subsidiary in Japan is the Japanese yen. Genomic Solutions has converted the British pound sterling and the Japanese yen to the U.S. dollar using the exchange rate in effect at the balance sheet date and has used the average exchange rate for the period for income statement items. The effects of conversion are recorded as a separate component of stockholders' equity. Genomic Solutions' agreement with PerkinElmer requires payment in U.S. currency. As a result, only business in the United Kingdom and Japan by Genomic Solutions' subsidiaries is conducted in foreign currencies. Exchange gains and losses are recorded using the actual exchange differences on the date of the transaction. Genomic Solutions has not taken any action to reduce its exposure to changes in foreign currency exchange rates, such as options or futures contracts, with respect to transactions with foreign subsidiaries or customers. The net tangible assets of Genomic Solutions' British subsidiary were approximately \$7.8 million at December 31, 2001. A hypothetical 10% decrease in the value of the British pound sterling relative to the U.S. dollar would result in an unrealized foreign exchange translation loss of approximately \$781,000. The net tangible liabilities of Genomic Solutions' Japanese subsidiary were approximately \$213,000 at December 31, 2001. A hypothetical 10% increase in the value of the Japanese yen relative to the U.S. dollar would result in an unrealized foreign exchange translation loss of approximately \$21,000.

Foreign currency transaction gain (loss) resulting from product and service sales in foreign denominated currencies totaled approximately \$(257,000), \$(82,000), and \$113,000 in 2001, 2000 and 1999, respectively.

Inflation

Genomic Solutions does not believe that inflation has had a material impact on its business or operating results during the periods presented.

110

GENOMIC SOLUTIONS MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS OF GENOMIC SOLUTIONS

The following discussion of Genomic Solutions' financial condition and results of operations should be read in conjunction with Genomic Solutions' financial statements and the notes to those statements included elsewhere in this proxy statement and prospectus.

Overview

Genomic Solutions develops, manufactures and sells instruments, consumables and software for the life sciences research and drug discovery markets. Its market focus is based on three key high growth areas: genomics, proteomics and high throughput screening and dispensing systems. These areas comprise three of the major technologies used by researchers in studying disease and developing new drugs. Genomic Solutions' products allow researchers to perform high volume experiments, and analyze the resultant data, at lower costs and in less time than with traditional techniques. Genomic Solutions' products are distributed and sold to pharmaceutical and biotechnology companies, government agencies, academic institutions and private research organizations throughout the world.

Genomic Solutions has a limited history of operations, and it anticipates that its quarterly results will fluctuate for the foreseeable future due to several factors, including market acceptance of current and new products, the introduction of new products by competitors, the success of research and development projects and the timing of significant orders. Genomic Solutions' limited operating history makes it difficult or impossible to accurately predict future operations.

Results of Operations

Six months ended June 30, 2002 and 2001

Revenue

Revenue for Genomic Solutions increased \$3.9 million, or 44%, to \$12.7 million in the first six months of 2002 from \$8.8 million in the first six months of 2001. The increase in total revenue was primarily due to sales of Genomic Solutions' new high throughput screening products of \$5.3 million. This revenue reflects sales by Cartesian Technologies, Inc. of its high throughput screening instrumentation. This revenue increase was partially offset by a 15%, or \$694,000, decrease in revenue from Genomic Solutions' genomic product offerings primarily due to fewer unit sales of its GeneTAC G3 robotic workstation. Revenue from Genomic Solutions' proteomic instrumentation and related consumable products was flat during the first six months of 2002 as compared to the same period of 2001. Also offsetting Genomic Solutions' overall revenue increase year over year was the absence of proteomic research services revenue this year compared to \$284,000 last year as a result of the divestiture of its proteomic research services business in September 2001. The balance of Genomic Solutions' total revenue for the six months of 2002, approximately \$340,000, was derived from field service maintenance and sales of its discontinued legacy products for analyzing one dimensional separations of DNA and proteins. Revenue in this area decreased from \$733,000 for the same period in 2001.

Cost of revenue

Cost of revenue for Genomic Solutions increased \$1.7 million, or 34%, to \$6.7 million in the first six months of 2002 from \$5 million in the first six months of 2001. The increase in cost of revenue is primarily attributable to the 44%, or \$3.9 million, increase in revenue described above. Gross profit as a percentage of total revenue increased to 48% in the first six months of 2002 compared with 44% in the first six months of 2001. The increase in gross profit percentage was primarily due to cost savings as a result of completing Genomic Solutions' 2001 restructuring plan, which included consolidating

facilities and reduction in personnel and revenue from sales of proteomic analysis software exclusively licensed from Proteometrics, LLC.

Selling, general and administrative expenses

Selling, general and administrative expenses for Genomic Solutions increased \$379,000, or 5%, to \$7.3 million in the first six months of 2002 from \$6.9 million in the first six months of 2001. This increase is primarily due to approximately \$410,000 in amortization expense of intangible assets related to Genomic Solutions' acquisition of Cartesian Technologies, slightly offset by \$147,000 in goodwill amortization expense charged last year. Goodwill is no longer being amortized in 2002 as a result of the adoption of Statement of Financial Accounting

Standards ("SFAS") No. 142 "Goodwill and Other Intangible Assets." The increase in selling, general and administrative expenses is also partially attributable to increased compensation related to commissions and incentives earned in connection with the increase in revenue for the period.

Research and development expenses

Research and development expenses for Genomic Solutions decreased \$1.1 million, or 31%, to \$2.5 million in the first six months of 2002 compared to \$3.6 million in the first six months of 2001. This decrease is primarily due to a decrease of approximately \$513,000 in salaries and other employee related costs as a result of employing an average of 40 research and development personnel during the first six months of 2002 compared to an average of 48 in the first six months of 2001 and a decrease of approximately \$485,000 in Genomic Solutions' usage of outside contract labor and consultants and development materials. The reduction in research and development spending and personnel was primarily due to Genomic Solutions' 2001 restructuring activities which included the divestiture of its proteomic research services group of scientists.

Interest expense

Interest expense for Genomic Solutions decreased \$24,000 in the first six months of 2002 to \$57,000 from \$81,000 in the first six months of 2001. This decrease was primarily due to the repayment of long-term debt related to Genomic Solutions' capital fixed asset leased lines of credit in September 2001.

Interest income

Interest income for Genomic Solutions was \$107,000 in the first six months of 2002 as compared to \$834,000 in the first six months of 2001. The decrease year over year in interest income earned is primarily due to lower average cash and cash equivalent balances in 2002.

Loss on Impairment of Asset

In June 2002, Genomic Solutions determined that the value of its investment in Photonic Sensor Systems, Inc. preferred stock was impaired and recorded a write-down of \$500,000 to reduce this asset's estimated fair value to zero.

Other income

Other income, net of other expense for Genomic Solutions, increased \$122,000 to net income of \$199,000 in the first six months of 2002 from net income of approximately \$77,000 in the first six months of 2001. This increase is primarily due to an increase in foreign currency gain in the first quarter of 2002.

Benefit from income taxes

Genomic Solutions incurred net operating losses in the six months ended June 30, 2002 and 2001, and consequently, it did not pay any federal income taxes. At December 31, 2001, Genomic Solutions had available net operating loss carryforwards of approximately \$42.9 million, which can be utilized to offset future taxable income. These net operating loss carryforwards expire between 2010 and 2021. Additionally, utilization of net operating loss carryforwards are limited under Section 382 of the Internal Revenue Code due to ownership changes, as defined by Section 382, that occurred in 1997 and as a result of Genomic Solutions' initial public offering completed in May 2000. These and other deferred income tax assets are fully reserved by a valuation allowance due to historical operating losses. Realization of deferred tax assets is dependent on future earnings, if any, the timing and amount of which are uncertain. Accordingly, valuation allowances in amounts equal to the deferred tax assets have been established to reflect these uncertainties.

Recent accounting pronouncements

In June 2001, the Financial Accounting Standards Board ("FASB") issued Statements of Financial Accounting Standards ("SFAS") No. 141, "Business Combinations," and SFAS No. 142, "Goodwill and Other Intangible Assets." These pronouncements amend the accounting for business combinations, goodwill, and other intangible assets. SFAS No. 141 eliminates the pooling-of-interests method of accounting for business combinations and further clarifies the criteria to recognize intangible assets separately from goodwill. The requirements of SFAS No. 141 are effective for any business combination completed after June 30, 2001. Upon adoption of SFAS No. 142 goodwill and other indefinite-lived assets are no longer amortized, but are subject to annual impairment reviews, or more frequently, if events or circumstances

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

indicate there may be an impairment. The amortization provisions of SFAS No. 142 apply to goodwill and intangible assets acquired after June 30, 2001. With respect to goodwill and intangible assets acquired prior to July 1, 2001, companies are required to adopt the pronouncement in their fiscal year beginning after December 15, 2001. Genomic Solutions adopted SFAS 142 on January 1, 2002. During the second quarter of 2002, Genomic Solutions completed the implementation impairment review as required. Upon completing the review, Genomic Solutions concluded there was no impairment of goodwill at the time of implementation. The merger is an event under SFAS 142 that may indicate that the value of Genomic Solutions' goodwill is impaired as of July 17, 2002. Genomic Solutions will calculate the amount of impairment, if any, and will record an impairment charge, if necessary, in the third quarter of 2002. Total goodwill included in Genomic Solutions' Financial Statements was \$9.7 million at June 30, 2002 and \$9.6 million at December 31, 2001.

Total operating expenses for Genomic Solutions would have been reduced by approximately \$147,000 for the six months ended June 30, 2001 if goodwill had not been amortized. This would have resulted in a net loss of \$5.8 million or \$(0.23) per share for the six months ended June 30, 2001.

In June 2001, the FASB issued SFAS No. 143, "Accounting for Asset Retirement Obligations." SFAS No. 143 establishes standards associated with the retirement of tangible long-lived assets and the associated asset retirement costs. This statement is effective for financial statements issued for fiscal years beginning after June 15, 2002. Genomic Solutions has not yet assessed the impact of this standard on our financial statements, but it does not expect the impact to be material.

In August 2001, the FASB issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS No. 144 supersedes SFAS No. 121, although it retains the fundamental principles of how to measure the impairment of assets held for use and assets to be disposed of by sale. It requires that long-lived assets to be disposed of other than by sale be considered held and used until disposed of. It also provides new guidance for using a probability-weighted approach for measuring future cash flows when there are alternative courses of action. This statement is effective for financial

113

statements issued for years beginning after December 15, 2001. On January 1, 2002, Genomic Solutions has adopted SFAS No. 144.

The Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standard (SFAS) No. 145, "Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections," effective for fiscal years beginning May 15, 2002 or later that rescinds FASB Statement No. 4, "Reporting Gains and Losses from Extinguishment of Debt," FASB Statement No. 64, "Extinguishments of Debt Made to Satisfy Sinking-Fund Requirements," and FASB Statement No. 44, "Accounting for Intangible Assets of Motor Carriers." This Statement amends FASB Statement No. 4 and FASB Statement No. 13, "Accounting for Leases," to eliminate an inconsistency between the required accounting for sale-leaseback transactions. This Statement also amends other existing authoritative pronouncements to make various technical corrections, clarify meanings, or describe their applicability under changed conditions. Genomic Solutions does not believe the impact of adopting SFAS No. 145 will have a material impact on its operations.

In July 2002, the FASB issued Statement No. 146, "Accounting for Costs Associated with Exit or Disposal Activities." Statement No. 146 is based on the fundamental principle that a liability for a cost associated with an exit or disposal activity should be recorded when it (1) is incurred, that is, when it meets the definition of a liability in FASB Concepts Statement No. 6, "Elements of Financial Statements," and (2) can be measured at fair value. The principal reason for issuing Statement No. 146 is the Board's belief that some liabilities for costs associated with exit or disposal activities that entities record under current accounting pronouncements, in particular EITF Issue 94-3, do not meet the definition of a liability. Statement No. 146 nullifies EITF Issue 94-3; thus, it will have a significant effect on practice because commitment to an exit or disposal plan no longer will be a sufficient basis for recording a liability for costs related to those activities. Statement No. 146 is effective for exit and disposal activities initiated after December 31, 2002. Early application is encouraged; however, previously issued financial statements may not be restated. An entity would continue to apply the provisions of EITF Issue 94-3 to an exit activity that it initiated under an exit plan that met the criteria of EITF Issue 94-3 before the entity initially applied Statement No. 146. Genomic Solutions does not believe that its adoption of this statement on January 1, 2003 will have a material impact on its operations.

Years ended December 31, 2001 and 2000

Revenue

Revenue decreased \$2.2 million, or 12%, to \$16.8 million in 2001 from \$19.1 million in 2000. The decrease in total revenue was due to a \$3.2 million decline in instrumentation sales to \$14.5 million in 2001 from \$17.7 million in 2000. Revenue increased \$1.3 million, or 19% in the United States, and decreased \$3.5 million, or 29%, in international markets. During 2001, PerkinElmer was Genomic Solutions' exclusive distributor in international markets with the exception of Japan, where revenues decreased \$1.6 million, or 34%. Management believes that on an

aggregate level this international revenue decrease is attributable to (1) market shifts in the genomic area discussed below; (2) differences, including litigation, with Genomic Solutions' distribution partner, PerkinElmer, all of which have been satisfactorily resolved; (3) a shortfall in expected PerkinElmer revenue because of PerkinElmer internal reorganization; and (4) general global economic conditions which have resulted in a slowdown or postponement of large capital equipment purchases. With respect to PerkinElmer, management believes that PerkinElmer will remain an important and productive distribution partner and that the revised distribution relationship with PerkinElmer that converts PerkinElmer to a non-exclusive distributor is beneficial for both companies. Genomic Solutions' revised distribution relationship with PerkinElmer allows Genomic Solutions to retain the benefits of PerkinElmer's world-wide distribution force in 2002 while pursuing alternative distribution channels to supplement PerkinElmer's efforts in various foreign markets.

The largest area of Genomic Solutions' revenue decline was in sales of genomic instrumentation. Sales of genomic instruments decreased by \$3.4 million in 2001 to \$7.6 million in 2001 from \$11 million in 2000. The revenue decline is attributable primarily to a 31% decrease in sales of Genomic Solutions' GeneTAC G3 Library Management System to 31 units sold in 2001 from 45 units sold in 2000. Genomic Solutions believes the decrease in G3 sales is the result of two factors: (i) a significant reduction in demand for instrumentation to "feed" high throughput DNA sequencers with the completion of the Human Genome Project; and (ii) a shift from using self-manufactured cDNA libraries for DNA microarray production to printing arrays using purchased cDNA libraries or oligonucleotides. Genomic Solutions expects G3 sales to remain flat or decrease in 2002, particularly in the United States. However, Genomic Solutions believes the genomic market, including DNA microarray system sales, will continue to grow and represent a significant portion of its sales. Genomic Solutions intends to pursue these market opportunities by focusing on sales of smaller benchtop arrayers, including the microarray product line obtained in the Cartesian Technologies acquisition, and through new and improved products, such as the Hyb4 hybridization station and UC-4 scanner.

Revenue from sales of Genomic Solutions' proteomic instrumentation was down \$197,000 in 2001 to \$5.9 million compared to \$6.1 million in 2000. Despite this decline, Genomic Solutions believes that the proteomics market will continue to grow, and that its new products, like the ProPrep automated digestion and spotting system, and its exclusive license of Proteometrics, LLC software will allow it to expand its market share in the proteomics area. The balance of Genomic Solutions' instrumentation revenue was from sales of products for documenting and analyzing one-dimensional separations of DNA, which were discontinued in 2000 in all markets except Japan, and which were flat in 2001 compared to 2000. The revenue decreases described above were partially offset by an increase in consumables and services revenue. Revenue from consumables and services increased approximately \$944,000, or 69%, to \$2.3 million in 2001 from \$1.4 million in 2000. Genomic Solutions' 2001 revenue also included \$384,000 in instrumentation sales of its high throughput screening products acquired from Cartesian Technologies. Cartesian Technologies' revenue represented less than one month's revenue and Genomic Solutions expects that sales of products acquired through the Cartesian Technologies acquisition will represent a material portion of Genomic Solutions' 2002 sales.

Cost of revenue

Cost of revenue increased \$2.4 million, or 26%, to \$11.8 million in 2001 from \$9.4 million in 2000. Cost of revenue in 2001 included a charge for \$1.2 million due to the disposal and markdown of inventory in connection with Genomic Solutions' restructuring plan initiated in September 2001. The increase in cost of revenue was also due to increased spending on product support and technicians which included employing an average of 46 production and assembly personnel in 2001 as compared to an average of 35 employees in 2000. Additionally, cost of revenue increased due to increased facilities costs as a result of operating for a full year in 2001 within Genomic Solutions' expanded robotic and fluidic handling production facility in Huntingdon, England. The number of employees involved in Genomic Solutions' manufacturing operations following both its restructuring initiative announced in September 2001 and the employees that joined it in connection with the acquisition of Cartesian Technologies in December 2001 was 49 at December 31, 2001.

Selling, general and administrative expenses

Selling, general and administrative expenses increased \$2.2 million, or 19%, to \$14.1 million in 2001 from \$11.9 million in 2000. Of this increase, approximately \$740,000 was attributable to increased professional, legal and litigation expenses incurred primarily as a result of business development activities including the acquisition of Cartesian Technologies and settlement of the PerkinElmer, Inc. lawsuit, approximately \$297,000 was due to salaries and other employee-related costs as a result of employing an average of 76 sales, marketing and administrative personnel during 2001 compared to an

average of 69 employees in 2000, approximately \$280,000 was attributable to increased advertising and promotional activities, approximately \$149,000 was due to director and officer insurance premiums for the period from May 2001 to December 2001, approximately \$229,000 was attributable to an increase in the reserve for bad debts, approximately \$64,000 was due to an increase in outside consulting services and the

remaining approximately \$458,000 was attributable to increased office and communication expenses and depreciation expense associated primarily with the additional personnel. At December 31, 2001, following implementation of its restructuring plan and the acquisition of Cartesian Technologies, Genomic Solutions had 72 employees engaged in sales, marketing and administration.

Research and development expenses

Research and development expenses increased \$1.2 million, or 21%, to \$6.8 million in 2001 compared to \$5.6 million in 2000. The majority of this increase, approximately \$889,000 was due to an increase in outside consulting services, patent costs, and license and development fees associated with various agreements entered into by Genomic Solutions in the most recent twelve months. The increase in development spending was also due to approximately \$252,000 in salaries and other employee related costs as a result of employing an average of 44 research and development personnel during 2001 compared to an average of 37 in 2000. The remaining approximately \$59,000 was attributable to increased office expenses associated with the additional personnel. At December 31, 2001, following implementations of its restructuring plan and the acquisition of Cartesian Technologies, Genomic Solutions had 35 employees engaged in research and development.

Restructuring and other unusual charges

In September 2001, Genomic Solutions announced a restructuring of its operations to implement significant cost savings and to accelerate its plan to achieve profitability. As part of the restructuring, Genomic Solutions closed its Lansing, Michigan manufacturing facility and relocated those operations to its headquarters in Ann Arbor. The restructuring reduced Genomic Solutions' workforce in the United States and the United Kingdom by approximately 25%. Also as part of the restructuring, Genomic Solutions sold certain assets used in connection with its proteomic contract research services business to Proteomic Research Services, Inc., a newly formed company owned and controlled by former employees of Genomic Solutions who were actively involved in providing proteomic-related services. Genomic Solutions owns 19.9% of Proteomic Research Services and has agreed to contract with it for assistance with certain proteomic projects. In return, Proteomic Research Services has agreed to purchase Genomic Solutions' instruments and consumables to the extent such items are required in connection with its operations.

In September 2001, Genomic Solutions recorded \$2.7 million in restructuring charges and \$1.2 million in inventory impairment charges related to these initiatives. The restructuring charge of \$2.7 million consists of \$637,000 for the impairment of certain long-lived assets, \$917,000 for the loss on disposal and sale of certain fixed assets, \$688,000 for employee termination benefits for 50 employees, and \$488,000 for exit costs associated with closing Genomic Solutions' Lansing, Michigan and San Diego, California facilities. As of December 31, 2001, Genomic Solutions terminated 45 employees and paid out \$312,000 in termination benefits. All restructuring activities were completed by January 31, 2002. At December 31, 2001, the remaining balance of the restructuring reserve totaled \$860,000 and is included in accrued liabilities in Genomic Solutions' consolidated balance sheet.

The inventory impairment charge of \$1.2 million relates to the write-down of inventories related to discontinuing the manufacture of certain products. This charge is included as a separate component of cost of revenue in Genomic Solutions' consolidated statements of operations.

In December 2001, Genomic Solutions' also recorded certain non-cash unusual charges of \$4.2 million for the write-off of in-process research and development acquired from Cartesian

Technologies, Inc. In addition, as a result of the impairment of certain long-lived assets, Genomic Solutions has taken a write-down on certain unamortized license fees of approximately \$4.0 million to reduce this asset to its estimated fair value as more fully disclosed under "Critical Accounting Policies."

In May 2000, Genomic Solutions recorded a restructuring charge to operations of \$600,000 in connection with the closing of its proteomic services and chemical production facility located in Chelmsford, Massachusetts. The charge consisted primarily of \$400,000 for employee termination benefits for fifteen employees and \$200,000 for exit costs associated with closing the facility. The restructuring reserve was fully utilized in 2000 and there was no remaining balance at December 31, 2000.

Interest expense

Interest expense decreased \$2.4 million in 2001 to \$207,000 from \$2.6 million in 2000. This decrease was primarily due to the repayment on June 9, 2000 of \$6.0 million of subordinated notes with warrants issued in April 1999 and \$3.5 million of subordinated notes with warrants issued in October 1999 as well as the reduction in average borrowings under Genomic Solutions' commercial bank borrowing facility. The \$207,000 of interest in 2001 represents interest incurred on borrowings under Genomic Solutions' commercial bank borrowing facility and under

capital leases of fixed assets.

Interest expense in 2000 includes amortization expense of approximately \$965,000 related to the discount recorded on the subordinated notes. The discount was being amortized over the period from the date of issuance to April 2000. In March and April 2000, Genomic Solutions amended the note agreements with the subordinated debt holders to change the acceleration of the maturity date from the closing date of the initial public offering to the earlier to occur of a date one year from the closing of an initial public offering or the date on which Genomic Solutions' cash and cash equivalents fall below \$50 million. Genomic Solutions retained the right to prepay these notes at any time. Genomic Solutions accounted for the amendment to the subordinated notes as an extinguishment of debt and recorded an extraordinary loss of approximately \$1.1 million in March 2000. The extraordinary loss represents the difference between the carrying value of the original subordinated notes less the related unamortized debt issuance costs at March 24, 2000 and the estimated fair value of the new subordinated notes. The effective interest rate was 53.0% and 154.1% for the subordinated notes issued in April 1999 and October 1999, respectively, calculated based on an expected maturity date of April 2000. The effective interest rate on the new subordinated notes was 8.75%.

Interest income

Interest income decreased \$1.6 million to \$1.1 million in 2001 from \$2.7 million in 2000. The decrease is due to lower average cash and cash equivalent balances and lower interest rates in 2001.

Other income

Other income, net of other expense, decreased \$720,000 to net expense of \$220,000 in 2001 from net income of approximately \$500,000 in 2000. This decrease is primarily due to certain nonrecurring transactions incurred in 2000 which included the \$382,000 gain on sale of all Genomic Solutions' product and intellectual property rights to the mass spectrometer developed by it in collaboration with HD Technologies and the \$282,000 gain on the sale of its 30% ownership interest in HD Technologies recognized in January 2000.

117

Benefit from income taxes

Genomic Solutions incurred net operating losses in 2001 and 2000, and consequently, it did not pay any federal income taxes. At December 31, 2001, it had available net operating loss carryforwards of approximately \$42.9 million, which can be utilized to offset future taxable income. These net operating loss carryforwards expire between 2010 and 2021. Additionally, utilization of net operating loss carryforwards are limited under Section 382 of the Internal Revenue Code due to ownership changes, as defined by Section 382, that occurred in 1997 and as a result of Genomic Solutions' initial public offering completed in May 2000. These and other deferred income tax assets are fully reserved by a valuation allowance due to historical operating losses. Realization of deferred tax assets is dependent on future earnings, if any, the timing and amount of which are uncertain. Accordingly, valuation allowances in amounts equal to the deferred tax assets have been established to reflect these uncertainties. See Note 10 of Notes to Genomic Solutions' Consolidated Financial Statements.

Years ended December 31, 2000 and 1999

Revenue

Revenue increased \$7.0 million, or 58%, to \$19.1 million in 2000 from \$12.1 million in 1999. This increase in revenue was due primarily to \$6.9 million from sales of DNA microarray and proteomic systems. New product sales consisted of \$3.8 million from the GeneTAC Biochip System, which includes the G3 Library Management Tool, GeneTAC Hybridization Station and GeneTAC LS4 Biochip Analyzer, and \$3.1 million from the Investigator Proteomic System, which was first shipped in June 1999. Increased sales of these products offset the \$245,000 revenue decline associated with Genomic Solutions' products for documenting and analyzing one-dimensional separations of DNA and proteins, which were discontinued in all markets except Japan. The remainder of 2000 revenues was attributable to services and consumables.

Cost of revenue

Cost of revenue increased \$2.4 million, or 34%, to \$9.4 million in 2000 from \$7.0 million in 1999. This increase was due primarily to \$1.9 million in increased cost of materials attributable to increased instrumentation sales. The remainder of the increase in cost of revenue was attributable to increased spending on product support, employees and facilities.

Selling, general and administrative expenses

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Selling, general and administrative expenses increased \$3.2 million, or 38%, to \$11.9 million in 2000 from \$8.7 million in 1999. Of this increase, \$2.1 million was attributable to salaries, sales commissions and other employee-related costs due primarily to the addition of approximately 13 sales, marketing and administrative personnel and increased sales commissions. The remaining increase consisted of approximately \$653,000 from promotional activities and approximately \$379,000 from increased office expenses and depreciation expense associated with the hiring of additional personnel.

Research and development expenses

Research and development expenses increased \$766,000, or 16%, to \$5.6 million in 2000 compared to \$4.8 million in 1999. Research and development spending increased due primarily to an increase in salaries of approximately \$909,000 and other employee related costs.

Restructuring charge

In May 2000, Genomic Solutions recorded a restructuring charge to operations of \$600,000 in connection with the closing of its proteomic services and chemical production facility located in

118

Chelmsford, Massachusetts. The charge consisted primarily of \$400,000 for employee termination benefits for fifteen employees and \$200,000 for exit costs associated with closing the facility. The restructuring reserve was fully utilized in 2000 and there was no remaining balance at December 31, 2000.

Interest expense

Interest expense increased \$123,000 in 2000 to \$2.6 million from \$2.5 million in 1999. This increase was due primarily to \$6 million of subordinated notes with warrants issued in April 1999 and \$3.5 million of subordinated notes with warrants issued in October 1999 and the increase in borrowings under Genomic Solutions' fixed asset lease line agreement and its commercial bank borrowing facilities.

Interest expense in 2000 includes amortization expense of approximately \$965,000 related to the discount recorded on the subordinated notes. The discount was being amortized over the period from the date of issuance to April 2000. In March and April 2000, Genomic Solutions amended the note agreements with the subordinated debt holders to change the acceleration of the maturity date from the closing date of the initial public offering to the earlier to occur of a date one year from the closing of an initial public offering or the date on which Genomic Solutions' cash and cash equivalents fall below \$50 million. Genomic Solutions retained the right to prepay these notes at any time. It accounted for the amendment to the subordinated notes as an extinguishment of debt and recorded an extraordinary loss of approximately \$1.1 million in March 2000. The extraordinary loss represents the difference between the carrying value of the original subordinated notes less the related unamortized debt issuance costs at March 24, 2000 and the estimated fair value of the new subordinated notes. The effective interest rate was 53.0% and 154.1% for the subordinated notes issued in April 1999 and October 1999, respectively, calculated based on an expected maturity date of April 2000. The effective interest rate on the new subordinated notes was 8.75%.

Genomic Solutions repaid the \$6 million of subordinated notes issued in April 1999 and \$3.5 million of subordinated notes issued in October 1999 in their entirety on June 9, 2000.

Interest income

Interest income increased \$2.6 million in 2000 to \$2.7 million from \$111,000 in 1999. Interest income increased due to higher average cash and cash equivalent balances in 2000, resulting primarily from the investment of the net proceeds from Genomic Solutions' initial public offering which closed on May 10, 2000, and \$8 million in gross proceeds from the sale of preferred stock to PerkinElmer in January 2000.

Benefit from income taxes

Genomic Solutions incurred net operating losses in 2000 and 1999, and consequently, it did not pay any federal income taxes. At December 31, 2000, it had available net operating loss carryforwards of approximately \$27.4 million, which can be utilized to offset future taxable income. These net operating loss carryforwards expire between 2010 and 2020. Additionally, utilization of net operating loss carryforwards are limited under Section 382 of the Internal Revenue Code due to ownership changes, as defined by Section 382, that occurred in 1997 and as a result of Genomic Solutions' initial public offering completed in May 2000. These and other deferred income tax assets are fully reserved by a valuation allowance due to historical operating losses. Realization of deferred tax assets is dependent on future earnings, if any, the timing and amount of which are uncertain. Accordingly, valuation allowances in amounts equal to the deferred tax assets have been established to reflect these uncertainties. See Note 10 of Notes to Genomic Solutions' Consolidated Financial Statements.

Liquidity and Capital Resources

At June 30, 2002 Genomic Solutions' cash and cash equivalents totaled \$5.3 million compared to \$13.1 million at December 31, 2001. As detailed below, the \$7.8 million decrease in cash and cash equivalents is principally due to \$7.6 million net cash used in operating activities during the six months ended June 30, 2002, a \$125,000 license fee payment for an exclusive license with Proteometrics, LLC and \$149,000 in fixed asset additions.

Genomic Solutions believes its existing cash and cash equivalents, and cash from operations, will be sufficient to fund its operating expenses, debt obligations and capital requirements until at least June 30, 2003. Genomic Solutions' primary sources of liquidity include its cash balances and future operating cash flows. Management's goal is to achieve positive operating cash flows sometime during the next twelve months. Genomic Solutions' ability to achieve this goal depends upon several factors including the following: (1) the cost savings from its restructuring initiatives implemented in late 2001 and July 2002; (2) its success in expanding its direct sales and building its distributor base to supplement PerkinElmer's sales efforts; (3) its ability to efficiently manage working capital; and (4) achieving anticipated revenue derived not only from the sales of its genomic and proteomic product offerings but also from sales of high throughput screening and dispensing instrumentation and sales of protein analysis software subject to its exclusive license with Proteometrics, LLC.

Genomic Solutions' expected revenue is dependent on many factors beyond its control, including factors discussed under "Risk Factors" beginning on page 21 of this proxy statement and prospectus. Genomic Solutions may not realize its anticipated revenue levels, it may become profitable at a different time or it may never become profitable. Given the current economic downturn, customers may delay or rethink large capital equipment purchases and budgets, making forecasting more difficult. Even if Genomic Solutions does achieve profitability, it may not sustain or increase profitability on a quarterly or annual basis. These and other factors, some of which are beyond Genomic Solutions' control, will determine if and when it may need funds and how much it will need. Genomic Solutions may need funds sooner than currently anticipated. It may need to raise additional capital to fund research and development programs, scale-up manufacturing activities, expand sales and marketing capabilities or fund unforeseen expenses. Even if Genomic Solutions has sufficient funds for its operating plans, it may choose to raise additional capital due to market conditions or strategic considerations. Genomic Solutions may seek funding through public or private equity offerings, debt financing or additional collaborations. Genomic Solutions cannot assure you that additional financing will be available on favorable terms, if at all.

Cash used in operating activities, which includes changes in working capital during the six months ended June 30, 2002, was \$7.6 million compared with \$6.4 million for the same period in 2001. Cash used in operations during the first six months of 2002 consisted primarily of Genomic Solutions' net loss of \$4 million, which included a non-cash charge of \$1.3 million for depreciation and amortization expense and a \$500,000 write off of an equity investment in Photonic Sensors Systems, Inc. The use of cash in operating activities in the first six months of 2002 was also due to an increase of \$1.4 million in accounts receivable due to the \$3.9 million increase in revenue for the six months ended June 30, 2002. The majority of revenue is shipped at the end of each quarter. The use of cash in the first six months of 2002 was also due to an increase of \$1.3 million in inventory, consisting primarily of increases in raw material and finished goods stock of genomic, proteomic and high throughput screening instrumentation. The use of cash in operating activities was also due to a \$2.3 million decrease in accounts payable and accrued liabilities. The decrease in accounts payable was due to the payment of approximately \$1.1 million in professional fees and expenses associated with the acquisition of Cartesian Technologies and with bringing Cartesian Technologies vendor balances current. The decrease in accrued liabilities was principally due to severance and retention bonus payments made in connection with Genomic Solutions' restructuring plan initiated in September 2001, and with the payment of Genomic Solutions' matching contribution to the Genomic Solutions 401k plan. By

comparison, for the six months ended June 30, 2001 cash used in operations totaled \$6.4 million primarily due to Genomic Solutions' net loss of \$5.9 million which included a non-cash charge of \$1.1 million for depreciation and amortization expense. The use of cash in operating activities in the first six months of 2001 was also due to an increase of \$2 million in inventories, and a decrease of \$1.7 million in accounts payable and accrued liabilities. The use of cash was partially offset by a \$1.8 million decrease in accounts receivable and a \$321,000 decrease in prepaid expenses and other current assets.

Depreciation and amortization expense for the six months ended June 30, 2002 was \$1.3 million and includes \$410,000 in amortization expense of intangible assets capitalized from the acquisition of Cartesian Technologies in December 2001. Amortization expense was offset by approximately \$147,000 in goodwill amortization expense charged last year that is no longer being expensed in 2002 as a result of the adoption of SFAS No. 142, "Goodwill and Other Intangible Assets."

Genomic Solutions' investing activities for the six months ended June 30, 2002 used cash of \$305,000 compared with \$4.0 million for the same period in 2001. Cash used in investing activities in 2002 was attributable to \$149,000 in fixed asset additions, a \$125,000 license fee payment for an exclusive license with Proteometrics, LLC, and \$93,000 for other long term assets, partially offset by receiving \$62,000 in cash from the sale of property and equipment. By comparison, for the six months ended June 30, 2001 cash used in investing activities was attributable to \$2.3 million in license fee payments for certain genomic technologies, \$1.3 million in fixed asset expenditures primarily for laboratory equipment, and \$500,000 equity investment in Photonic Sensor Systems, Inc., partially offset by receiving approximately \$19,000 in cash from the sale of property and equipment.

Genomic Solutions' financing activities for the six months ended June 30, 2002 used cash of \$10,000 compared to \$5.8 million for the same period in 2001. Cash used in financing activities in 2002 was primarily due to the repayment of long-term debt of \$35,000 and due to other financing activities of \$4,000. Cash used in financing activities was partially offset by the receipt of \$29,000 in proceeds from the sale of common stock upon the exercise of vested stock options by employees. By comparison, for the six months ended June 30, 2001 cash used in financing activities was primarily due to the repurchase of Genomic Solutions' stock from PerkinElmer, Inc. for \$5.5 million and the repayment of long-term debt of \$389,000 and to other financing activities of \$4,000. The cash used in financing activities in 2001 was partially offset by the receipt of \$86,000 in proceeds from the sale of common stock upon the exercise of vested stock options by employees.

In June 2002, Genomic Solutions amended its primary bank line-of-credit agreement to provide for borrowings up to \$2.5 million through June 2003. As of June 30, 2002, there were outstanding borrowings of \$2.5 million under this line of credit. Genomic Solutions from time to time draws on this line of credit to fund its short term working capital needs. Management believes it has the ability to amend and expand this line of credit and has the working capital capacity to support the current borrowing level.

Working capital decreased \$2.4 million to \$13.4 million at June 30, 2002 from \$15.8 million at December 31, 2001. The decrease in working capital is primarily due to a \$7.8 million decrease in cash. The decrease in working capital was partially offset by a \$1.7 million increase in accounts receivable, a \$1.3 million increase in inventory, and a \$2.3 million decrease in accounts payable and accrued liabilities.

Critical Accounting Policies

Management's Discussion and Analysis of Financial Condition and Results of Operations discusses Genomic Solutions' consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts

121

of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, management evaluates its estimates and judgments, including those related to bad debts, inventories, investments, intangible assets, financing operations, warranty obligations, restructuring costs, contingencies and litigation. Management bases its estimates and judgments on historical experience, observance of trends in the industry, information provided by customers and information available from other outside sources and on various other factors that are believed to be reasonable under the circumstances. These sources form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions and conditions.

Management of Genomic Solutions believes the following critical accounting policies, among others, affect its more significant judgments and estimates used in the preparation of Genomic Solutions' consolidated financial statements. Genomic Solutions' critical accounting policies include:

Inventories

Inventories consist primarily of purchased parts and components used to make instrumentation and are stated at the lower of cost, as determined on a first-in, first-out basis, or market. Reserves for slow moving and obsolete inventories are provided based on historical experience and current product demand. If actual future demand or market conditions are less favorable than those projected by management, additional inventory write-downs may be required. Genomic Solutions evaluates the adequacy of these reserves quarterly. In 2001, in connection with the restructuring of its operations, Genomic Solutions recorded a write-down of inventory of approximately \$1.2 million related to discontinuing the manufacture of certain products. This charge is included as a separate component of cost of revenue in Genomic Solutions' consolidated statements of operations.

Impairment of long-lived assets

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

At each balance sheet date, Genomic Solutions evaluates the carrying value of goodwill and other long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. If evidence of a possible impairment exists, Genomic Solutions estimates the undiscounted future cash flows from the use of the asset and its eventual disposition and then compares this amount to the carrying value of the asset. If an impairment exists, Genomic Solutions estimates the present value of expected future cash flows and records an adjustment to reduce the asset to its estimated fair value.

Genomic Solutions records an investment impairment charge when it believes an investment has experienced a decline in value that is other than temporary. Future adverse changes in market conditions or poor operating results of underlying investments could result in losses or an inability to recover the carrying value of the investments that may not be reflected in an investment's current carrying value, thereby possibly requiring an impairment charge in the future.

In December 2001, Genomic Solutions instituted litigation against Photonic Sensors, Inc., a Georgia corporation, alleging breach of contract in connection with a certain License and Development Agreement entered into with Photonic. Concurrently with the execution of the License and Development Agreement, Genomic Solutions entered into an agreement whereby it invested \$500,000 in Photonic in exchange for preferred shares of Photonic. The preferred shares carried a liquidation preference giving Genomic Solutions priority over distributions to Photonic shareholders. On June 28, 2002, Genomic Solutions settled the litigation with Photonic. Pursuant to the Settlement Agreement, Genomic Solutions relinquished its entire equity interest in Photonic. Neither party was obligated to pay any amounts or fees to the other party. Genomic Solutions determined that the value of its investment in Photonic Sensor's preferred stock was impaired and recorded an adjustment of \$500,000

122

to reduce this asset to its estimated fair value. This write-down is included in the loss on impairment of long lived asset in the accompanying consolidated statement of operations.

In 2001, as a result of its restructuring initiatives, Genomic Solutions determined that goodwill related to certain past acquisitions was impaired and recorded an adjustment of approximately \$266,000 to reduce these assets to their estimated fair value. Genomic Solutions also determined that one of its key license agreements was substantially impaired due to certain U.S. District Court summary judgment rulings determining that key patents or claims subject to the agreement were invalid and substantial changes in market conditions with respect to the revenue and profit expectations of certain products produced under the agreement. As a result of the impairments, Genomic Solutions has taken a write-down on certain unamortized license fees of approximately \$4.0 million to reduce this asset to its estimated fair value. These write-downs are included in restructuring and other unusual charges in the accompanying consolidated statements of operations.

123

GENOMIC SOLUTIONS PRINCIPAL AND MANAGEMENT STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of Genomic Solutions' common stock as of September 16, 2002, by:

each person known by Genomic Solutions to own beneficially 5% or more of the Genomic Solutions common stock;

each director of Genomic Solutions;

each executive officer of Genomic Solutions named in the summary compensation table of Genomic Solutions' proxy statement for its Annual Meeting held on May 7, 2002; and

all of the directors and executive officers of Genomic Solutions as a group.

Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission and generally includes voting or investment power with respect to securities. The percentage calculations are based on 31,257,198 shares of common stock issued and

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

outstanding as of September 16, 2002. Shares of common stock subject to options that are currently exercisable or exercisable within 60 days after September 16, 2002 are deemed to be outstanding and to be beneficially owned by the person holding the options for the purpose of computing the percentage ownership of that person, but are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise noted, each person or group identified possesses sole voting and investment power with respect to the shares indicated, subject to applicable community property laws.

Unless indicated otherwise, the address of the beneficial owners is: c/o Genomic Solutions Inc., 4355 Varsity Drive, Suite E, Ann Arbor, Michigan 48108.

Name and Address of Beneficial Owner	Shares Beneficially Owned	Percent of Class
JP Morgan Partners LLC(1) 1221 Avenue of the Americas New York, NY 10020	4,865,435	15.55%
Damion E. Wicker, M.D.(2) c/o JP Morgan Partners LLC 1221 Avenue of the Americas New York, NY 10020	4,865,435	15.55%
J. Matthew Mackowski(3) c/o Telegraph Hill Partners 275 Post Street, Suite 600 San Francisco, CA 94108	1,898,461	6.07%
American Healthcare Fund II(4) 4430 Arapaho Avenue, Suite 200 Boulder, CO 80303	1,886,694	6.03%
Daniel J. Mitchell(5) c/o American Healthcare Fund II 4430 Arapaho Avenue, Suite 200 Boulder, CO 80303	1,907,494	6.09%
Thomas C. Tisone	1,754,208	5.61%
Jeffrey S. Williams(6)	944,833	3.02%
124		
Robert G. Shepler(7) c/o Telegraph Hill Partners 275 Post Street, Suite 600 San Francisco, CA 94108	673,802	2.15%
Steven J. Richvalsky(8)	167,413	*
Gary A. Kendra(9)	48,594	*
David W. Byatt(10)	32,000	*
Andrew A. Jakimcius(11)	92,992	*
Michael P. Kurek, Ph.D.(12)	67,266	*
Shannon M. Richey(13)	17,400	*
Schleicher & Schuell Beteiligungs GmbH(14)	1,974,410	6.32%

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Grimsehlstrasse, 23 D-37574
Einbeck, Germany

All directors and executive officers as a group (12 persons)(15)	12,469,898	39.34%
--	------------	--------

*

Less than 1%

- (1) Includes options to purchase 40,000 shares of common stock that JP Morgan has the right to request Dr. Damion Wicker to exercise and transfer any shares issued to JP Morgan.
- (2) 4,825,435 shares are held in the name of JP Morgan Partners LLC and are attributed to Dr. Wicker as he is a partner of JP Morgan Partners LLC. Dr. Wicker disclaims beneficial ownership of all shares issued or issuable to JP Morgan Partners, except to the extent of his pecuniary interest. Includes options to purchase 40,000 shares of common stock. Dr. Wicker is contractually obligated to exercise the options at the request of, and to transfer any shares issued under the stock options to JP Morgan Partners.
- (3) Includes options to purchase 40,000 shares of common stock.
- (4) Includes options to purchase 40,000 shares of common stock that American Healthcare has the right to request Mr. Mitchell to exercise and transfer any shares issued to American Healthcare.
- (5) 1,846,694 shares are held in the name of American Healthcare and are attributed to Mr. Mitchell as he is the general partner of Capital Health Venture Partners, the general partner of American Healthcare. Mr. Mitchell disclaims beneficial ownership of all shares issued or issuable to American Healthcare, except to the extent of his pecuniary interest. Includes options to purchase 40,000 shares of common stock. Mr. Mitchell is contractually obligated to exercise the options at the request of, and to transfer any shares issued under the stock options to American Healthcare.
- (6) Includes options to purchase 78,000 shares of common stock. Includes 10,492 shares of common stock which are held by Mr. Williams' children and 100,000 shares that are held by Mr. Williams' wife.
- (7) Includes options to purchase 40,000 shares of common stock.
- (8) Includes options to purchase 79,733 shares of common stock.
- (9) Includes options to purchase 41,680 shares of common stock.
- (10) Includes options to purchase 32,000 shares of common stock.

- (11) Includes options to purchase 47,911 shares of common stock. As of July 31, 2002, Mr. Jakimcius was no longer employed by Genomic Solutions.
- (12) As of December 2001, Dr. Kurek was no longer employed by Genomic Solutions.
- (13)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

As of December 2001, Ms. Richey was no longer employed by Genomic Solutions.

- (14) Information with respect to Schleicher & Schuell Beteiligungs GmbH is based on statements filed by such party under Section 13 of the Exchange Act reporting beneficial ownership as of December 31, 2001.
- (15) Includes options to purchase 439,324 shares of common stock.

126

HARVARD BIOSCIENCE PRINCIPAL AND MANAGEMENT STOCKHOLDERS

The following table sets forth information regarding the beneficial ownership of Harvard Bioscience common stock as of August 15, 2002 by:

each person known by Harvard Bioscience to own beneficially 5% or more of the Harvard Bioscience common stock,

each director of Harvard Bioscience,

each executive officer of Harvard Bioscience, and

all of the directors and executive officers of Harvard Bioscience as a group.

The number of shares beneficially owned by each stockholder is determined under rules issued by the Securities and Exchange Commission and includes voting or investment power with respect to securities. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power and includes any shares as to which the individual or entity has the right to acquire beneficial ownership within 60 days after August 15, 2002 through the exercise of any warrant, stock option or other right. The inclusion in this proxy statement and prospectus of such shares, however, does not constitute an admission that the named stockholder is a direct or indirect beneficial owner of such shares. Unless otherwise indicated, the address of all listed stockholders is c/o Harvard Bioscience, Inc., 84 October Hill Road, Holliston, Massachusetts 01746.

Name and Address of Beneficial Owner	Shares Beneficially Owned	Percent of Class(1)
Chane Graziano	3,698,881	13.8%
Kern Capital Management, LLC(2) 114 West 47th Street, Suite 1926 New York, NY 10036	2,739,400	10.2%
David Green	2,369,936	8.8%
Zurich Scudder Investments, Inc.(3) 345 Park Avenue New York, NY 10154	1,720,600	6.4%
Christopher W. Dick(4) 255 State Street Boston, MA 02109	1,601,141	6.0%
Richard C. Klaffky(5) 100 Pearl Street	1,092,193	4.1%

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Name and Address of Beneficial Owner	Shares Beneficially Owned	Percent of Class(1)
Hartford, CT 06103		
Susan M. Luscinski(6)	161,778	*
Mark A. Norige(6)	151,767	*
James L. Warren(7)	53,886	*
John F. Kennedy(8)	5,166	*
Robert Dishman(8)	4,166	*
Earl R. Lewis(8)	4,166	*
All executive officers and directors, as a group (10 persons)(9)	9,143,080	34.0%

*

Represents less than 1% of the outstanding shares of common stock.

127

- (1) Based on 26,792,932 shares outstanding on August 15, 2002.
- (2) This information is based upon a Schedule 13G filed jointly by Kern Capital Management, LLC, Robert E. Kern Jr. and David G. Kern with the Securities and Exchange Commission on March 8, 2002 reporting beneficial ownership as of February 28, 2002. Robert and David Kern are principals and controlling members of Kern Capital Management, LLC and may be deemed the beneficial owner of the shares owned by Kern Capital Management, LLC.
- (3) This information is based upon a Schedule 13G filed by Zurich Scudder Investments, Inc. with the Securities and Exchange Commission on February 1, 2002 reporting beneficial ownership as of December 31, 2001.
- (4) Consists of 1,307,887 shares owned by Ascent Venture Partners II, L.P., 287,254 shares owned by Ascent Venture Partners, L.P. and 2,500 shares owned by Ascent Venture Management, LLC, of which Mr. Dick may be considered the beneficial owner, and 3,500 shares owned directly by Mr. Dick. Ascent Management SBIC Corp. is the general partner of Ascent Venture Management II, L.P., which is the general partner of Ascent Venture Partners II, L.P., and Ascent Management SBIC Corp. exercises sole voting and investment power with respect to all of the shares held of record by Ascent Venture Partners II, L.P. Ascent Venture Management, LLC is the general partner of Ascent Venture Partners, L.P. and exercises sole voting and investment power with respect to all of the shares held of record by Ascent Venture Partners, L.P. Mr. Dick, a member of the board of directors of Harvard Bioscience, is the Managing Director of Ascent Management SBIC Corp. and Ascent Venture Management, LLC. Mr. Dick disclaims any beneficial ownership of the shares held by Ascent Venture Partners II, L.P., Ascent Venture Partners, L.P. and Ascent Venture Management, LLC, except to the extent of his pecuniary interest therein.
- (5) Consists of 1,092,193 shares owned by First New England Capital, L.P., of which Mr. Klaffky may be considered the beneficial owner. FINEC Corp. is the general partner of First New England Capital, L.P. and exercises sole voting and investment power with respect to all of the shares held of record by First New England Capital, L.P. Mr. Klaffky, a member of the board of directors of Harvard Bioscience, is the President of FINEC Corp. Mr. Klaffky disclaims any beneficial ownership of the shares held by First New England Capital, L.P., except to the extent of his pecuniary interest therein. Mr. Klaffky disclaims beneficial ownership of such shares, except to the extent of his pecuniary interest therein.
- (6)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Includes options to acquire 49,275 shares that may be exercised within 60 days of August 15, 2002.

(7)

Mr. Warren resigned as Chief Financial Officer of Harvard Bioscience in August 2001.

(8)

Includes options to acquire 4,166 shares that may be exercised within 60 days of August 15, 2002.

(9)

Includes options to acquire 111,048 shares that may be exercised within 60 days of August 15, 2002.

128

COMPARISON OF RIGHTS OF HOLDERS OF GENOMIC SOLUTIONS COMMON STOCK AND HARVARD BIOSCIENCE COMMON STOCK

Upon completion of the merger, you will become a stockholder of Harvard Bioscience. Your rights as a stockholder of Genomic Solutions are currently governed by the certificate of incorporation and bylaws of Genomic Solutions, the Delaware corporation statute and other Delaware laws related to corporations. As a stockholder of Harvard Bioscience following the merger, your rights as a stockholder will continue to be governed by the Delaware corporation statute and other Delaware laws related to corporations, but will be governed by the certificate of incorporation and bylaws of Harvard Bioscience instead of the certificate of incorporation and bylaws of Genomic Solutions.

The following is a summary of the material differences between your rights as a stockholder of Genomic Solutions and the rights of stockholders of Harvard Bioscience. While we believe that the description covers the material differences, this summary does not purport to be a complete description of the differences and may not contain all of the information that is important to you. You are encouraged to review the full text of each of the certificate of incorporation and bylaws of Harvard Bioscience, the certificate of incorporation and bylaws of Genomic Solutions, the Delaware corporation statute and other Delaware laws related to corporations for a more complete understanding of the differences between being a stockholder of Genomic Solutions and being a stockholder of Harvard Bioscience. The certificate of incorporation and bylaws of Harvard Bioscience have been filed as exhibits to the material filed by Harvard Bioscience with the Securities and Exchange Commission. For information as to how documents may be obtained, see "Where You Can Find Additional Information" beginning on page 140.

Capitalization

Harvard Bioscience. Harvard Bioscience is authorized to issue 80,000,000 of common stock, par value \$0.01 per share, and 5,000,000 shares of preferred stock, par value \$0.01 per share. As of September 16, 2002, 31,458,180 shares of Harvard Bioscience common stock were issued, 26,797,396 shares were outstanding, 4,660,784 shares of Harvard Bioscience common stock were held in the treasury of Harvard Bioscience, and no shares of Harvard Bioscience preferred stock were issued and outstanding. Harvard Bioscience's board of directors has the authority, without stockholder approval, to issue shares of authorized but undesignated preferred stock from time to time in one or more series and to fix the voting rights, if any, designations, powers, preferences, and any qualifications, limitations or restrictions thereof applicable to each series of preferred stock, which rights, designations, powers and preferences may be superior to those of the Harvard Bioscience common stock.

Genomic Solutions. Genomic Solutions is authorized to issue 60,000,000 of common stock, par value \$0.001 per share, and 15,000,000 shares of preferred stock, par value \$0.001 per share. As of September 16, 2002, 31,257,198 shares of Genomic Solutions common stock were issued and outstanding, and no shares of Genomic Solutions preferred stock were issued and outstanding. Genomic Solutions' board of directors has the authority, without stockholder approval, to issue shares of authorized but undesignated preferred stock from time to time in one or more series and to fix the voting rights, if any, designations, powers, preferences, and any qualifications, limitations or restrictions thereof applicable to each series of preferred stock, which rights, designations, powers and preferences may be superior to those of the Genomic Solutions common stock.

Number of Directors

Harvard Bioscience. Harvard Bioscience's board of directors currently consists of seven directors. Harvard Bioscience's certificate of incorporation provides that the number of directors shall be fixed by resolution of the Harvard Bioscience board of directors. The number of directors may be changed by resolution of the Harvard Bioscience board of directors. Following the merger, Harvard Bioscience

129

anticipates that the board of directors will be increased to eight directors and that Jeffrey Williams will be nominated to fill this newly created vacancy.

Genomic Solutions. Genomic Solutions' board of directors currently consists of six directors. A seventh board seat is currently vacant due to the death of one of the directors in November 2001. Genomic Solutions' certificate of incorporation provides that the number of directors shall be not fewer than three nor greater than nine, and that the exact number shall be determined by resolution of the Genomic Solutions board of directors.

Classification of Directors

Both Harvard Bioscience's certificate of incorporation and Genomic Solutions' certificate of incorporation provide that the board of directors is divided into three classes, each of whose members serve for a staggered three-year term. At each annual meeting of stockholders, a class of directors is elected to serve for a three-year term and until successors have been duly elected and qualified.

Cumulative Voting For Directors

Under Delaware law, unless a corporation's certificate of incorporation provides otherwise, there can be no cumulative voting for the election of directors. Neither Harvard Bioscience's certificate of incorporation nor Genomic Solutions' certificate of incorporation allows for cumulative voting rights by stockholders in the election of directors.

Director Voting

Harvard Bioscience. The bylaws of Harvard Bioscience provide that the number of directors constituting a quorum shall be a majority of the number of authorized directors, including any unfilled vacancies. At any meeting at which a quorum is present, the vote of a majority of the directors present generally constitutes action by the board of directors.

Genomic Solutions. The bylaws of Genomic Solutions provide that the number of directors constituting a quorum shall be a majority of the number of directors then in office. At any meeting at which a quorum is present, the vote of a majority of the directors present is generally sufficient for the board of directors to take any action.

Removal of Directors

Harvard Bioscience. Under Harvard Bioscience's certificate of incorporation, any director may be removed with cause by the holders of 75% or more of the shares then entitled to vote at an election of directors.

Genomic Solutions. Under Genomic Solutions' certificate of incorporation, any director may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors.

Vacancies on the Board of Directors

Harvard Bioscience. Under Harvard Bioscience's certificate of incorporation, any vacancy on the board of directors, however occurring, including by reason of an increase in the size of the board of directors, or the death, resignation, disqualification or removal of a director, shall be filled by a majority of the remaining members of the board of directors, even if the majority is less than a quorum. Each director elected in this manner shall hold office for the remainder of the full term of the class of directors in which the new directorship was created or the vacancy occurred. If there are no

directors in office, any officer or stockholder may call a special meeting of stockholders in accordance with the provisions of Harvard Bioscience's certificate of incorporation and bylaws to fill the vacancies.

Genomic Solutions. Under Genomic Solutions' certificate of incorporation, all vacancies and newly created directorships on the board of directors shall be filled by the board of directors. Any director elected to fill a vacancy not resulting from an increase in the number of directors shall have the same remaining term as such director's predecessor. If there are no directors in office, any officer or stockholder may call a special meeting of stockholders in accordance with the provisions of Genomic Solutions' certificate of incorporation and bylaws to fill the vacancies.

Interested Director Transactions

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Harvard Bioscience. Harvard Bioscience does not have any provisions in its certificate of incorporation or bylaws that pertain to transactions involving interested directors.

Genomic Solutions. Genomic Solutions' bylaws provide that a contract or transaction between Genomic Solutions and an interested director or officer will not be void or voidable if:

the material facts as to the interested director's or officer's relationship or interest and as to the contract or transaction are disclosed or known by the board of directors or committee and the board of directors or committee, in good faith, authorizes the contract or transaction by an affirmative vote of a majority of the disinterested directors, even if the number of disinterested directors is less than a quorum; or

the material facts as to the interested director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote on the matter and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

the contract or transaction is fair to Genomic Solutions as of the time it is authorized, approved or ratified by the board of directors, committee or stockholders.

Annual Meetings of Stockholders

Harvard Bioscience. Under Harvard Bioscience's bylaws, nominations of persons for election to the board of directors and the proposal of business to be considered at an annual meeting of stockholders must be made pursuant to the notice of meeting, by or at the direction of the board of directors, or by a stockholder who was a stockholder of record at the time of notice and complies with the advance notice procedures summarized below under " Advance Notice Provisions for Stockholder Nominations and Proposals."

Genomic Solutions. Under Genomic Solutions' bylaws, nominations of persons for election to the board of directors at a meeting of stockholders at which directors are to be elected must be made by or at the direction of the board of directors, or by a stockholder or stockholders holding, individually or in the aggregate, at least 10% of the share entitled to vote in the election of directors who complies with the advance notice procedures summarized below under " Advance Notice Provisions for Stockholder Nominations and Proposals." Under Genomic Solutions' bylaws, the proposal of business to be considered at an annual meeting of stockholders must be made by or at the direction of the board of directors, or by a stockholder who complies with the advance notice procedures summarized below under " Advance Notice Provisions for Stockholder Nominations and Proposals."

Special Meetings of Stockholders

Harvard Bioscience. Under Harvard Bioscience's certificate of incorporation and bylaws, special meetings of the stockholders may only be called by the board of directors pursuant to a resolution

131

adopted by the majority of directors then in office, and only matters specified in the notice of the special meeting may be acted upon.

Genomic Solutions. Under Genomic Solutions' bylaws, special meetings of the stockholders may only be called by the chairman of the board of directors, the president of Genomic Solutions, the board of directors pursuant to a resolution adopted by the board of directors, or at the written request of stockholders owning at least 50% of the capital stock issued, outstanding and entitled to vote, and the business transacted shall be limited to the purposes specified in the notice of the special meeting.

Voting Rights; Quorums for Meetings of Stockholders

Harvard Bioscience. Each holder of Harvard Bioscience common stock is entitled to one vote for each share held by the stockholder. The bylaws of Harvard Bioscience provide, in accordance with Delaware law, that the holders of a majority of the shares entitled to vote constitute a quorum, and that, when a quorum is present, any matter before a meeting of the stockholders generally is decided by a majority of the votes properly cast. Any election of directors by stockholders is determined by a plurality of the votes properly cast.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Genomic Solutions. Each holder of Genomic Solutions common stock is entitled to one vote for each share held by the stockholder. The bylaws of Genomic Solutions provide, in accordance with Delaware law, that the holders of not less than a majority of the shares entitled to vote at any meeting of stockholders, present in person or by proxy, shall constitute a quorum, and that, when a quorum is present, any matter before a meeting of the stockholders generally is decided by a majority of the votes present and entitled to vote on the subject matter. Any election of directors by stockholders is determined by a plurality of the votes cast by the stockholders entitled to vote at the election.

Notice of Meetings of Stockholders

Under both Harvard Bioscience's bylaws and Genomic Solutions' bylaws, each stockholder of record must receive written notice, at least 10 days, but not more than 60 days, before the date of any annual or special meeting of stockholders, stating the time, date and place of such meeting and, in the case of a special meeting, the purpose for which the meeting has been called.

Record Date

Under both Harvard Bioscience's bylaws and Genomic Solutions' bylaws, the board of directors may fix a record date for receiving notice of or voting at a meeting of stockholders, for receiving dividends or other similar distributions or allotments of rights, or for the purpose of any other lawful action. The record date must be not more than 60 days or less than 10 days before the date of a meeting of stockholders or not more than 60 days prior to any other action. In addition, under Genomic Solutions' bylaws, the record date for stockholder action by written consent must be not earlier than the date on which the board of directors adopts a resolution fixing the record date and not later than 10 days after such resolution is adopted.

Stockholder Action By Written Consent

Harvard Bioscience. Harvard Bioscience's certificate of incorporation states that stockholders may not take action by written consent in lieu of a meeting.

Genomic Solutions. Under Genomic Solutions bylaws, any action required or permitted to be taken at any meeting of the stockholders may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, is signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote were present and voted.

132

Prompt notice of stockholder action without a meeting by less than unanimous written consent must be given to those stockholders who have not consented in writing.

Advance Notice Provisions for Stockholder Nominations and Proposals

Harvard Bioscience. Harvard Bioscience's bylaws allow stockholders to nominate candidates for election to Harvard Bioscience's board of directors or propose other business at any annual meeting of stockholders. For nominations or other business to be properly brought before an annual meeting by a stockholder, the stockholder must have given timely notice in writing to the secretary of Harvard Bioscience and such other business must otherwise be a proper subject for action by stockholders under Delaware law. To be timely, a stockholder's notice must be delivered to the secretary at the principal executive offices of Harvard Bioscience not later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the first anniversary of the preceding year's annual meeting. If the date of the annual meeting is more than 30 days before or more than 60 days after such anniversary date, notice by the stockholder must be delivered not earlier than the close of business on the 120th day prior to the annual meeting and not later than the close of business on the later of the 90th day prior to the annual meeting or the 10th day following the day on which public announcement of the date of the meeting is first made.

Genomic Solutions. Genomic Solutions' bylaws allow stockholders to nominate candidates for election to Genomic Solutions' board of directors at any meeting of stockholders at which directors are to be elected or to propose other business at any annual meeting of stockholders. For nominations or other business to be properly brought by a stockholder, the stockholder must have given timely notice in writing to the secretary of Genomic Solutions and such other business must otherwise be proper subjects for stockholder action. To be timely, a stockholder's notice must be delivered to the secretary at the principal executive offices of Genomic Solutions not less than 120 days prior to the scheduled meeting date. If the scheduled meeting date differs from the date of the next preceding annual meeting of stockholders and if less than 130 days notice or prior public disclosure of the scheduled meeting date is given or made, notice by the stockholder must be delivered not later than the 10th day following the earlier of the day on which notice of the meeting was mailed to stockholders and the day on which public disclosure was made.

Dividends

Harvard Bioscience. Under Harvard Bioscience's certificate of incorporation, the board of directors or an authorized committee of the board of directors may declare and pay, or set apart for payment, dividends on shares of Harvard Bioscience's common stock out of any assets or funds legally available for the payment of dividends.

Genomic Solutions. Under Genomic Solutions' certificate of incorporation, the board of directors may declare dividends upon Genomic Solutions' common stock out of assets or funds legally available for the payment of dividends. These dividends may be paid in cash, Genomic Solutions preferred stock, stock of any other corporation, or property of Genomic Solutions.

Liquidation

Harvard Bioscience. Harvard Bioscience's certificate of incorporation provides that upon the voluntary or involuntary liquidation, dissolution or winding up of Harvard Bioscience, the net assets of Harvard Bioscience will be distributed pro rata to the holders of Harvard Bioscience common stock.

Genomic Solutions. Genomic Solutions' certificate of incorporation provides that upon any liquidation, dissolution or winding up of Genomic Solutions, no distribution shall be made to holders of a stock ranking on parity with the common stock, except distributions made ratably on the common

133

stock and all such other parity stock in proportion to the total amounts to which the holders of all such shares are entitled upon such liquidation, dissolution or winding up.

Amendment of Certificate of Incorporation

Under Delaware law, a certificate of incorporation of a Delaware corporation may be amended by approval of the board of directors of the corporation and the affirmative vote of the holders of a majority of the outstanding shares entitled to vote for the amendment, unless a higher vote is required by the corporation's certificate of incorporation.

Harvard Bioscience. Harvard Bioscience's certificate of incorporation reserves Harvard Bioscience's right to amend or repeal the certificate of incorporation, in the manner prescribed by Delaware law and Harvard Bioscience's certificate of incorporation. As required by Delaware law, any amendment to Harvard Bioscience's certificate of incorporation must first be approved by a majority of our board of directors and, if required by law, thereafter approved by a majority of the outstanding shares entitled to vote with respect to such amendment, except that any amendment to the provisions relating to stockholder action, the board of directors, limitation of director liability and the amendment of Harvard Bioscience's certificate of incorporation must be approved by not less than 75% of the outstanding shares entitled to vote with respect to such amendment.

Genomic Solutions. Genomic Solutions' certificate of incorporation does not contain any provisions with respect to the amendment of its certificate of incorporation.

Amendment of Bylaws

Under Delaware law, stockholders entitled to vote have the power to adopt, amend or repeal bylaws. In addition, a corporation may, in its certificate of incorporation, confer such power upon the board of directors. The stockholders have the power to adopt, amend or repeal bylaws, even though the board may also be delegated such power.

Harvard Bioscience. Harvard Bioscience's certificate of incorporation and bylaws provide that its bylaws may be amended or repealed by the board of directors or by the stockholders. Such action by the board of directors requires the affirmative vote of a majority of the directors then in office. Such action by the stockholders requires the affirmative vote of at least 75% of the shares present in person or represented by proxy at an annual meeting of stockholders or a special meeting called for such purpose unless Harvard Bioscience's board of directors recommends that the stockholders approve such amendment or repeal at such meeting, in which case such amendment or repeal only requires the affirmative vote of a majority of the shares present in person or represented by proxy at the meeting.

Genomic Solutions. Genomic Solutions' certificate of incorporation provides that its board of directors may make, amend, supplement or repeal its bylaws, provided that the stockholders may change or repeal any bylaw adopted by the board of directors and that no amendment or supplement to the bylaws adopted by the board of directors may vary or conflict with any amendment or supplement adopted by the stockholders. Genomic Solutions' bylaws provide that its bylaws may be altered, amended or repealed or new bylaws may be adopted by the vote of a majority of the shares entitled to vote thereon.

Statutory Business Combination Provision

Harvard Bioscience and Genomic Solutions are both subject to Section 203 of the Delaware General Corporation Law, which prohibits a publicly-held Delaware corporation from consummating a

134

"business combination," except under certain circumstances, with an "interested stockholder" for a period of three years after the date such person became an "interested stockholder" unless:

before such person became an interested stockholder, the board of directors of the corporation approved the transaction in which the interested stockholder became an interested stockholder or approved the business combination;

upon the closing of the transaction that resulted in the interested stockholder becoming such, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding shares held by directors who are also officers of the corporation and shares held by employee stock plans; or

following the transaction in which such person became an interested stockholder, the business combination is approved by the board of directors of the corporation and authorized at a meeting of stockholders by the affirmative vote of the holders of at least two-thirds of the outstanding voting stock of the corporation not owned by the interested stockholder.

The term "interested stockholder" generally is defined as a person who, together with affiliates and associates, owns, or, within the prior three years, owned, 15% or more of a corporation's outstanding voting stock. The term "business combination" includes mergers, consolidations, asset sales involving 10% or more of a corporation's assets and other similar transactions resulting in a financial benefit to an interested stockholder. Section 203 makes it more difficult for an "interested stockholder" to effect various business combinations with a corporation for a three-year period. A Delaware corporation may "opt out" of Section 203 with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from an amendment approved by holders of at least a majority of the outstanding voting stock. The certificates of incorporation and bylaws of both Harvard Bioscience and Genomic Solutions do not exclude them from the restrictions imposed under Section 203.

Limitation of Liability of Directors

Delaware law permits a corporation to include a provision in its certificate of incorporation eliminating or limiting the personal liability of a director or officer to the corporation or its stockholders for damages for a breach of the director's fiduciary duty. However, no such provision can eliminate or limit director liability for:

any breach of the director's duty of loyalty to the corporation or its stockholders;

acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of the law;

willful or negligent violation of the laws governing the payment of dividends or the purchase or redemption of stock; and

any transaction from which the director derived an improper personal benefit.

Harvard Bioscience's and Genomic Solutions' certificates of incorporation each include a provision to limit directors' personal liability to the corporation to the fullest extent permitted by law.

While these provisions provide directors with protection from awards for monetary damages for breaches of their duty of care, they do not eliminate that duty. Accordingly, these provisions will have no effect on the availability of equitable remedies such as an injunction or rescission based on a director's breach of his duty of care.

Indemnification of Directors and Officers

Delaware law permits a corporation to indemnify officers and directors for actions taken in good faith and in a manner they reasonably believed to be in, or not opposed to, the best interests of the corporation, and with respect to any criminal action, which they had no reasonable cause to believe was unlawful.

Harvard Bioscience. Under Harvard Bioscience's bylaws, Harvard Bioscience commits to indemnify each of its directors and officers to the fullest extent authorized by Delaware law, as it now exists or may in the future be amended, against expenses (including attorneys' fees), judgments, penalties, fines, and amounts reasonably paid in settlement that are incurred in connection with any proceeding, arising by reason of the fact that such person is or was a director or officer of Harvard Bioscience, if such director or officer acted in good faith and in a manner such director or officer reasonably believed to be in or not opposed to the best interests of Harvard Bioscience and had no reasonable cause to believe his conduct was unlawful. Harvard Bioscience's bylaws also provide for the advancement of expenses to directors and, in the discretion of the board of directors, to officers. In addition, Harvard Bioscience's bylaws provide that the right of directors and officers to indemnification shall be a contract right and shall not be exclusive of any other right now possessed or hereafter acquired under any bylaw, agreement, vote of stockholders or otherwise. Furthermore, Harvard Bioscience's bylaws authorize it to provide insurance for its directors and officers, against any liability, whether or not Harvard Bioscience would have the power to indemnify such person against such liability under Delaware law.

Genomic Solutions. Under Genomic Solutions' certificate of incorporation, Genomic Solutions commits to indemnify each of its directors and officers to the fullest extent permitted by Delaware law against expenses (including attorneys' fees), judgments, fines, and amounts paid in settlement actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was a director or officer of Genomic Solutions, if such director or officer acted in good faith and in a manner such director or officer reasonably believed to be in or not opposed to the best interests of Genomic Solutions and had no reasonable cause to believe his conduct was unlawful. Genomic Solutions' certificate of incorporation also provides for the advancement of expenses to directors and officers. In addition, Genomic Solutions' certificate of incorporation provides that the right of directors and officers to indemnification shall be a contract right. Furthermore, Genomic Solutions' certificate of incorporation authorizes it to provide insurance for its directors and officers, against any liability, whether or not Genomic Solutions would have the power to indemnify such person against such liability under Delaware law.

DESCRIPTION OF HARVARD BIOSCIENCE CAPITAL STOCK

The following description of Harvard Bioscience's common stock and preferred stock summarizes the material terms and provisions of these types of securities. For the complete terms of Harvard Bioscience's common stock and preferred stock, please refer to Harvard Bioscience's certificate of incorporation and bylaws, which have been filed with the Securities and Exchange Commission. The terms of these securities may also be affected by Delaware law.

Authorized Capital Stock

Pursuant to its certificate of incorporation, Harvard Bioscience is authorized to issue up to 80,000,000 shares of common stock, par value \$0.01 per share, and 5,000,000 shares of preferred stock, in one or more series, par value \$0.01 per share.

Common Stock

As of September 16, 2002, there were 31,458,180 shares of Harvard Bioscience common stock issued, 26,797,396 shares outstanding and 4,660,784 shares held in treasury. All outstanding shares of Harvard Bioscience common stock are duly authorized, validly issued, fully paid and

nonassessable.

Voting Rights. Holders of Harvard Bioscience common stock are entitled to one vote per share registered in his or her name on the books of Harvard Bioscience. Holders of Harvard Bioscience common stock are not entitled to vote cumulatively for the election of directors. Generally, all matters to be voted on by Harvard Bioscience common stockholders must be approved by a majority, or, in the case of election of directors, by a plurality, of the votes cast at a meeting at which a quorum is present, voting together as a single class, subject to any voting rights granted to holders of any then outstanding preferred stock.

Dividends. Holders of Harvard Bioscience common stock will share ratably in any dividends if, as and when authorized and declared by the Harvard Bioscience board, or any authorized committee thereof, out of legally available assets. This right is subject to the preferential rights of any then outstanding preferred stock. Dividends consisting of shares of Harvard Bioscience common stock may be paid to holders of Harvard Bioscience common stock.

Liquidation. Upon Harvard Bioscience's liquidation, dissolution or winding up, all holders of Harvard Bioscience common stock are entitled to share ratably in any assets legally available for distribution to holders of shares of Harvard Bioscience common stock. This right is subject to the preferential rights of any then outstanding preferred stock.

Other Rights and Restrictions. No shares of Harvard Bioscience common stock are subject to redemption or have preemptive rights to purchase additional shares of Harvard Bioscience common stock.

Listing. Harvard Bioscience common stock is traded on the Nasdaq National Market under the ticker symbol "HBIO."

Transfer Agent and Registrar. The transfer agent and registrar for Harvard Bioscience common stock is Registrar and Transfer Company.

Preferred Stock

As of September 16, 2002, no shares of Harvard Bioscience preferred stock were issued and outstanding. Harvard Bioscience's board of directors is authorized to fix the voting rights, if any, designations, powers, preferences, qualifications, limitations and restrictions thereof, applicable to the shares of each series of Harvard Bioscience preferred stock issued. Harvard Bioscience's board of

137

directors may, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of Harvard Bioscience common stock and could have anti-takeover effects, including preferred stock or rights to acquire preferred stock in connection with implementing a stockholder rights plan. Harvard Bioscience has no present plan to issue any shares of preferred stock. The ability of Harvard Bioscience's board of directors to issue preferred stock without stockholder approval could have the effect of delaying, deferring or preventing a change of control of Harvard Bioscience or the removal of existing management.

Registration Rights

The holders of 8,762,151 shares of Harvard Bioscience common stock are entitled to rights with respect to registration of such shares under the Securities Act. These rights are provided under the terms of a securityholders agreement between Harvard Bioscience and certain of the holders of registrable securities. Under these registration rights, certain holders of registrable securities holding 30% or more of the then outstanding registrable securities held by all holders of registrable securities may require on two occasions that Harvard Bioscience register such shares of Harvard Bioscience common stock for public resale. In addition, certain holders of registrable securities may require that Harvard Bioscience register such shares of Harvard Bioscience common stock for public resale on Form S-3 or similar short-form registration, if Harvard Bioscience is eligible to use Form S-3 or similar short form registration, and the value of the securities to be registered is at least \$2,000,000. If Harvard Bioscience elects to register any shares of Harvard Bioscience common stock for any public offering, the holders of registrable securities are entitled to include shares of common stock in the registration. However, Harvard Bioscience may reduce the number of shares proposed to be registered in view of market conditions. Harvard Bioscience will pay all expenses in connection with any registration, other than underwriting discounts and commissions.

Indemnification Matters

Harvard Bioscience has entered into indemnification agreements with each of its directors. Such agreements provide that Harvard Bioscience will indemnify its directors for expenses incurred because of their status as a director to the fullest extent permitted by Delaware law,

as it now exists or may in the future be amended, and Harvard Bioscience's bylaws. These agreements also provide for the advancement of expenses to directors. In addition, Harvard Bioscience's bylaws provide that directors and officers shall be, and in the discretion of the board of directors, non-officer employees may be, indemnified to the fullest extent authorized by Delaware law, as it now exists or may in the future be amended, against all expenses and liabilities reasonably incurred in connection with service for or on behalf of Harvard Bioscience. Harvard Bioscience's bylaws also provide for the advancement of expenses to directors and, in the discretion of the board of directors, to officers. For a further discussion of the indemnification provisions of Harvard Bioscience's bylaws, see "Comparison of Rights of Holders of Genomic Solutions Common Stock and Harvard Bioscience Common Stock Indemnification of Directors and Officers."

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling Harvard Bioscience pursuant to the foregoing provisions, Harvard Bioscience has been informed 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. At present, there is no pending material litigation or proceeding involving any director, officer, employee or agent of Harvard Bioscience in which indemnification will be required or permitted.

138

Provisions of Delaware Law and Harvard Bioscience's Certificate of Incorporation and Bylaws That May Have Anti-Takeover Effects

Certain provisions of Delaware law, Harvard Bioscience's certificate of incorporation and bylaws described below, as well as the ability of Harvard Bioscience's board of directors to issue shares of preferred stock and to set the voting rights, preferences and other terms thereof, may be deemed to have an anti-takeover effect and may discourage takeover attempts not first approved by Harvard Bioscience's board of directors, including takeovers which particular stockholders may deem to be in their best interests. These provisions also could have the effect of discouraging open market purchases of Harvard Bioscience common stock because they may be considered disadvantageous by a stockholder who desires subsequent to such purchases to participate in a business combination transaction with Harvard Bioscience or to elect a new director to the Harvard Bioscience board.

For a description of certain provisions of Harvard Bioscience's certificate of incorporation and bylaws that may have the effect of delaying, deferring or preventing a change in control of Harvard Bioscience, see generally the section entitled "Comparison of Rights of Holders of Genomic Solutions Common Stock and Harvard Bioscience Common Stock" beginning on page 129 of this proxy statement and prospectus. In particular see the discussions under the headings "Special Meetings of Stockholders," "Stockholder Action by Written Consent," "Advance Notice Provisions for Stockholder Nominations and Proposals," "Amendment of Certificate of Incorporation," "Amendment of Bylaws" and "Statutory Business Combination Provision" in that section.

LEGAL MATTERS

The validity of the shares of Harvard Bioscience common stock offered by this proxy statement and prospectus will be passed upon for Harvard Bioscience by Goodwin Procter LLP. Genomic Solutions is represented in connection with the merger by Jaffe, Raitt, Heuer & Weiss, P.C. It is a condition to the completion of the merger that Genomic Solutions receive an opinion of Jaffe, Raitt, Heuer & Weiss, P.C. to the effect that, among other things, the merger will qualify as a reorganization within the meaning of Section 368(a) under the Internal Revenue Code. In the event that Genomic Solutions' tax counsel is unwilling or unable to render an opinion, Harvard Bioscience's tax counsel may render the opinion. See the section entitled "The Merger and Related Transactions Material United States Federal Income Tax Consequences of the Merger" beginning on page 84 of this proxy statement and prospectus.

EXPERTS

The consolidated financial statements of Harvard Bioscience, Inc. and Subsidiaries as of December 31, 2001 and 2000, and for each of the years in the three-year period ended December 31, 2001 have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG LLP, independent accountants, incorporated by reference herein, and upon authority of said firm as experts in accounting and auditing.

The consolidated financial statements of Genomic Solutions at December 31, 2001 and 2000, and for each of the years in the three-year period ended December 31, 2001, included in the proxy statement of Genomic Solutions, which is referred to and made a part of this prospectus and registration statement of Harvard Bioscience, have been audited by Arthur Andersen LLP, independent auditors, as set forth in their report appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing. Arthur Andersen LLP has not consented to the inclusion of their report in this proxy statement and prospectus, and the requirement to

file their consent has been dispensed with in reliance upon Rule 437a of the Securities Act. Because Arthur Andersen LLP has not consented to the inclusion of their report in this proxy statement and prospectus, you will not be able to recover against Arthur Andersen LLP under Section 11 of the Securities Act for any untrue statements of a material fact contained in the consolidated financial statements audited by Arthur Andersen LLP or any omissions to state a material fact required to be stated therein.

GENOMIC SOLUTIONS' STOCKHOLDER PROPOSALS

If the merger is not completed before the 2003 annual meeting of Genomic Solutions stockholders, Genomic Solutions stockholders may present proper proposals for inclusion in the document mailed by Genomic Solutions for such meeting and for consideration at the next annual meeting of its stockholders by submitting their proposals to Genomic Solutions in a timely manner complying with all the requirements of the proxy rules established by the Securities and Exchange Commission and Genomic Solutions' bylaws. Proposals of stockholders of Genomic Solutions that are intended to be presented by such stockholders at Genomic Solutions' 2003 annual meeting must be received by Genomic Solutions no later than December 1, 2002 in order that they may be considered for inclusion in the document and form of proxy relating to that meeting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

This proxy statement and prospectus incorporates other reports by reference which are not presented in or delivered with this document.

All reports, proxy and information statements and other information filed by Harvard Bioscience pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of this proxy statement and prospectus and before the date of the special meeting described herein are incorporated by reference into this proxy statement and prospectus from the date of filing of those reports, proxy and information statements and other information.

You should rely only on the information contained in this proxy statement and prospectus or to which Harvard Bioscience has referred you herein. We have not authorized anyone to provide you with different information.

The following documents, which have been filed by Harvard Bioscience with the Securities and Exchange Commission, are incorporated by reference into this proxy statement and prospectus:

Annual Report on Form 10-K for the year ended December 31, 2001;

Quarterly Report on Form 10-Q for the quarter ended March 31, 2002;

Quarterly Report on Form 10-Q for the quarter ended June 30, 2002;

Current Report on Form 8-K filed on July 19, 2002;

Proxy Statement filed on April 17, 2002 for the stockholders meeting held on May 23, 2002; and

The description of Harvard Bioscience's common stock contained in Harvard Bioscience's registration statement filed on Form 8-A on November 8, 2000 and any amendment or report filed for the purpose of updating such description.

The reports incorporated by reference into this proxy statement and prospectus are available from Harvard Bioscience upon request. Harvard Bioscience will provide a copy of any and all of the information that is incorporated by reference in this proxy statement and prospectus (not including exhibits to the information unless those exhibits are specifically incorporated by reference into this proxy statement and prospectus) to any person, without charge, upon written or oral request to the following address and telephone number. **Any request for**

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

documents should be made by October 17, 2002 to ensure timely delivery prior to the special meeting of Genomic Solutions stockholders at which the merger agreement and the merger will be considered and voted upon.

Harvard Bioscience, Inc.
84 October Hill Road
Holliston, Massachusetts 01746
(508) 893-8999
Attn: Susan M. Luscinski, Chief Financial Officer

140

Any statement contained in this proxy statement and prospectus or in a document incorporated or deemed to be incorporated by reference into this proxy statement and prospectus will be deemed to be modified or superseded for purposes of this proxy statement and prospectus to the extent that a statement contained in this proxy statement and prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this proxy statement and prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this proxy statement and prospectus.

Harvard Bioscience and Genomic Solutions file reports, proxy statements and other information with the Securities and Exchange Commission. Copies of our reports, proxy statements and other information may be inspected and copied at the public reference facilities maintained by the Securities and Exchange Commission at the following locations:

Public Reference Room
Judiciary Plaza
Room 1024
450 Fifth Street, N.W.
Washington, D.C. 20549

Chicago Regional Office
Citicorp Center
500 West Madison Street
Suite 1400
Chicago, Illinois 60661

Copies of these materials also may be obtained by mail at prescribed rates from the Public Reference Section of the Securities and Exchange Commission, 450 Fifth Street, N.W., Washington, D.C. 20549 or by calling the Securities and Exchange Commission at 1-800-SEC-0330. In addition, the Securities and Exchange Commission maintains a website that contains reports, proxy and information statements and other information regarding each of Harvard Bioscience and Genomic Solutions. The address of the Securities and Exchange Commission Website is <http://www.sec.gov>.

Reports, proxy and information statements and other information concerning Harvard Bioscience and Genomic Solutions also can be inspected at the offices of The National Association of Securities Dealers, Inc.

The National Association of Securities Dealers, Inc.
1735 K Street, N.W.
Washington, D.C. 20006

Harvard Bioscience has filed a registration statement on Form S-4 under the Securities Act with the Securities and Exchange Commission with respect to Harvard Bioscience's common stock to be issued to Genomic Solutions stockholders in the merger. This proxy statement and prospectus constitutes the prospectus of Harvard Bioscience filed as part of the registration statement. This proxy statement and prospectus does not contain all of the information set forth in the registration statement because certain parts of the registration statement are omitted in accordance with the rules and regulations of the Securities and Exchange Commission. Statements made in this proxy statement and prospectus as to the content of any contract, agreement or other document referred to are not necessarily complete. With respect to each of those contract, agreements or other documents to be filed or incorporated by reference as an exhibit to the registration statement, you should refer to the corresponding exhibit, when it is filed, for a more complete description of the matter involved and read all statements in this proxy statement and prospectus in light of that exhibit. The registration statement and its exhibits are available for inspection and copying as set forth above.

Genomic Solutions stockholders should call Gary A. Kendra, Secretary, at Genomic Solutions at (734) 975-4800 with any request for any documentation referred to in this proxy statement and prospectus.

141

This proxy statement and prospectus does not constitute an offer to sell, or a solicitation of an offer to purchase, the securities offered by this proxy statement and prospectus, or the solicitation of a proxy, in any jurisdiction to or from any person to whom or from whom it is unlawful to make such offer, solicitation of an offer or proxy solicitation in such jurisdiction. Neither the delivery of this

proxy statement and prospectus nor any distribution of securities pursuant to this proxy statement and prospectus shall, under any circumstances, create any implication that there has been no change in the information set forth or incorporated into this proxy statement and prospectus by reference or in our affairs since the date of this proxy statement and prospectus. The information contained in this proxy statement and prospectus with respect to Genomic Solutions and its subsidiaries was provided by Genomic Solutions and the information contained in this proxy statement and prospectus with respect to Harvard Bioscience was provided by Harvard Bioscience.

INDEX TO GENOMIC SOLUTIONS FINANCIAL STATEMENTS

	Page
Report of Independent Public Accountants	F-2
Consolidated Balance Sheets as of December 31, 2001 and 2000	F-3
Consolidated Statements of Operations for the years ended December 31, 2001, 2000 and 1999	F-4
Consolidated Statements of Stockholders' Equity (Deficit) for the years ended December 31, 2001, 2000 and 1999	F-5
Consolidated Statements of Cash Flows for the years ended December 31, 2001, 2000 and 1999	F-7
Notes to Consolidated Financial Statements	F-8
	F-1

Report of Independent Public Accountants

To the Board of Directors and Stockholders of
Genomic Solutions Inc.:

We have audited the accompanying consolidated balance sheets of GENOMIC SOLUTIONS INC. (a Delaware corporation) AND SUBSIDIARIES as of December 31, 2001 and 2000, and the related consolidated statements of operations, stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2001. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Genomic Solutions Inc. and subsidiaries as of December 31, 2001 and 2000, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2001, in conformity with accounting principles generally accepted in the United States.

Arthur Andersen LLP

Detroit, Michigan,
February 13, 2002 (except with respect
to the matter discussed in Note 16,
as to which the date is March 21, 2002)

CONSOLIDATED BALANCE SHEETS

	December 31, 2001	December 31, 2000
	<u> </u>	<u> </u>
	(in thousands, except per share data)	
Assets		
Current Assets:		
Cash and cash equivalents	\$ 13,097	\$ 40,159
Accounts receivable, net	5,466	7,788
Inventories	9,622	5,734
Prepaid expenses and other	948	1,114
	<u> </u>	<u> </u>
Total current assets	29,133	54,795
Property and equipment, net	3,261	4,735
Goodwill, net	9,578	954
Intangible assets, net	4,217	4,524
Other assets	1,735	216
	<u> </u>	<u> </u>
Total assets	\$ 47,924	\$ 65,224
	<u> </u>	<u> </u>
Liabilities and Stockholders' Equity		
Current Liabilities:		
Lines of credit	\$ 2,500	\$
Current portion of long-term debt	57	754
Accounts payable	5,213	3,711
Accrued liabilities	4,755	6,067
Deferred revenue	842	293
	<u> </u>	<u> </u>
Total current liabilities	13,367	10,825
	<u> </u>	<u> </u>
Long-Term Liabilities:		
Long-term debt, less current portion	66	1,202
Other long-term liabilities	52	1,208
	<u> </u>	<u> </u>
Total long-term liabilities	118	2,410
	<u> </u>	<u> </u>
Commitments and Contingencies (see Note 16)		
Stockholders' Equity:		
Preferred stock, \$0.001 par value; 15,000 shares authorized; zero shares issued and outstanding		
Callable common stock, \$0.001 par value; 40,000 shares authorized; zero and 23,758 shares issued and outstanding at December 31, 2001 and 2000, respectively		24
Common stock, \$0.001 par value; 40,000 shares authorized; 31,154 and 1,270 shares issued and outstanding at December 31, 2001 and 2000, respectively	31	1
Additional paid-in capital	103,045	94,317
Notes receivable	(137)	(129)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	December 31, 2001	December 31, 2000
Deferred compensation related to stock options	(72)	(98)
Retained deficit	(68,055)	(41,955)
Accumulated other comprehensive loss	(373)	(171)
Total stockholders' equity	34,439	51,989
Total liabilities and stockholders' equity	\$ 47,924	\$ 65,224

The accompanying notes are an integral part of these consolidated statements.

F-3

CONSOLIDATED STATEMENTS OF OPERATIONS

	Years ended December 31,		
	2001	2000	1999
	(in thousands, except per share data)		
Revenue:			
Product revenue	\$ 15,523	\$ 18,215	\$ 11,282
Service revenue	1,317	862	810
Total revenue	16,840	19,077	12,092
Cost of Revenue:			
Cost of product revenue	10,186	8,972	6,570
Cost of service revenue	426	402	420
Impairment of inventory	1,180		
Total cost of revenue	11,792	9,374	6,990
Gross profit	5,048	9,703	5,102
Operating Expenses:			
Selling, general and administrative	14,136	11,919	8,652
Research and development	6,797	5,596	4,830
Restructuring and other unusual charges	10,936	600	438
Total operating expenses	31,869	18,115	13,920
Loss from operations	(26,821)	(8,412)	(8,818)
Other Income (Expense):			
Interest expense	(207)	(2,599)	(2,476)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	Years ended December 31,		
Interest income	1,148	2,657	111
Gain on sale of investment		282	
Gain on sale of assets		382	
Other expense, net	(220)	(164)	41
Total other income (expense)	721	558	(2,324)
Loss before taxes and extraordinary items	(26,100)	(7,854)	(11,142)
Benefit for Income Taxes			
Loss before extraordinary items	(26,100)	(7,854)	(11,142)
Extraordinary Loss, net of \$0 tax expense		(1,050)	
Net Loss	(26,100)	(8,904)	(11,142)
Non-cash common stock warrant benefit (charge)		1,059	(3,861)
Deemed dividend upon issuance to and subsequent repurchase of stock from PerkinElmer, Inc	(2,811)	(8,000)	
Net loss attributable to common stockholders	\$ (28,911)	\$ (15,845)	\$ (15,003)
Net Loss Per Share, Basic and Diluted:			
Loss per share before extraordinary items	\$ (1.05)	\$ (0.45)	\$ (3.75)
Loss per share from extraordinary items		(0.06)	
Net loss per share	(1.05)	(0.51)	(3.75)
Income (loss) per share from non-cash common stock warrant benefit (charge)		0.06	(1.30)
Loss per share from deemed dividend	(0.12)	(0.45)	
Loss per share attributable to common stockholders	\$ (1.17)	\$ (0.90)	\$ (5.04)
Weighted average common shares	24,791	17,526	2,974

The accompanying notes are an integral part of these consolidated statements.

F-4

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)

	Convertible Preferred Stock		Callable Common Stock		Common Stock		Additional Paid-In Capital	Notes Receivable	Deferred Compensation Related To Stock Options	Retained Deficit	Accumulated Other Comprehensive Income (Loss)	Comprehensive Total	Comprehensive Loss
	Shares	Amount	Shares	Amount	Shares	Amount							
Balance December 31, 1998	6,901	\$ 7	2,919	\$ 3		\$	\$ 16,524	\$ (47)		\$ (11,107)	\$ 105	\$ 5,485	
			1				1					1	

(in thousands)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	<u>Convertible Preferred Stock</u>		<u>Callable Common Stock</u>		<u>Deferred Compensation Related To Stock Options</u>			<u>Accumulated Other Comprehensive Income (Loss)</u>		
Callable common stock issued in exchange for services										
Interest income on notes receivable						(6)				(6)
Callable common stock issued upon exercise of stock options					9					9
Callable common stock issued as payment for interest on subordinated debt			87		238					238
			48							
Deferred compensation on stock options granted					129		(129)			
Amortization of deferred compensation							5			5
Prepaid stock issuance expenses					(69)					(69)
Accretion of redemption price of common stock warrants								(3,861)		(3,861)
Net loss								(11,142)		(11,142) \$
Foreign currency translation adjustment									(41)	(41) (41)
Comprehensive loss										\$ (11,183)
Balance December 31, 1999	6,901	7	3,055	3	16,832	(53)	(124)	(26,110)	64	(9,381)
Series P preferred stock issued for cash	1,270	1			7,441					7,442
Deemed dividend related to beneficial conversion feature on Series P preferred stock					8,000			(8,000)		
Interest income on notes receivable						(7)				(7)
Callable common stock issued in employee stock purchase plan			5		32					32
Callable common stock issued upon exercise of stock options			907	1	302	(69)				234
Callable common stock issued as payment for interest on subordinated debt			43		208					208
Callable common stock issued in initial public offering			7,660	8	55,125					55,133
Automatic conversion of preferred stock and warrants into callable common stock	(6,901)	(7)	12,088	12	6,377					6,382
Automatic conversion of series P preferred stock into	(1,270)	(1)		1,270	1					

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	Convertible Preferred Stock	Callable Common Stock	Deferred Compensation Related To Stock Options ₂₆	Accumulated Other Comprehensive Income (Loss)	
common stock					
Amortization of deferred compensation					26
Decreation of redemption price of common stock warrants				1,059	1,059
Net loss				(8,904)	(8,904) \$ (8,904)
Foreign currency translation adjustment				(235)	(235) (235)
Comprehensive loss					\$ (9,139)

F-5

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)(continued)

	Convertible Preferred Stock		Callable Common Stock		Common Stock		Additional Paid-In Capital	Notes Receivable	Deferred Compensation Related To Stock Options	Retained Deficit	Accumulated Other Comprehensive Income (Loss)		Comprehensive Loss
	Shares	Amount	Shares	Amount	Shares	Amount					Total		
	(in thousands)												
Balance December 31, 2000			23,758	24	1,270	1	94,317	(129)	(98)	(41,955)	(171)	51,989	
Interest income on notes receivable								(8)					(8)
Common stock issued in employee stock purchase plan					16		49						49
Callable common stock issued upon exercise of stock options			123				33						33
Common stock issued upon exercise of stock options					38		26						26
Callable common stock issued as payment for interest on subordinated debt			(8)				(36)						(36)
Repurchase of stock from PerkinElmer, Inc.					(873)	(1)	(5,499)						(5,500)
Automatic conversion of callable common stock to common stock			(23,873)	(24)	23,873	24							
Common stock issued in settlement of lawsuit					29		55						55
Common stock issued in					6,801	7	14,100						14,107

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	Convertible Preferred Stock	Deferred Compensation Related To Stock Options	Accumulated Other Comprehensive Income (Loss)		
connection with acquisition					
Amortization of deferred compensation		26	26		
Net loss			(26,100)	(26,100)	\$ (26,100)
Foreign currency translation adjustment			(202)	(202)	(202)
Comprehensive loss					\$ (26,302)
Balance December 31, 2001	\$ 31,154	\$ 31	\$ 103,045	\$ (137)	\$ (72)
				\$ (68,055)	\$ (373)
					\$ 34,439

The accompanying notes are an integral part of these consolidated statements.

F-6

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years ended December 31,		
	2001	2000	1999
	(in thousands)		
Cash Flows from Operating Activities:			
Net loss	\$ (26,100)	\$ (8,904)	\$ (11,142)
Adjustments to reconcile net loss to net cash used in operating activities			
Depreciation and amortization	2,325	1,351	1,239
Amortization of discount on subordinated debt		965	1,606
Restructuring and other unusual charges	12,116	600	438
Callable common stock issued in lieu of interest		208	238
Extraordinary loss		1,050	
Gain on sale of investment		(282)	
Gain on sale of assets		(382)	
Other	54	51	(2)
Increase (decrease) in cash resulting from changes in assets and liabilities, net of acquisitions			
Accounts receivable, net	2,649	(4,157)	(2,376)
Inventories	(3,143)	(2,409)	(787)
Prepaid expenses and other	211	(817)	371
Accounts payable	(1,263)	1,565	309
Accrued liabilities	(804)	(81)	524
Deferred revenue	(5)	106	58
Net cash used in operating activities	(13,960)	(11,136)	(9,524)
Cash Flows from Investing Activities:			
Purchase of property and equipment	(2,043)	(1,669)	(1,449)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	Years ended December 31,		
Capitalized license fees	(3,465)		
Acquisitions of stock of various companies	(3,086)		
Increase in other assets	(40)	(103)	(340)
Proceeds from sale of investment		575	
Proceeds from sale of property and equipment	37	168	
Net cash used in investing activities	(8,597)	(1,029)	(1,789)
Cash Flows from Financing Activities:			
Net borrowings (repayments) under lines of credit	2,500	(1,768)	(170)
Proceeds from issuance of common stock and callable common stock	108	55,399	8
Repayment of long-term debt	(1,888)	(758)	(538)
Repurchase of stock from PerkinElmer, Inc.	(5,500)		
Proceeds from issuance of preferred stock		7,442	
Borrowings under sale-leaseback transactions		113	1,140
Repayment of subordinated debt		(9,500)	
Proceeds from issuance of subordinated debt and common stock warrants			9,500
Other financing activities	(8)	(7)	(75)
Net cash provided by (used in) financing activities	(4,788)	50,921	9,865
Effect of Exchange Rate Changes on Cash	283	75	(104)
Net Increase (Decrease) in Cash and Cash Equivalents	(27,062)	38,831	(1,552)
Cash and Cash Equivalents Beginning of Year	40,159	1,328	2,880
Cash and Cash Equivalents End of Year	\$ 13,097	\$ 40,159	\$ 1,328
Supplemental Disclosure of Cash Flow Activity:			
Cash paid for interest	\$ 226	\$ 1,419	\$ 631
Cash paid for income taxes	\$ 71	\$	\$
Supplemental Disclosure of Non-Cash Activity:			
Equipment purchased under capital lease obligations (see Note 16)	\$	\$ 959	\$ 1,561
Capitalized license fees not yet paid	\$	\$ 4,525	\$
Issuance of common stock and options in connection with acquisition	\$ 14,501	\$	\$

The accompanying notes are an integral part of these consolidated statements.

F-7

1. DESCRIPTION OF BUSINESS

Genomic Solutions Inc. ("Genomic Solutions") and its subsidiaries (collectively referred to as the "Company") develop, manufacture and sell instruments, consumables and software for the life sciences research and drug discovery markets. The Company's market focus is based on three key high growth areas: genomics, proteomics and high-throughput screening and dispensing systems. These areas comprise three of the major technologies used by researchers in studying disease and developing new drugs. The Company's products are distributed and sold to

pharmaceutical and biotechnology companies, government agencies, academic institutions and private research organizations throughout the world.

As of December 31, 2001, the Company has operations in the United States, Japan and the United Kingdom. Genomic Solutions KK, a wholly-owned subsidiary of Genomic Solutions located in Tokyo, Japan, provides sales and technical support functions for the Japanese market. Genomic Solutions Ltd., a wholly-owned subsidiary of Genomic Solutions located in Huntingdon, England provides robot and fluid handling systems development and manufacturing as well as marketing, sales and support for the United Kingdom market. Cartesian Technologies, Inc. located in Irvine, California, provides genomic and high-throughput screening and dispensing systems development and manufacturing as well as marketing and sales support for the United States and United Kingdom markets.

On May 10, 2000, the Company completed its initial public offering, raising net proceeds, after deducting underwriting discounts and commissions and other offering expenses, of approximately \$55.1 million. All of the Company's preferred stock was automatically converted to callable common stock or common stock (see Note 11) and all of the warrants issued in connection with the subordinated note agreements in April and October 1999 were either exercised or cancelled upon the completion of the initial public offering (see Note 9).

As a result of the Company's efforts in recent years to build its infrastructure and internal staffing, develop its systems and expand into new markets, the Company has experienced significant operating losses. As more fully discussed in Note 19, on September 7, 2001, the Company announced restructuring initiatives designed to lower its cost structure and achieve profitability in 2002. There can be no assurance that the Company's revenues or customer base will grow, or that the Company will be able to achieve or sustain profitability or positive cash flow. The failure of the Company to achieve or sustain profitability or positive cash flow may result in the Company reducing the scope of its operations or anticipated expansion, which could adversely affect the Company's business and results of operations.

2. SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The consolidated financial statements include the accounts of Genomic Solutions and its subsidiaries, Genomic Solutions KK, Genomic Solutions Ltd. and Cartesian Technologies, Inc. All significant intercompany balances and transactions have been eliminated in consolidation.

Revenue

Product revenue is derived from sales of genomic, proteomic and high-throughput screening and dispensing systems and consumables. Revenue from systems and consumable product sales, including revenues generated through distributors, is recognized when a customer contract is fully executed and the product is shipped. Title to the system passes to the customer and acceptance occurs upon shipment. There are no significant installation efforts required. Service revenue includes revenue from contract research services and service maintenance agreements. Revenue from contract research

F-8

services is recognized as the services are performed on a time and materials basis. Revenue from service maintenance agreements is recognized on a straight-line basis over the period in which the services are provided.

Research and Development Expenses

Research and development expenses include all employee payroll and related costs attributable to research and development activities and are expensed when incurred.

The Company incurs software development costs for software to be imbedded in the Company's instrumentation products. The Company accounts for these software development costs in accordance with Statement of Financial Accounting Standards ("SFAS") No. 86. Under SFAS No. 86, capitalization of software development costs begins upon the establishment of technological feasibility of the software component (defined as a working program model) and completing research and development activities for the instrumentation component of the product. In 2001, 2000 and 1999, amounts that would have been capitalized under this statement were immaterial, and therefore no software development costs have been capitalized. The Company does not expect to capitalize any software development costs in future periods.

Foreign Currency Translation

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

The financial position and results of operations of Genomic Solutions' foreign subsidiaries are measured using local currency as the functional currency. Assets and liabilities of each subsidiary are translated at the rate of exchange in effect at the end of the period. Revenues and expenses are translated at the average exchange rate for the period. Foreign currency translation gains and losses not impacting cash flows are credited to or charged against a separate component of stockholders' equity. Foreign currency translation gains and losses arising from cash transactions are credited or charged against current earnings. Foreign currency transaction gain (loss) totaled approximately \$(257,000), \$(82,000) and \$113,000 in 2001, 2000 and 1999, respectively, and are included in other expense in the accompanying consolidated statements of operations.

Management Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Cash Equivalents

The Company considers all highly liquid investments with a maturity of ninety days or less to be cash equivalents.

Accounts Receivable

At December 31, 2001 and 2000, accounts receivable are stated net of an allowance for uncollectible accounts of approximately \$455,000 and \$226,000, respectively.

F-9

Inventories

Inventories consist primarily of purchased parts and components and are stated at the lower of cost, as determined on a first-in, first-out basis, or market. Reserves for slow moving and obsolete inventories are provided based on historical experience and current product demand. We evaluate the adequacy of these reserves quarterly.

Property and Equipment

Property and equipment are recorded at cost. Depreciation is provided on a straight-line basis over the estimated useful lives of the related assets, which generally range from three to five years.

Goodwill

Goodwill is being amortized on a straight-line basis over periods ranging from five to ten years. At December 31, 2001 and 2000, accumulated amortization totaled \$536,000 and \$809,000, respectively. Amortization expense totaled approximately \$318,000, \$298,000 and \$385,000 in 2001, 2000 and 1999, respectively, exclusive of write-downs.

License Fees

From time to time, the Company enters into license agreements with third parties whereby the Company obtains the right to use certain technologies for certain periods of time. Under agreements entered into during 2000, the Company was required to pay initial, non-refundable fees of \$4,525,000 and then pay royalties on certain product sales during the terms of the agreements (see Note 16). The initial, non-refundable fees have been capitalized as intangible assets and are amortized over the effective term of the agreements of between five and ten years. At December 31, 2001, accumulated amortization totaled approximately \$4.5 million including the effect of the write-down of certain initial non-refundable fees as discussed below. Amortization expense totaled approximately \$463,000 in 2001, exclusive of write-downs. At December 31, 2000, no amortized expense had been recognized. The initial, non-refundable fees are accrued in the accompanying consolidated balance sheets within current and long-term liabilities.

Impairment of Goodwill and Long-Lived Assets

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

At each balance sheet date, the Company evaluates the carrying value of goodwill and other long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. If evidence of a possible impairment exists as a result of this evaluation, the Company estimates the undiscounted future cash flows from the use of the asset and its eventual disposition and then compares this amount to the carrying value of the asset. If an impairment exists, the Company measures the impairment by estimating the present value of expected future cash flows and recording an adjustment to reduce the asset to its estimated fair value.

In September 2001 as a result of the Company's restructuring initiatives, the Company determined that goodwill related to certain past acquisitions was impaired and recorded an adjustment of approximately \$266,000 to reduce these assets to their estimated fair value. In September 1999, the Company determined that goodwill related to a past acquisition was impaired and recorded an adjustment of approximately \$438,000 to reduce this asset to its estimated fair value. These write-downs are included in restructuring and other unusual charges in the accompanying consolidated statements of operations.

F-10

In December 2001, the Company determined that one of its key license agreements was substantially impaired due to certain U.S. District Court summary judgment rulings determining that key patents or claims subject to the agreement were invalid and substantial changes in market conditions with respect to the revenue and profit expectations of certain products produced under the agreement. As a result of the impairments, the Company has taken a write-down on certain unamortized license fees of approximately \$4.0 million to reduce this asset to its estimated fair value. This write-down is included in restructuring and other unusual charges in the accompanying consolidated statements of operations.

Accrued Warranty

The Company provides a one-year warranty on the majority of its instrumentation sales. The warranty primarily consists of two preventative maintenance visits by the Company. The Company has recorded a liability for estimated warranty costs to be incurred on sales made prior to the end of each period, which is included in accrued liabilities in the accompanying consolidated balance sheets.

Stock-Based Compensation

The Company accounts for stock-based compensation to employees using the intrinsic value method prescribed under Accounting Principles Board Opinion ("APB") No. 25, "Accounting for Stock Issued to Employees," and related interpretations. Accordingly, compensation cost for stock options is measured as the excess, if any, of the fair value of the Company's common stock at the date of the option grant over the amount the employee must pay to acquire the stock. In 1999, the Company recognized deferred compensation related to stock option grants (see Note 13). As supplemental information, the Company has provided pro forma disclosure of stock option activity in Note 13, in accordance with the requirements of SFAS No. 123, "Accounting for Stock-Based Compensation."

The Company accounts for stock-based compensation to non-employees under SFAS No. 123 and Emerging Issues Task Force ("EITF") No. 96-18. Stock-based compensation related to options issued to non-employees is not material for any period presented.

Net Loss Per Share

Basic and diluted net loss per share is computed by dividing the net loss allocable to common shareholders by the weighted average number of shares of common stock outstanding. For the years 2001, 2000 and 1999, the effect of convertible preferred stock, stock options and warrants outstanding for the purchase of shares of common stock have not been used in the calculation of diluted net loss per share because to do so would be anti-dilutive. As such, the numerator and the denominator used in computing both basic and diluted net loss per share allocable to common stockholders for each period are equal. The total number of shares excluded from the calculations of diluted net loss per share, prior to application of the treasury stock method, was 2,412,292, 1,840,866 and 4,776,371 in 2001, 2000 and 1999, respectively.

F-11

The calculation of basic and diluted net loss per share is as follows (in thousands, except per share data):

Years ended December 31,

	Years ended December 31,		
	2001	2000	1999
Net loss attributable to common stockholders	\$ (28,911)	\$ (15,845)	\$ (15,003)
Basic and diluted weighted average common shares outstanding	24,791	17,526	2,974
Net loss per share attributable to common stockholders	\$ (1.17)	\$ (0.90)	\$ (5.04)

Fair Value of Financial Instruments

The carrying values of the Company's accounts receivable, lines of credit, and accounts payable approximate fair value due to the short maturities of these instruments. Management's estimate of the fair value of notes payable and the note receivable is determined by reference to various market data for comparable financial instruments, requires considerable judgment by management, and are not necessarily indicative of the amounts that could be realized in a current market exchange. The fair value of these financial instruments approximate their recorded values for all periods presented. It is not practicable to estimate the fair value of the Company's capital lease obligations.

Comprehensive Loss

Comprehensive loss is the total of net loss and all other non-owner changes in equity. The difference between net loss, as reported in the accompanying consolidated statements of operations, and comprehensive loss is the foreign currency translation adjustment for the respective periods. Accumulated other comprehensive loss consists solely of the cumulative translation adjustment as presented in the accompanying consolidated balance sheets.

Recent Accounting Pronouncements

SFAS No. 141, "Business Combinations" and SFAS No. 142 "Goodwill and Other Intangible Assets," were recently approved by the Financial Accounting Standards Board ("FASB"). These pronouncements amend the accounting for business combinations, goodwill, and intangible assets. SFAS No. 141 eliminates the pooling-of-interests method of accounting for business combinations and further clarifies the criteria to recognize intangible assets separately from goodwill. The requirements of SFAS No. 141 are effective for any business combination that is completed after June 30, 2001. SFAS No. 142 no longer permits amortization of goodwill and intangible assets with indefinite lives. Separable intangible assets that are not deemed to have an indefinite life will continue to be amortized over their useful lives. In addition, SFAS No. 142 establishes a new method of testing goodwill for impairment by using a fair-value approach. The amortization provisions of SFAS No. 142 apply to goodwill and intangible assets acquired after June 30, 2001. With respect to goodwill and intangible assets acquired prior to July 1, 2001, companies are required to adopt the pronouncement in their fiscal year beginning after December 15, 2001. Total goodwill included in the Company's financial statements was \$9.6 million at December 31, 2001 and \$954,000 at December 31, 2000. Goodwill amortization expense was \$318,000 during 2001 and \$298,000 during 2000. The Company is currently assessing the effect of the new standards related to the impairment testing of goodwill.

In June 2001, the FASB issued SFAS No. 143, "Accounting for Asset Retirement Obligations." SFAS No. 143 establishes standards associated with the retirement of tangible long-lived assets and the

F-12

associated asset retirement costs. This statement is effective for financial statements issued for fiscal years beginning after June 15, 2002. Genomic Solutions has not yet assessed the impact of this standard on its financial statements, but does not expect the impact to be material.

In August 2001, the FASB issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS No. 144 supercedes SFAS No. 121, although it retains the fundamental principles of how to measure the impairment of assets held for use and assets to be disposed of by sale. It requires that long-lived assets to be disposed of other than by sale be considered held and used until disposed of. It also provides new guidance for using a probability-weighted approach for measuring future cash flows when there are alternative courses of action. This statement is effective for financial statements issued for years beginning after December 15, 2001. Genomic Solutions has not yet assessed the impact of this standard on its financial statements, but does not expect the impact to be material.

3. INVENTORIES

Inventories consist primarily of purchased parts and components used to make instrumentation. Finished goods and work-in-process inventories include material, labor and manufacturing overhead costs. Inventories consisted of the following (in thousands):

	At December 31,	
	2001	2000
Raw materials	\$ 3,908	\$ 2,673
Work-in-process	2,077	764
Finished goods	3,637	2,297
	<u>\$ 9,622</u>	<u>\$ 5,734</u>

4. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following (in thousands):

	At December 31,	
	2001	2000
Furniture and office equipment	\$ 4,341	\$ 5,761
Computer equipment	1,532	1,150
	<u>5,873</u>	<u>6,911</u>
Less Accumulated depreciation	2,612	2,176
	<u>\$ 3,261</u>	<u>\$ 4,735</u>

Property and equipment held under capital lease obligations totaled approximately \$143,000 and \$2.8 million at December 31, 2001 and 2000, respectively. The related accumulated depreciation totaled approximately \$21,000 and \$1.0 million at December 31, 2001 and 2000, respectively.

5. INVESTMENTS

In May 2001, the Company purchased 463,500 shares of Series A Convertible Preferred Stock of Photonic Sensor Systems, Inc. for an aggregate purchase price of \$500,000, representing a 3.4% interest in the company. The Company accounts for this investment under the cost method. As more particularly described in Footnote 16, the Company is in litigation with Photonic Sensor Systems, Inc. and no further investments by the Company will be made.

F-13

In January 2000, Genomic Solutions Ltd. sold its investment in HD Technologies for approximately \$575,000 in cash, which resulted in a gain of approximately \$282,000. In September 2000, the Company sold all of its product and intellectual property rights to the mass spectrometer developed by the Company in collaboration with HD Technologies for approximately \$648,000, consisting of \$150,000 in cash and equipment valued at approximately \$498,000, which resulted in a gain of approximately \$382,000.

6. ACCRUED LIABILITIES

Accrued liabilities consisted of the following (in thousands):

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	At December 31,	
	2001	2000
License fees	\$ 1,125	\$ 3,400
Restructuring	860	
Compensation and related taxes	473	811
Other	2,297	1,856
	<u>\$ 4,755</u>	<u>\$ 6,067</u>

7. LINES OF CREDIT

At December 31, 2001, the Company has a \$2.5 million line-of-credit agreement (the "Primary Line of Credit") with a bank, which provides for borrowings through June 2002. At December 31, 2001 and 2000, outstanding borrowings under this agreement totaled \$2.5 million and \$0, respectively. Outstanding borrowings bear interest at the bank's prime interest rate (weighted-average rate of 6.5% and 9.5% in 2001 and 2000, respectively) and are payable on demand. The agreement contains various covenants which, among other requirements, establish minimum levels of working capital and tangible net worth that must be maintained by the Company.

At December 31, 2001 and 2000, Genomic Solutions Ltd. has a line-of-credit agreement with a bank whereby it may borrow up to approximately \$109,000. Outstanding borrowings are collateralized by a letter of credit issued by the Company and eligible accounts receivable, as defined and bear interest at 2.75% above the bank's base rate. The interest rate at December 31, 2001 is 6.75%. At December 31, 2001 and 2000, no amounts were outstanding under this agreement. The current agreement expires May 27, 2002.

At December 31, 2001, Cartesian Technologies, Inc. has a line-of-credit agreement with a bank whereby Cartesian Technologies, Inc. may borrow up to approximately \$291,000. Outstanding borrowings are collateralized by eligible accounts receivable and inventories, as defined and bear interest at 2.5% above the bank's base rate. The interest rate at December 31, 2001 is 6.5%. At December 31, 2001, no amounts were outstanding under this agreement. The current agreement expires April 2002.

F-14

8. LONG-TERM DEBT

Long-term debt consists of the following (in thousands):

	At December 31,	
	2001	2000
Capital lease obligations, due in varying amounts with interest rates ranging from 18% to 36%, through July 2004 (see Note 16)	\$ 123	\$
Capital lease obligations repaid in 2001		1,952
Notes payable by Genomic Solutions Ltd., repaid in 2001		4
	<u>123</u>	<u>1,956</u>
Less Current portion	57	754
	<u>\$ 66</u>	<u>\$ 1,202</u>

See Note 16 for future scheduled maturities of capital lease obligations.

9. SUBORDINATED DEBT AND COMMON STOCK WARRANTS

In April 1999 and October 1999, the Company received \$6.0 million and \$3.5 million, respectively, from the issuance of subordinated notes with detachable warrants ("Sub Note 1" and "Sub Note 2", respectively). Accordingly, the proceeds were allocated to the debt and warrants based on their relative fair values. Proceeds of \$5.9 million were recorded as the initial carrying value of the subordinated notes with the

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

resulting discount amortized using the effective interest method through April 2000. On March 24, 2000 and April 28, 2000, the Company and the subordinated debt holders amended the note agreements to change the acceleration of the maturity date from the closing date of an initial public offering to one year from the closing date of an initial public offering. Aggregate amortization expense related to the discount was \$1.3 million and \$1.6 million in 2000 and 1999 respectively, and is included in interest expense in the accompanying consolidated statements of operations. Both subordinated notes bore interest at a stated rate of 12%. The effective interest rate was 53.0% and 154.1% for Sub Note 1 and Sub Note 2, respectively, calculated based on an expected maturity date of April 2000.

The Company accounted for the amendment to the subordinated notes as an extinguishment of debt and recorded an extraordinary loss of approximately \$1.1 million in 2000. The extraordinary loss represents the difference between the carrying value of the original subordinated notes less the related unamortized debt issuance costs at March 24, 2000, aggregating to approximately \$8.7 million, and the estimated fair value of the new subordinated notes of approximately \$9.8 million. Management's estimate of the fair value of the new subordinated notes was based on an effective interest rate of 8.75%. Management determined this rate by reference to market data for comparable financial instruments available to the Company at March 24, 2000. The resulting premium on the amended subordinated notes was being amortized using the effective interest method through April 2001. Since the subordinated notes were fully repaid in 2000, the premium of \$313,000 was fully amortized in 2000 and is netted against interest expense in the accompanying consolidated statements of operations.

Concurrent with completion of the Company's initial public offering, 1,553,500 warrants were exercised and 1,071,500 warrants were cancelled. Prior to completion of the public offering, the warrants were redeemable by the holders after April 23, 2004 at either fair market value, as determined between the holder and the Company or by appraisal, or seven times EBITDA, as defined. The difference between the estimated redemption price and the initial carrying value of the warrants was being accreted to retained deficit on a straight-line basis through April 2004. In 1999, the Company recorded accretion of \$3.9 million, based on the anticipated offering price at December 31, 1999 of its common stock in connection with its initial public offering. In 2000, the Company recorded decretion

F-15

of approximately \$1.1 million as a result of the decline in the actual offering price at May 5, 2000 of the Company's common stock in its initial public offering.

On June 9, 2000, the Company repaid in their entirety the \$9.5 million of subordinated notes issued in 1999.

10. INCOME TAXES

The components of the provision (benefit) for income taxes are as follows (in thousands):

	Years ended December 31,		
	2001	2000	1999
Continuing operations:			
Currently payable	\$	\$	\$
Deferred tax benefit	(7,028)	(2,447)	(3,682)
Increase in valuation allowance	7,028	2,447	3,682
	\$	\$	\$
Extraordinary item:			
Currently payable	\$	\$	\$
Deferred tax benefit		(357)	
Increase in valuation allowance		357	
	\$	\$	\$

The differences between the income tax provision calculated at the United States Federal statutory rate and the consolidated income tax provision (benefit) from operations are summarized as follows (in thousands):

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	Years ended December 31,		
	2001	2000	1999
Federal statutory provision (benefit)	\$ (8,874)	\$ (2,670)	\$ (3,788)
Other nondeductible items	174	90	79
Increase in valuation allowance	7,028	2,447	3,682
Write-off of acquired in-process research and development	1,428		
Other	244	133	27
	\$	\$	\$

F-16

The components of deferred income taxes consisted of the following (in thousands):

	At December 31,	
	2001	2000
Net operating loss carryforwards	\$ 14,583	\$ 9,314
Impairment of long-lived assets	1,209	
Accruals and reserves	673	148
Goodwill	422	430
Other	(6)	(39)
	16,881	9,853
Less Valuation allowance	(16,881)	(9,853)
	\$	\$

Deferred national income taxes have not been provided on the undistributed earnings of the Company's foreign subsidiaries as such amounts are either considered to be permanently reinvested or would not create any additional U.S. tax upon repatriation.

At December 31, 2001 and 2000 the Company has available pre-tax net operating loss carryforwards of approximately \$42.9 and \$27.4 million, respectively, which can be utilized to offset future taxable income. These net operating loss carryforwards expire between 2010 and 2021. Annual utilization of the net operating loss carryforwards are limited under Section 382 of the Internal Revenue Code due to ownership changes, as defined by Section 382, that occurred in 2000 and 1997. These and other deferred income tax assets are fully reserved by a valuation allowance due to historical operating losses.

11. PREFERRED STOCK

The Board of Directors is authorized to issue up to 15,000,000 shares of preferred stock in one or more series. Under each issuance of a series of preferred stock, the Board of Directors is permitted to fix the designations, preferences, powers, and relative rights and restrictions thereof, including without limitation, the dividend rate, conversion rights, voting rights, redemption price, and liquidation preference. At December 31, 2001, the Company has not authorized any series of preferred stock for issuance and there are no shares of preferred stock outstanding.

On January 26, 2000, the Company closed an investment agreement (the "Agreement") with PerkinElmer, Inc. ("PerkinElmer") for \$8.0 million through the purchase of 1,269,841 shares of the Company's Series P preferred stock at \$6.30 per share. Since the Series P preferred stock was convertible into common stock at a rate less than fair value, there was a beneficial conversion feature associated with the Series P preferred stock. The Company recorded a charge of \$8.0 million related to the beneficial conversion feature in the first quarter of fiscal 2000. The beneficial conversion feature was recorded through equal and offsetting amounts to additional paid-in capital and retained deficit as a deemed dividend and did not affect total stockholders' equity nor the results of operations. However, the beneficial conversion charge increased the net loss attributable to common stockholders in the computation of net loss per share.

The Agreement provided an option for PerkinElmer to acquire additional shares of the Company's common stock thereby increasing its ownership interest to approximately 20% of the Company. As part of the agreement, PerkinElmer entered into purchase agreements with holders of more than 95% of the Company's then outstanding capital stock, options and warrants, which gave PerkinElmer the option to purchase all of the Company's equity securities held by these holders for a period of two

F-17

years. Upon completion of the Company's initial public offering, each outstanding share of capital stock, other than the shares held by PerkinElmer, were converted to callable common stock and each right to receive capital stock was converted to the right to receive callable common stock. Upon completion of the initial public offering, the purchase agreements entered into between the Company's stockholders and PerkinElmer terminated and pursuant to the Company's certificate of incorporation, as amended, PerkinElmer had the right to cause the Company to redeem its callable securities for a period of two years after October 23, 2000, at a price that was generally 120% of fair market value, as set forth in the Company's certificate. PerkinElmer was required to fund the proceeds necessary to repurchase the shares through a capital contribution to the Company.

In April 2001, the Company repurchased 873,016 shares of its stock owned by PerkinElmer at PerkinElmer's original purchase price. As a result of the sale by PerkinElmer of more than half of its holdings of Genomic Solutions stock, PerkinElmer's right to cause the Company to redeem its callable common stock terminated and each outstanding share of callable common stock automatically converted into one share of common stock. Net loss per share available to common stockholders for the year ended December 31, 2001 includes the \$0.11 per share effect of the fair value of the repurchase of the Company's stock held by PerkinElmer, in excess of the fair value of the stock held by PerkinElmer.

12. COMMON STOCK

The Company has reserved for issuance that number of shares of its authorized but unissued common stock necessary to exercise all of its outstanding stock options.

13. STOCK OPTION PLANS

The Company has three stock option plans: the 1994 Stock Option Plan ("the 1994 Plan"); the 1998 Employee Stock Option Plan ("the 1998 Plan"); and the 1998 Non-Employee Director and Consultant Stock Option Plan (the "Non-Employee Plan"). Options granted under these plans are either incentive stock options, which are granted at the fair market value of the common stock on the date of grant, or non-qualified stock options, which are generally granted at the fair market value of the common stock on the date of grant. Options are granted at the discretion of the Board of Directors upon recommendation by the Compensation Committee and expire ten years after the date of grant.

1994 Stock Option Plan

The 1994 Plan provided for the grant of options to employees, consultants and directors. The maximum number of shares that may be granted under the 1994 Plan is 1,590,000, provided that no new options may be granted under the plan. Options granted generally become exercisable at a rate of 33% per year over three years from the date of grant except that 540,000 options vested immediately upon issuance and 14,600 options vest over a five-year period.

1998 Employee Stock Option Plan

In January 1998, the Company established the 1998 Plan to increase its ability to attract and retain key employees. The maximum number of shares that may be granted under the Plan is limited to ten percent of the Company's issued and outstanding common stock. Options granted prior to January 1, 2000 become exercisable at a rate of 20% per year over five years from the date of grant. Options granted in 2000 generally become exercisable monthly over three years from the date of grant except that 30,000 options vested immediately upon issuance and 150,000 options vest annually over a five-year period. Options granted in 2001 become exercisable as follows: 239,084 options vest monthly over three

F-18

years, 215,000 options vest annually over three years, 220,000 options vest annually over four years, and 296,664 vest at various dates depending on the vesting dates of the original Cartesian grants. As of December 31, 2001, there are 890,429 options available to grant.

1998 Non-Employee Director and Consultant Stock Option Plan

In January 1998, the Company established the Non-Employee Plan to increase its ability to retain directors and consultants. The maximum number of shares that may be granted under the Plan is 750,000. Options granted generally become exercisable one year from date of grant. As of December 31, 2001, there are 236,252 options available to grant.

Summary of Stock Option Plans

Stock option activity under the above plans is summarized below:

	Number of Shares	Weighted Average Exercise Price
Outstanding at December 31, 1998	1,938,936	\$ 0.70
Options granted	310,750	\$ 2.00
Options cancelled	(136,485)	\$ 1.15
Options exercised	(86,830)	\$ 0.10
Outstanding at December 31, 1999	2,026,371	\$ 0.89
Options granted	910,000	\$ 10.55
Options cancelled	(188,185)	\$ 2.22
Options exercised	(907,320)	\$ 0.34
Outstanding at December 31, 2000	1,840,866	\$ 5.81
Options granted	1,189,496	\$ 2.72
Options cancelled	(456,153)	\$ 6.99
Options exercised	(161,917)	\$ 0.36
Outstanding at December 31, 2001	2,412,292	\$ 4.43
Weighted average fair value of stock options granted 2001	\$ 2.52	
Weighted average fair value of stock options granted 2000	\$ 7.99	
Weighted average fair value of stock options granted 1999	\$ 1.41	

F-19

Options outstanding and exercisable at December 31, 2001 are as follows:

Number of Shares	Price Per Share	Weighted Average Contractual Remaining Life	Exercisable
145,596	\$ 0.07	1.8 Years	145,596
192,650	\$ 0.37	5.6 Years	135,050
310,416	\$ 0.96	3.3 Years	310,416
694,400	\$ 2.03	7.4 Years	348,850
195,000	\$ 3.63	9.3 Years	0
480,524	\$ 7.19	8.5 Years	206,671

Number of Shares	Price Per Share	Weighted Average Contractual Remaining Life	Exercisable
393,706	\$ 12.05	7.8 Years	184,353
2,412,292			1,330,936

Stock-Based Compensation

Using the intrinsic value method under APB 25, no compensation expense has been recognized in the accompanying consolidated statements of operations for options granted to employees at fair value. In 1999, the Company granted 200,250 stock options with a deemed fair value in excess of the amount the employee must pay to acquire the stock. Accordingly, the Company recorded deferred compensation totaling approximately \$129,000, which is included as an offset to stockholders' equity in the accompanying consolidated balance sheets. The deferred compensation is being amortized on a straight-line basis over the vesting period of the options which is generally five years. The Company recorded amortization expense on deferred compensation totaling approximately \$26,000, \$26,000 and \$5,000 in 2001, 2000 and 1999, respectively.

Had compensation expense been determined based on the fair value at the date of grant consistent with SFAS No. 123, the reported net loss and loss per share attributable to common stockholders from operations would have been increased to the following pro forma amounts, which may not be representative of that to be expected in future years (in thousands, except per share data):

		Years ended December 31,		
		2001	2000	1999
Net loss	As Reported	\$ (28,911)	\$ (15,845)	\$ (15,003)
	Pro Forma	\$ (29,465)	\$ (17,121)	\$ (15,103)
Loss per share	As Reported	\$ (1.17)	\$ (0.90)	\$ (5.04)
	Pro Forma	\$ (1.19)	\$ (0.98)	\$ (5.08)

The fair value of these options was estimated at the date of grant using the Black-Scholes option valuation method in 2001 and 2000 with the following assumptions: weighted average risk free interest rate of 4.15% and 6.13%, dividend yield of 0%, expected life of options of 4 years, and a volatility factor of 105% and 100% in 2001 and 2000, respectively. The fair value of these options was estimated using the minimum value option valuation method under SFAS 123 in 1999 with the following assumptions: weighted average risk free interest rate of 5.86%, dividend yield of 0%, and expected life of options of 5.3 years. Option valuation models require the input of highly subjective assumptions. Because changes in subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing model does not necessarily provide a reliable single measure of the fair value of the Company's stock options.

F-20

14. EMPLOYEE STOCK PURCHASE PLAN

In February 2000, the Company established the Employee Stock Purchase Plan ("ESPP"). All employees are eligible to participate in the ESPP. The plan provides that participants may authorize Genomic Solutions to withhold a portion of earnings to be used to purchase the Company's common stock. A total of 1,000,000 shares of common stock have been reserved for issuance under the Purchase Plan. The Purchase Plan provides that the Company will sell shares to employees who elect to participate in the Purchase Plan at a price equal to 85% of the lesser of the fair market value of the common stock on the first trading day of an offering period or the last trading day of such offering period.

Under the Purchase Plan, the Company issued 15,758 and 4,909 shares of common stock to various employees in 2001 and 2000, respectively. These shares were issued with a weighted average price per share of \$3.12 in 2001 and \$6.48 in 2000. At December 31, 2001, there were 979,333 shares of common stock available to be issued under this plan.

15. EMPLOYEE BENEFIT PLAN

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Genomic Solutions Inc. has a 401(k) plan covering all eligible United States employees. Participants may elect to defer a percentage of qualified compensation through voluntary contributions to the plan and Genomic Solutions Inc. may make discretionary contributions to the plan based on the gross compensation of qualified participants. Genomic Solutions Inc. made contributions of approximately \$145,000 and \$98,000 in 2001 and 2000, respectively. Genomic Solutions Inc. made no contributions to the plan in 1999.

In October 2000, Genomic Solutions Ltd. established a pension plan covering all eligible United Kingdom employees. Participants may elect to defer a percentage of qualified compensation through voluntary contributions to the plan and Genomic Solutions Ltd. will make matching contributions to the plan up to 3% of the base salary of qualified participants. Genomic Solutions Ltd. made contributions of approximately \$43,000 and \$15,000 in 2001 and 2000, respectively.

F-21

16. COMMITMENTS AND CONTINGENCIES

Leases

The Company leases most of its office space, transportation, and laboratory and office equipment under various capital and operating lease agreements. Initial leases vary in length and several of the leases contain renewal options. Capital leases terminate at various dates through fiscal 2004. Total rental expense was approximately \$1.0 million, \$850,000 and \$454,000 in 2001, 2000 and 1999, respectively.

Future minimum payments required under all noncancelable capital and operating leases at December 31, 2001 are as follows (in thousands):

	Total	Operating Leases	Capital Leases
2002	\$ 1,060	\$ 975	\$ 85
2003	767	714	53
2004	344	329	15
2005	115	115	
2006	50	50	
	\$ 2,336	\$ 2,183	153
Less Amount representing interest			30
Present value of capital lease obligations			123
Less Current portion			57
			\$ 66

Litigation

On February 12, 2001, PerkinElmer filed a lawsuit in Delaware Chancery Court requesting that the Delaware court interpret the terms of PerkinElmer's right, under the Company's Certificate of Incorporation, to require the Company to call and redeem its callable common stock. The lawsuit named the Company as well as each of its directors and alleged, among other things, that the Company sought to improperly impede or terminate PerkinElmer's right to cause the Company to redeem its callable stock, and to impose an improper financial penalty upon an exercise by PerkinElmer of that right. PerkinElmer's complaint was in the context of a proposed transaction that the Company was pursuing with an unnamed third party, which if completed without PerkinElmer exercising its right, would have had the effect of terminating the right. On February 15, 2001, the Company filed a motion for summary judgment seeking dismissal of the lawsuit. On April 18, 2001, the Company reached an agreement with PerkinElmer that ended all litigation between the companies and settled all disputes between the parties. The Company filed a Form 8-K on April 23, 2001, reporting the settlement, together with copies of the settlement documents.

On November 27, 2000, Molecular Dynamics, Inc. filed a lawsuit against the Company in Santa Clara County Superior Court, San Jose, California. The lawsuit related to the Company's refusal to purchase shares of capital stock of Meridian Instruments, Inc. owned by Molecular Dynamics. The complaint sought payment of approximately \$650,000, which would increase by \$8,333 each month until payment was made, as a result of a "put" right in favor of Molecular Dynamics which the Company is allegedly obligated to honor.

In September 2001, the Company entered into a settlement agreement with Molecular Dynamics that ended all litigation between the companies and settled all disputes between the parties. The

F-22

settlement of this matter did not have a material impact on the Company's financial position or results of operations.

In December 2001, the Company filed suit against Photonic Sensor Systems, Inc., a Georgia corporation, in the federal district court for the Eastern District of Michigan alleging three counts of breach of contract in connection with a certain License and Development Agreement entered into with Photonic and seeking monetary relief in the amount of the Company's original preferred stock investment of \$500,000. Pursuant to the License and Development Agreement, Photonic Sensors was obligated to develop and create optical interferometer based chips and related instrumentation for genomic and proteomic research. The Company's claims against Photonic Sensors arise from its failure to perform Photonic's obligations under the License and Development Agreement. In January 2002, Photonic filed a counter-claim requesting monetary relief against the Company alleging breach of contract, indemnification and tortious interference based on the alleged failure of the Company to purchase stock upon the achievement of certain milestones. The Company filed its answer denying the allegations in the counter-claim in early February 2002. Management believes that the counter-claim is without merit and intends to defend it vigorously.

On March 21, 2002, the Company received a letter from Photonic requesting permission to sell certain of its assets, including computer equipment, and noting that Photonic had found it necessary to cease operations and close its offices. The Company has a liquidation preference with respect to any distribution to shareholders of Photonics's assets. The Company has not been able to obtain any financial information from Photonic or otherwise verify the value, if any, of the Company's interest in Photonic. If Photonic does not raise capital to reopen its operations, the Company may lose the value of its investment in Photonic's preferred stock and in the License and Development Agreement.

From time to time, the Company is a defendant in various lawsuits that have arisen in the normal course of business. Management believes that the ultimate resolution of these matters will not have a material adverse effect on the Company's financial position or results of operations. The Company's settlement of various matters in 2001 did not have a material impact on the Company's financial position or results of operations.

Royalty Payments

Under the terms of various license agreements, the Company is required to pay royalties on certain product sales during the terms of the respective agreements. Under the most significant agreement, royalties are generally equal to the greater of pre-determined minimums, a percentage of product revenue, or a set amount per product.

17. ACQUISITIONS

Cartesian Technologies, Inc.

In December 2001, the Company acquired 100% of the outstanding capital stock of Cartesian Technologies, Inc. ("Cartesian") in exchange for approximately 6.8 million shares of common stock (with a fair value of approximately \$13.3 million, net of issuance expenses), the assumption of outstanding stock options with a fair value of approximately \$832,000, \$2.5 million in cash, and transaction costs of approximately \$1.2 million for an aggregate purchase price of \$17.8 million. The acquisition has been accounted for under the purchase method of accounting. In connection with the acquisition, the Company recorded a charge to operations in 2001 of \$4.2 million associated with the write-off of in-process research and development acquired in the transaction that had not reached technological feasibility. The remaining excess of the aggregate purchase price over the fair value of the

F-23

net assets acquired of approximately \$9.2 million has been recognized as goodwill. According to SFAS No. 142, goodwill arising from acquisitions initiated after June 30, 2001, is not subject to amortization (See Note 2). The Company will review goodwill each quarter for impairment according to SFAS No. 142, which also establishes a new method of testing goodwill for impairment by using a fair-value approach. The operating results of Cartesian have been included in the Company's consolidated results of operations from the date of acquisition. The purchase price consists of the following (in thousands):

Net assets	\$	253
------------	----	-----

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Purchase price in excess of net assets acquired	9,208
Purchased developed technology and know-how	4,100
Purchased in-process research and development	4,200
Common stock issued	(13,275)
Options to purchase shares of common stock issued	(832)
Acquisition related liabilities	(1,154)
	\$ 2,500
Net cash paid	\$ 2,500

Cartesian's in-process research and development projects consisted of new and improved components to existing products, vertical expansion of existing products, and new products aimed at the high-throughput screening, microarray and proteomics markets. In general, the existing research and development efforts target higher degrees of automation and increased throughput. The various projects ranged from 10% to 90% complete at the date of acquisition. The fair value of the projects were determined by estimating the contribution of the purchased in-process technology to developing commercially viable products and estimating the resulting cash flows from the expected product sales of such product. In determining the discounted cash flows, material net cash in-flows were expected to occur from 2003 to 2006 and the risk-adjusted discount rate was between 30% - 35%. The acquired in-process research and development had no alternative future use. Management is primarily responsible for the valuation of the acquired in-process research and development.

The following pro forma unaudited financial data is presented to illustrate the estimated effects of the Cartesian acquisition as if this transaction had occurred as of the beginning of 2001 and 2000. For the year ended December 31, 2001, pro forma revenue, net loss and net loss per share would have been \$25.5 million, \$(23.2) million and \$(0.74), respectively. For the year ended December 31, 2000, pro forma revenue, loss before extraordinary items and net loss would have been \$26.8 million, \$(8.4) million and \$(9.5) million, respectively. Pro forma loss per share before extraordinary items and net loss per share would have been \$(0.35) and \$(0.39), respectively.

18. SEGMENT INFORMATION

The Company operates in one segment: the development, manufacture and marketing of integrated, genomic, proteomic and high-throughput screening and dispensing systems and services for analyzing and quantifying biomolecules. The Company's three product lines, genomic, proteomic and high-throughput screening and dispensing systems and services, have similar economic characteristics and attributes, including similar marketing and distribution patterns, similar production processes and similar, if not the same, customers. As a result, the Company aggregates its product lines into a single segment of genomic, proteomic and high-throughput screening and dispensing systems and services. The Company operates primarily in three geographic regions: the United States, United Kingdom and Japan.

F-24

The Company distributes products to customers on a worldwide basis. Sales and marketing operations outside the United States are conducted principally through the Company's foreign subsidiaries, and PerkinElmer, Inc. Intercompany sales and transfers between geographic areas are accounted for at prices, which are designed to be, representative of third party transactions. Revenue is attributed to each geographic location based on which office makes the sale, which includes intercompany sales.

The following tables summarize selected financial information of the Company's operations by geographic location (in thousands):

	Years ended December 31,		
	2001	2000	1999
Revenue:			
United States	\$ 14,718	\$ 11,494	\$ 8,897
United Kingdom	10,423	13,287	6,867
Japan	3,069	4,675	2,296
Less Intercompany revenue	(11,370)	(10,379)	(5,968)
Total revenue	\$ 16,840	\$ 19,077	\$ 12,092

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	At December 31,		
	2001	2000	1999
Long-lived assets:			
United States	\$ 17,093	\$ 17,334	\$ 2,885
United Kingdom	921	916	1,265
Japan	142	168	59
Goodwill	9,579	954	1,253
Less Eliminations	(8,944)	(8,943)	(778)
Total long-lived assets	\$ 18,791	\$ 10,429	\$ 4,684

In 2001 and 2000, PerkinElmer accounted for 30% and 14% of the Company's total revenue. No customer accounted for greater than 10% of total revenue in 1999.

19. RESTRUCTURING AND INVENTORY IMPAIRMENT CHARGES

On September 7, 2001, the Company announced restructuring initiatives designed to lower its cost structure and achieve profitability in 2002. The restructuring plan included closing certain facilities, divesting its proteomic contract research services business, reducing its employee headcount by approximately 25% and discontinuing certain products. As a result of this restructuring plan, the Company recorded restructuring and inventory impairment charges of approximately \$2.7 million and \$1.2 million, respectively, during 2001.

The restructuring charge of \$2.7 million consisted of the impairment of certain long-lived assets, the loss on disposal and sale of certain fixed assets, employee termination benefits for 50 employees, and exit costs associated with closing certain facilities. In connection with the restructuring initiatives, the Company estimated the discounted future cash flows related to goodwill and certain fixed assets and reduced these assets to their estimated fair value. As of December 31, 2001, the Company had terminated 45 employees and paid out \$312,000 in termination benefits. There have been no lease cancellation costs paid out to date. All restructuring activities were completed by January 31, 2002. At

F-25

December 31, 2001, the remaining balance of the restructuring reserve totaled \$860,000 and is included in accrued liabilities in the Company's consolidated balance sheet.

The inventory impairment charge of \$1.2 million relates to the write-down of inventories related to discontinuing the manufacture of certain products. This charge is included as a separate component of cost of revenue in the Company's consolidated statements of operations.

The following table summarizes the restructuring charges (in thousands):

	Original Provision	Utilized		Accrual at December 31, 2001
		Cash	Noncash	
Impairment of long-lived assets	\$ 0.6	\$ 0.6	\$ 0.6	\$ 0.6
Loss on disposal and sale of assets	0.9		0.9	
Employee termination benefits	0.7	0.3		0.4
Lease cancellation costs	0.5			0.5
Total	\$ 2.7	\$ 0.3	\$ 1.5	\$ 0.9

On May 16, 2000, the Company incurred a one-time restructuring charge of \$600,000 to close our Chelmsford, Massachusetts proteomics facility. A new Center for Proteomics has been constructed at our Ann Arbor, Michigan headquarters. The charge consisted primarily of \$400,000 for employee termination benefits for fifteen employees and \$200,000 for exit costs associated with closing the facility. The restructuring reserve was fully utilized in 2000 and there was no remaining balance at December 31, 2000.

20. QUARTERLY FINANCIAL DATA (UNAUDITED)

Summarized quarterly financial data is as follows (in thousands, except per share data):

	<u>1st</u> <u>Quarter</u>	<u>2nd</u> <u>Quarter</u>	<u>3rd</u> <u>Quarter</u>	<u>4th</u> <u>Quarter</u>	<u>Year to Date</u>
2001					
Revenue	\$ 4,379	\$ 4,463	\$ 3,629	\$ 4,369	\$ 16,840
Gross profit	1,954	1,922	(82)	1,254	5,048
Loss before extraordinary items	(2,908)	(2,937)	(7,924)	(12,331)	(26,100)
Loss per share before extraordinary items	(0.12)	(0.12)	(0.32)	(0.49)	(1.05)
Net loss	(2,987)	(2,931)	(7,853)	(12,329)	(26,100)
Net loss per share	\$ (0.12)	\$ (0.12)	\$ (0.32)	\$ (0.49)	\$ (1.05)
2000					
Revenue	\$ 3,995	\$ 4,500	\$ 5,038	\$ 5,544	\$ 19,077
Gross profit	1,991	2,169	2,503	3,040	9,703
Loss before extraordinary items	(2,844)	(2,867)	(869)	(1,274)	(7,854)
Loss per share before extraordinary items	(0.83)	(0.17)	(0.03)	(0.05)	(0.45)
Net loss	(3,894)	(2,867)	(869)	(1,274)	(8,904)
Net loss per share	\$ (1.14)	\$ (0.17)	\$ (0.03)	\$ (0.05)	\$ (0.51)

F-26

INDEX TO GENOMIC SOLUTIONS FINANCIAL STATEMENTS

Condensed Consolidated Balance Sheets as of June 30, 2002 (unaudited) and December 31, 2001	F-28
Condensed Consolidated Statements of Operations for the three months and six months ended June 30, 2002 and 2001 (unaudited)	F-29
Condensed Consolidated Statements of Cash Flows for the six months ended June 30, 2002 and 2001 (unaudited)	F-30
Notes to Condensed Consolidated Financial Statements (unaudited)	F-31
	F-27

GENOMIC SOLUTIONS INC.
CONDENSED CONSOLIDATED BALANCE SHEETS

(in thousands)

	<u>June 30,</u> <u>2002</u>	<u>December 31,</u> <u>2001</u>
	(Unaudited)	
Assets		
Current Assets:		
Cash and cash equivalents	\$ 5,266	\$ 13,097
Accounts receivable, net	7,156	5,466
Inventories	10,954	9,622
Prepaid expenses and other	1,027	948

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	June 30, 2002	December 31, 2001
Total current assets	24,403	29,133
Property and equipment, net	2,650	3,261
Goodwill and intangible assets, net	13,579	13,795
Other long-term assets	1,361	1,735
Total assets	\$ 41,993	\$ 47,924
Liabilities and Stockholders' Equity		
Current Liabilities:		
Lines of credit	\$ 2,500	\$ 2,500
Current portion long-term debt	44	57
Accounts payable	3,813	5,213
Accrued liabilities	3,901	4,755
Deferred revenue	696	842
Total current liabilities	10,954	13,367
Long-Term Liabilities:		
Long-term debt, less current portion	44	66
Other long-term liabilities	63	52
Total long-term liabilities	107	118
Stockholders' Equity:		
Preferred stock, \$.001 par value; 15,000 shares authorized; zero shares issued and outstanding		
Common stock, \$.001 par value; 60,000 shares authorized; 31,216 and 31,154 shares issued and outstanding at June 30, 2002 and December 31, 2001, respectively	31	31
Additional paid-in capital	103,102	103,045
Notes receivable	(142)	(137)
Deferred compensation related to stock options	(59)	(72)
Retained deficit	(72,018)	(68,055)
Accumulated other comprehensive income (loss)	18	(373)
Total stockholders' equity	30,932	34,439
Total liabilities and stockholders' equity	\$ 41,993	\$ 47,924

The accompanying notes are an integral part of these condensed consolidated financial statements.

F-28

GENOMIC SOLUTIONS INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited; in thousands, except per share data)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	For the three months ended June 30,		For the six months ended June 30,	
	2002	2001	2002	2001
Revenue:				
Product revenue	\$ 5,847	\$ 4,083	\$ 12,392	\$ 8,096
Service revenue	193	380	324	746
Total revenue	6,040	4,463	12,716	8,842
Cost of Revenue:				
Cost of product revenue	3,215	2,468	6,598	4,813
Cost of service revenue	45	73	59	153
Total cost of revenue	3,260	2,541	6,657	4,966
Gross profit	2,780	1,922	6,059	3,876
Operating Expenses:				
Selling, general and administrative	3,792	3,571	7,311	6,932
Research and development	1,058	1,639	2,483	3,620
Total operating expenses	4,850	5,210	9,794	10,552
Loss from operations	(2,070)	(3,288)	(3,735)	(6,676)
Other Income (Expense):				
Interest expense	(43)	(19)	(57)	(81)
Interest income	50	312	107	834
Gain on sale of investment			23	
Loss on impairment of long lived assets	(500)		(500)	
Other income, net	182	58	199	77
Total other income (expense)	(311)	351	(228)	830
Loss before taxes and extraordinary items	(2,381)	(2,937)	(3,963)	(5,846)
Provision (Benefit) for Income Taxes		(6)		72
Net Loss	(2,381)	(2,931)	(3,963)	(5,918)
Deemed dividend upon repurchase of stock from PerkinElmer, Inc.		(2,811)		(2,811)
Net loss attributable to common stockholders	\$ (2,381)	\$ (5,742)	\$ (3,963)	\$ (8,729)
Net Loss Per Share, Basic and Diluted:				
Net loss per share	\$ (0.08)	\$ (0.12)	\$ (0.13)	\$ (0.24)
Loss per share from deemed dividend	0.00	(0.12)	0.00	(0.11)
Loss per share attributable to common stockholders	\$ (0.08)	\$ (0.24)	\$ (0.13)	\$ (0.35)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	For the three months ended June 30,		For the six months ended June 30,	
Weighted average common shares	31,180	24,429	31,176	24,734

The accompanying notes are an integral part of these condensed consolidated financial statements.

F-29

GENOMIC SOLUTIONS INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited; in thousands)

	For the six months ended June 30,	
	2002	2001
Cash Flows from Operating Activities:		
Net loss	\$ (3,963)	\$ (5,918)
Adjustments to reconcile net loss to net cash used in operating activities-		
Depreciation and amortization	1,254	1,149
Gain on sale of assets	(23)	
Loss on impairment of long lived asset	500	
Increase (decrease in cash resulting from changes in assets and liabilities, net of acquisitions		
Accounts receivable	(1,439)	1,767
Inventories	(1,306)	(2,009)
Prepaid expenses and other	(99)	321
Accounts payable	(1,514)	(791)
Accrued liabilities	(829)	(879)
Deferred revenue	(135)	(63)
	<u>(7,554)</u>	<u>(6,423)</u>
Net cash used in operating activities		
Cash Flows from Investing Activities:		
Purchase of property and equipment	(149)	(1,273)
Increase in other assets	(93)	(19)
Capitalized license fees	(125)	(2,250)
Equity investment.		(500)
Proceeds from sale of property and equipment	62	19
	<u>(305)</u>	<u>(4,023)</u>
Net cash used in investing activities		
Cash Flows from Financing Activities:		
Proceeds from issuance of common stock and callable common stock	29	86
Repayment of long-term debt	(35)	(389)
Repurchase of stock from PerkinElmer, Inc.		(5,500)
Other financing activities	(4)	(4)

	For the six months ended June 30,	
	_____	_____
Net cash used in financing activities	(10)	(5,807)
Effect of Exchange Rate Changes on Cash	38	22
Net Decrease in Cash and Cash Equivalents	(7,831)	(16,231)
Cash Beginning of Period	13,097	40,159
Cash End of Period	\$ 5,266	\$ 23,928
Supplemental Disclosure of Cash Flow Activity:		
Cash paid for interest	\$ 51	\$ 99
Cash paid for income taxes	\$	\$ 56

The accompanying notes are an integral part of these condensed consolidated financial statements.

F-30

GENOMIC SOLUTIONS INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING PRINCIPLES

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements of Genomic Solutions Inc. and its subsidiaries (the "Company") have been prepared in accordance with generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete annual financial statements. In the opinion of management, all adjustments, consisting of normal recurring adjustments, considered necessary for a fair presentation have been included. Interim results are not necessarily indicative of results that may be expected for a full year.

The accompanying unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and footnotes thereto included in the Company's latest annual report on Form 10-K.

Net Loss Per Share

Net loss per share is computed in accordance with SFAS No. 128, "Earnings Per Share," by dividing the net loss allocable to common stockholders by the weighted average number of shares of common stock outstanding. For the three and six month periods ended June 30, 2002 and 2001, the effect of stock options and warrants outstanding for the purchase of shares of common stock have not been used in the calculation of diluted net loss per share because to do so would be anti-dilutive. As such, the denominator used in computing both basic and diluted net loss per share allocable to common stockholders for each period are equal. The total number of shares excluded from the calculations of diluted net loss per share, prior to application of the treasury stock method, was 2,071,445 and 2,782,511 for the three months ended June 30, 2002 and 2001, respectively and 2,021,336 and 2,594,490 for the six months ended June 30, 2002 and 2001, respectively.

Comprehensive Loss

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Comprehensive loss is the total of net loss and all other non-owner changes in equity. The difference between net loss, as reported in the accompanying condensed consolidated statements of operations, and comprehensive loss is the foreign currency translation adjustment for the respective periods. Accumulated other comprehensive loss consists solely of the cumulative translation adjustment as presented in the accompanying condensed consolidated balance sheets. The components of comprehensive loss for the three months and six months ended June 30, 2002 and 2001 are as follows (in thousands):

	For the three months ended June 30,		For the six months ended June 30,	
	2002 (Unaudited)	2001 (Unaudited)	2002 (Unaudited)	2001 (Unaudited)
Net loss	\$ (2,381)	\$ (2,931)	\$ (3,963)	\$ (5,918)
Foreign currency translation adjustment	557	(60)	391	(505)
Comprehensive loss	\$ (1,824)	\$ (2,991)	\$ (3,572)	\$ (6,423)

F-31

New Accounting Pronouncements

In June 2001, the Financial Accounting Standards Board ("FASB") issued Statements of Financial Accounting Standards ("SFAS") No. 141, "Business Combinations" and SFAS No. 142 "Goodwill and Other Intangible Assets." These pronouncements amend the accounting for business combinations, goodwill, and other intangible assets. SFAS No. 141 eliminates the pooling-of-interests method of accounting for business combinations and further clarifies the criteria to recognize intangible assets separately from goodwill. The requirements of SFAS No. 141 are effective for any business combination completed after June 30, 2001. Upon adoption of SFAS No. 142 goodwill and other indefinite-lived assets are no longer amortized, but are subject to annual impairment reviews, or more frequently, if events or circumstances indicate there may be an impairment. The amortization provisions of SFAS No. 142 apply to goodwill and intangible assets acquired after June 30, 2001. With respect to goodwill and intangible assets acquired prior to July 1, 2001, companies are required to adopt the pronouncement in their fiscal year beginning after December 15, 2001. The Company adopted SFAS 142 on January 1, 2002. During the second quarter of 2002, the Company completed the implementation impairment review as required. Upon completing the review, the Company concluded there was no impairment of goodwill at the time of implementation. The proposed acquisition of the Company by Harvard Bioscience, Inc. ("HBIO") is an event under SFAS 142 that may indicate that the value of the Company's goodwill is impaired as of July 17, 2002 (see Note 7). The Company will calculate the amount of impairment, if any, and will record an impairment charge, if necessary, in the third quarter of 2002. Total goodwill included in the Company's Financial Statements was \$9.7 million at June 30, 2002 and \$9.6 million at December 31, 2001.

Total operating expenses would have been reduced by approximately \$73,000 and \$147,000 for the three and six months ended June 30, 2001 if goodwill had not been amortized. This would have resulted in a net loss of \$2.9 million or \$(0.12) per share and \$5.8 million or \$(0.23) per share for the three and six months ended June 30, 2001, respectively.

In June 2001, the FASB issued SFAS No. 143, "Accounting for Asset Retirement Obligations." SFAS No. 143 establishes standards associated with the retirement of tangible long-lived assets and the associated asset retirement costs. This statement is effective for financial statements issued for fiscal years beginning after June 15, 2002. Genomic Solutions has not yet assessed the impact of this standard on its financial statements, but does not expect the impact to be material.

In August 2001, the FASB issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS No. 144 supersedes SFAS No. 121, although it retains the fundamental principles of how to measure the impairment of assets held for use and assets to be disposed of by sale. It requires that long-lived assets to be disposed of other than by sale be considered held and used until disposed of. It also provides new guidance for using a probability-weighted approach for measuring future cash flows when there are alternative courses of action. This statement is effective for financial statements issued for years beginning after December 15, 2001. On January 1, 2002, the Company adopted SFAS No. 144.

The Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standard (SFAS) No. 145, "Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections," effective for fiscal years beginning May 15, 2002 or later that rescinds FASB Statement No. 4, "Reporting Gains and Losses from Extinguishment of Debt," FASB Statement No. 64, "Extinguishments of Debt Made to Satisfy Sinking-Fund Requirements," and

F-32

FASB Statement No. 44, "Accounting for Intangible Assets of Motor Carriers." This Statement amends FASB Statement No. 4 and FASB Statement No. 13, "Accounting for Leases," to eliminate an inconsistency between the required accounting for sale-leaseback transactions. This Statement also amends other existing authoritative pronouncements to make various technical corrections, clarify meanings, or describe their applicability under changed conditions. The Company does not believe the impact of adopting SFAS No. 145 will have a material impact on its operations.

In July 2002, the FASB issued Statement No. 146, "Accounting for Costs Associated with Exit or Disposal Activities." Statement No. 146 is based on the fundamental principle that a liability for a cost associated with an exit or disposal activity should be recorded when it (1) is incurred, that is, when it meets the definition of a liability in FASB Concepts Statement No. 6, "Elements of Financial Statements," and (2) can be measured at fair value. The principal reason for issuing Statement No. 146 is the Board's belief that some liabilities for costs associated with exit or disposal activities that entities record under current accounting pronouncements, in particular EITF Issue 94-3, do not meet the definition of a liability. Statement No. 146 nullifies EITF Issue 94-3; thus, it will have a significant effect on practice because commitment to an exit or disposal plan no longer will be a sufficient basis for recording a liability for costs related to those activities. Statement No. 146 is effective for exit and disposal activities initiated after December 31, 2002. Early application is encouraged; however, previously issued financial statements may not be restated. An entity would continue to apply the provisions of EITF Issue 94-3 to an exit activity that it initiated under an exit plan that met the criteria of EITF Issue 94-3 before the entity initially applied Statement No. 146. The Company does not believe that the adoption of this statement on January 1, 2003 will have a material impact on its operations.

2. INVENTORIES

Finished goods and work-in-process inventories include material, labor and manufacturing overhead costs. Inventories consisted of the following (in thousands):

	June 30, 2002	December 31, 2001
	<u> </u>	<u> </u>
	(Unaudited)	
Raw materials	\$ 4,360	\$ 3,908
Work-in-process	2,174	2,077
Finished goods	4,420	3,637
	<u> </u>	<u> </u>
	\$ 10,954	\$ 9,622
	<u> </u>	<u> </u>

3. RESTRUCTURING AND INVENTORY IMPAIRMENT CHARGES

On September 7, 2001, the Company announced restructuring initiatives designed to lower its cost structure. The restructuring plan included closing certain facilities, divesting its proteomic contract research services business, reducing its employee headcount and discontinuing certain products. As a result of this restructuring plan, the Company recorded restructuring and inventory impairment charges of approximately \$2.7 million and \$1.2 million, respectively, during 2001.

The restructuring charge of \$2.7 million consisted of \$261,000 for the impairment of goodwill; \$376,000 for the impairment of certain long-lived assets, \$917,000 for the loss on disposal and sale of certain fixed assets, \$688,000 for employee termination benefits for 50 employees, and \$488,000 for exit

costs associated with closing certain facilities. In connection with the restructuring initiatives, the Company estimated the discounted future cash flows related to goodwill and certain fixed assets and reduced these assets to their estimated fair value. As of June 30, 2002, the Company had terminated 45 employees and paid out \$699,000 in termination benefits. At June 30, 2002, the remaining balance of the restructuring reserve totaled \$361,000 and is included in accrued liabilities in the Company's consolidated balance sheet.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

The following tables summarize the restructuring charges (in millions):

	Original Provision	Utilized		Accrual at June 30, 2002
		Cash	Noncash	
Impairment of long-lived assets	\$ 0.6	\$	\$ 0.6	\$
Loss on disposal and sale of assets	0.9		0.9	
Employee termination benefits	0.7	0.7		
Lease cancellation costs	0.5	0.1		0.4
Total	\$ 2.7	\$ 0.8	\$ 1.5	\$ 0.4

4. LINE OF CREDIT

During the second quarter of 2002, the Company amended its \$2.5 million line-of-credit agreement with a bank which extends the term of the agreement for an additional year, therefore, providing for borrowings through June 2003.

5. LITIGATION

In December 2001, the Company filed suit against Photonic Sensor Systems, Inc., a Georgia corporation, in the Federal District Court for the Eastern District of Michigan, alleging breach of contract and seeking monetary relief in the amount of the Company's preferred stock investment of \$500,000. In January 2002, Photonic filed a counter-claim seeking monetary damages and alleging breach of contract, indemnification and tortious interference based on the alleged failure of the Company to purchase stock upon the achievement of certain milestones.

On June 28, 2002, the Company settled the litigation with Photonic. Pursuant to the Settlement Agreement, the Company relinquished its entire equity interest in Photonic. Neither party was obligated to pay any amounts or fees to the other party. The Company determined that the value of its investment in Photonic Sensor's preferred stock was impaired and recorded an adjustment of \$500,000 to reduce this asset to its estimated fair value. This write-down is included in the loss on impairment of long lived asset in the accompanying condensed consolidated statement of operations.

From time to time, the Company is involved in routine legal matters that arise in the ordinary course of its business. The Company currently is not a party to any such matters that it believes will have, individually or in the aggregate, a material adverse effect on its business, financial condition or results of operation.

F-34

6. SEGMENT INFORMATION

The Company operates in one segment: the development, manufacture and marketing of life science systems for dispensing, separating and analyzing biomolecules. The Company's three product lines, genomic, proteomic and microscale liquid handling systems, have similar economic characteristics and attributes, including similar marketing and distribution patterns, similar production processes and similar, if not the same, customers. As a result, the Company aggregates its product lines into a single segment of genomic, proteomic and microscale liquid handling systems. The Company operates primarily in three geographic regions: North America, the United Kingdom and Japan.

The Company distributes products to customers on a worldwide basis. Sales and marketing operations outside the United States are conducted principally through the Company's foreign subsidiaries and third party distributors, including PerkinElmer, Inc. Intercompany sales and transfers between geographic areas are accounted for at prices which are designed to be representative of third party transactions. Revenue is attributed to each geographic location based on which office makes the sale, which includes intercompany sales.

The following table summarizes selected financial information of the Company's operations by geographic location (in thousands):

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

	For the three months ended June 30,		For the six months ended June 30,	
	2002	2001	2002	2001
	(Unaudited)	(Unaudited)	(Unaudited)	(Unaudited)
Revenue:				
United States	\$ 5,889	\$ 3,610	\$ 12,342	\$ 6,560
Europe	2,812	2,902	5,617	5,655
Japan	330	850	2,110	2,152
Less Intercompany revenue	(2,991)	(2,899)	(7,353)	(5,525)
Total revenue	\$ 6,040	\$ 4,463	\$ 12,716	\$ 8,842
		June 30, 2002	December 31, 2001	
		(Unaudited)	(Unaudited)	
Long-lived assets:				
United States		\$ 15,927	\$ 17,093	
Europe		876	921	
Japan		115	142	
Goodwill		9,671	9,579	
Less Eliminations		(8,999)	(8,944)	
Total long-lived assets		\$ 17,590	\$ 18,791	

7. SUBSEQUENT EVENTS

Definitive Agreement to be Acquired by Harvard Bioscience, Inc.

On July 17, 2002, the Company signed a definitive agreement to be acquired by Harvard Bioscience, Inc. ("HBIO") whereby HBIO will acquire the Company for consideration of 3.2 million

F-35

shares of HBIO common stock and \$9 million in cash. This transaction is expected to close in the fourth quarter of 2002 subject to Genomic Solutions stockholder approval and completing other customary closing conditions. As of July 17, 2002, the total estimated purchase price of \$26 million is less than the carrying value of the Company's net assets as of that date, and is an event under SFAS 142 that may indicate that the value of the Company's goodwill is impaired as of that date. The Company will calculate the amount of impairment, if any, and will record an impairment charge, if necessary, in the third quarter of 2002.

Restructuring

On July 18, 2002, the Company announced restructuring initiatives designed to lower its cost structure and achieve profitability. The restructuring plan included reducing its employee headcount, discontinuing certain products and closing certain facilities. As a result of this restructuring plan, the Company will record restructuring and inventory impairment charges of approximately \$1.5 million during the third quarter of 2002.

F-36

**AGREEMENT AND PLAN OF MERGER
BY AND AMONG
HARVARD BIOSCIENCE, INC. ("PARENT"),
HAG ACQ. CORP. ("MERGERCO"),
AND
GENOMIC SOLUTIONS INC. (THE "COMPANY")**

Dated as of July 17, 2002

TABLE OF CONTENTS

	Page
ARTICLE I THE MERGER	2
1.1. The Merger	2
1.2. Effective Time	2
1.3. Closing	2
1.4. Tax Consequences	2
1.5. Taking of Necessary Action; Further Action	2
ARTICLE II DIRECTORS AND OFFICERS OF THE SURVIVING CORPORATION	2
2.1. Directors of the Surviving Corporation and the Company Subsidiaries	2
2.2. Officers of the Surviving Corporation and the Company Subsidiaries	3
ARTICLE III EFFECT OF THE MERGER ON THE CAPITAL STOCK OF THE CONSTITUENT CORPORATIONS	3
3.1. Effect on Capital Stock	3
3.2. Appraisal Rights	4
3.3. Company Stock Options, Company Warrants and Related Matters	5
ARTICLE IV PAYMENT OF SHARES	7
4.1. Payment for Shares of Company Common Stock	7
ARTICLE V REPRESENTATIONS AND WARRANTIES OF THE COMPANY	9
5.1. Existence; Good Standing; Authority; Compliance With Law	9
5.2. Authorization, Validity and Effect of Agreements	10
5.3. Capitalization	11
5.4. Subsidiaries	12
5.5. Other Interests	12
5.6. No Violation; Governmental Consents	12
5.7. Commission Documents	13
5.8. Litigation	13
5.9. Absence of Certain Changes	13
5.10. No Undisclosed Liabilities	14
5.11. Taxes	14
5.12. Properties	16
5.13. Intellectual Property	17
5.14. Environmental Matters	20
5.15. Employee Benefit Plans	21
5.16. Labor Relations and Employment	24
5.17. No Brokers	25
5.18. Opinion of Financial Advisor	25

	Page
5.19. Vote Required	25
5.20. Takeover Laws	25
5.21. Contracts	25
5.22. Collectibility of Accounts Receivable	26
5.23. Inventory	26
5.24. Accounting Policies	27
5.25. Backlog	27
5.26. Customers, Distributors and Suppliers	27
5.27. Restructuring Plan	28
5.28. Product Liability and Warranty	28
5.29. Certain Business Practices	28
A-i	
5.30. Insurance	29
5.31. Reorganization	29
5.32. Ownership of Parent Common Stock; Affiliates and Associates	29
5.33. Compliance with the Hart-Scott-Rodino Act	29
5.34. No Contracts with Affiliates	29
5.35. Disclosure	30
ARTICLE VI REPRESENTATIONS AND WARRANTIES OF PARENT AND MERGERCO	31
6.1. Existence; Good Standing; Authority; Compliance with Law	31
6.2. Authorization, Validity and Effect of Agreements	32
6.3. Capitalization	32
6.4. No Violation; Governmental Consents	33
6.5. Commission Documents	33
6.6. Litigation	34
6.7. Absence of Certain Changes	34
6.8. No Undisclosed Liabilities	34
6.9. Intellectual Property	34
6.10. Environmental Matters	34
6.11. Employee Benefit Plans	35
6.12. Labor Relations and Employment	36
6.13. No Brokers	36
6.14. No Stockholder Vote Required	36
6.15. Takeover Laws	36
6.16. Material Contracts	36
6.17. Accounting Policies	36
6.18. Certain Business Practices	37
6.19. Reorganization	37
6.20. Ownership of Company Common Stock; Affiliates and Associates	37
6.21. Compliance with the Hart-Scott-Rodino Act	37
ARTICLE VII COVENANTS	38
7.1. No Solicitations	38
7.2. Conduct of Business by the Company	39
7.3. Restructuring Plan	42
7.4. Meeting of Company Stockholders	42
7.5. Proxy Statement; Registration Statement; Filing Cooperation	43
7.6. Nasdaq Listing Application	44
7.7. Additional Agreements; Regulatory Filings	44
7.8. Affiliates	45
7.9. Fees and Expenses	45
7.10. Officers' and Directors' Indemnification	45
7.11. Access to Information; Confidentiality	46
7.12. Financial and Other Statements	46
7.13. Advice of Change	46
7.14. Public Announcements	47
7.15. Employee Benefit Arrangements	47
7.16. Delisting	48
7.17. Further Assurances	48

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

7.18. Tax-Free Reorganization	48
ARTICLE VIII CONDITIONS TO THE MERGER	49
8.1. Conditions to the Obligations of Each Party to Effect the Merger	49
8.2. Conditions to Obligations of the Company	49

A-ii

8.3. Conditions to Obligations of Parent	50
ARTICLE IX TERMINATION, AMENDMENT AND WAIVER	52
9.1. Termination	52
9.2. Effect of Termination	53
9.3. Amendment	54
9.4. Extension; Waiver	54
ARTICLE X GENERAL PROVISIONS	54
10.1. Notices	54
10.2. Interpretation	55
10.3. Non-Survival of Representations, Warranties, Covenants and Agreements	55
10.4. Miscellaneous	55
10.5. Assignment	55
10.6. Severability	55
10.7. Choice of Law/Consent to Jurisdiction	55

Exhibits

Exhibit A Form of Affiliate Letter

Exhibit B Form of Tax Opinion

A-iii

AGREEMENT AND PLAN OF MERGER

THIS AGREEMENT AND PLAN OF MERGER (the "*Agreement*") is entered into as of July 17, 2002, by and among HARVARD BIOSCIENCE, INC., a Delaware corporation ("*Parent*"), HAG ACQ. CORP., a Delaware corporation and a wholly owned subsidiary of Parent ("*MergerCo*"), and GENOMIC SOLUTIONS INC., a Delaware corporation (the "*Company*").

RECITALS

WHEREAS, the respective Boards of Directors of Parent, MergerCo and the Company have approved the merger of the Company with and into MergerCo (the "*Merger*") in accordance with the Delaware General Corporation Law (the "*DGCL*") and, upon the terms and subject to the conditions set forth in this Agreement, holders of shares of common stock, par value \$0.001 per share, of the Company (the "*Company Common Stock*") issued and outstanding immediately prior to the Effective Time (as defined in Section 1.2) will be entitled, subject to the terms and conditions hereof, to the right to receive shares of common stock, par value \$0.01 per share, of Parent (the "*Parent Common Stock*") and cash;

WHEREAS, the Board of Directors of the Company (the "*Company Board*") has, in light of and subject to the terms and conditions set forth herein, (a) determined that (i) the consideration to be paid for each share of Company Common Stock in the Merger is fair to the stockholders of the Company, and (ii) the Merger is in the best interests of the Company and its stockholders, and (b) resolved to approve and adopt this Agreement and the transactions contemplated or required by this Agreement, including the Merger (collectively, the "*Transactions*"), and to recommend approval and adoption by the stockholders of the Company of this Agreement and the Transactions;

WHEREAS, as a condition to the willingness of Parent and MergerCo to enter into this Agreement, certain stockholders of the Company (the "*Voting Agreement Stockholders*") have entered into a Voting Agreement, dated as of the date hereof, with Parent and MergerCo (the "*Voting Agreement*"), pursuant to which each Voting Agreement Stockholder has agreed, among other things, to vote such Voting Agreement Stockholder's shares of Company Common Stock in favor of the approval of the Transactions, upon the terms and subject to the conditions set forth in the Voting Agreement;

WHEREAS, as a condition to the willingness of Parent and MergerCo to enter into this Agreement, the President and Chief Executive Officer of the Company has entered into an Employment Agreement, dated as of the date hereof, with MergerCo (the "*Employment Agreement*"), upon the terms and subject to the conditions set forth in the Employment Agreement;

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

WHEREAS, for federal income tax purposes, it is intended that the Merger shall qualify as a reorganization under the provisions of Sections 368(a)(1)(A) and 368(a)(2)(D) of the Internal Revenue Code of 1986, as amended (the "*Code*"), and this Agreement is intended to be and is adopted as a plan of reorganization for purposes of Sections 354, 361 and 368 of the Code; and

WHEREAS, Parent, MergerCo and the Company desire to make certain representations, warranties, covenants and agreements in connection with the Transactions, and also to prescribe various conditions to the Transactions.

NOW, THEREFORE, in consideration of the mutual agreements set forth herein and other valuable consideration, the receipt and adequacy whereof are hereby acknowledged, the parties hereto agree as follows:

A-1

ARTICLE I

THE MERGER

1.1. *The Merger.* Subject to the terms and conditions of this Agreement, at the Effective Time, the Company and MergerCo shall consummate the Merger pursuant to which (a) the Company shall be merged with and into MergerCo and the separate corporate existence of the Company shall thereupon cease, (b) MergerCo shall be the successor or surviving corporation in the Merger (sometimes hereinafter referred to as the "*Surviving Corporation*"), shall continue under the corporate name "Genomic Solutions Inc." and shall continue to be governed by the laws of the State of Delaware and the DGCL, and (c) the separate corporate existence of MergerCo with all its rights, privileges, immunities, powers and franchises shall continue unaffected by the Merger. The Merger shall have the effects specified in Section 259 of the DGCL. The Certificate of Incorporation of MergerCo (the "*MergerCo Certificate*"), as in effect at the Effective Time, shall be the Certificate of Incorporation of the Surviving Corporation until thereafter amended as provided therein or by applicable law. The Bylaws of MergerCo (the "*MergerCo Bylaws*"), as in effect at the Effective Time, shall be the Bylaws of the Surviving Corporation until thereafter amended as provided therein or by applicable law.

1.2. *Effective Time.* Subject to the provisions of this Agreement, as soon as practicable after all of the conditions set forth in Article VIII shall have been satisfied or, if permissible, waived, the parties will file a certificate of merger (the "*Certificate of Merger*") executed in accordance with the relevant provisions of the DGCL and will make all other filings or recordings required under the DGCL in order to effect the Merger. The Merger will become effective at such time as the Certificate of Merger has been duly filed with the Secretary of State of the State of Delaware, or at such subsequent date or time as MergerCo and the Company agree and specify in the Certificate of Merger (the time the Merger becomes effective being herein referred to as the "*Effective Time*").

1.3. *Closing.* The closing of the Merger (the "*Closing*") shall take place at such time and on a date to be specified by the parties, which shall be no later than the second business day after satisfaction or, if permissible, waiver of all of the conditions set forth in Article VIII hereof (the "*Closing Date*"), at the offices of Goodwin Procter LLP, Exchange Place, Boston, Massachusetts 02109, unless another date or place is agreed to by the parties hereto.

1.4. *Tax Consequences.* It is intended that the Merger will constitute a reorganization within the meaning of Sections 368(a)(1)(A) and 368(a)(2)(D) of the Code and that this Agreement constitutes a "plan of reorganization" for purposes of Sections 354 and 361 of the Code. Parent, MergerCo and the Company will be a party within the meaning of Section 368(b) of the Code to such reorganization.

1.5. *Taking of Necessary Action; Further Action.* Each of Parent, MergerCo and the Company shall use its reasonable best efforts to take all such action as may be necessary or appropriate in order to effectuate the Merger under the DGCL as promptly as practicable following the requisite approval by the stockholders of the Company. If at any time after the Effective Time any further action is necessary or desirable to carry out the purposes of this Agreement and to vest the Surviving Corporation with full right, title and possession to all assets, properties, rights, privileges, powers and franchises of both the Company and MergerCo, the officers of such corporations are fully authorized in the name of their corporation or otherwise to take, and shall take, all such lawful and necessary action.

ARTICLE II

DIRECTORS AND OFFICERS OF THE SURVIVING CORPORATION

2.1. *Directors of the Surviving Corporation and the Company Subsidiaries.* The directors of MergerCo immediately prior to the Effective Time shall be the directors of the Surviving Corporation

A-2

immediately after the Effective Time until their successors shall have been duly elected or appointed and qualified or until their earlier death, resignation or removal in accordance with the Certificate of Incorporation and Bylaws of the Surviving Corporation. The Company will cause any director who is a designee of the Company on the Board of Directors of any Company Subsidiary to resign as of the Effective Time, unless otherwise directed by Parent. Such resignation shall include the termination of (a) any indemnification agreement between the Company and such director and (b) any registration rights with respect to Company Common Stock held by such director.

2.2. *Officers of the Surviving Corporation and the Company Subsidiaries.* The officers of MergerCo immediately prior to the Effective Time shall be the officers of the Surviving Corporation immediately after the Effective Time until their successors shall have been duly elected or appointed and qualified or until their earlier death, resignation or removal in accordance with the Certificate of Incorporation and Bylaws of the Surviving Corporation. The Company will cause any officer who is a designee of the Company of any Company Subsidiary to resign as of the Effective Time, unless otherwise directed by Parent. Such resignation shall include the termination of (a) any indemnification agreement between the Company and such officer and (b) any registration rights with respect to Company Common Stock held by such officer.

ARTICLE III

EFFECT OF THE MERGER ON THE CAPITAL STOCK OF THE CONSTITUENT CORPORATIONS

3.1. *Effect on Capital Stock.* As of the Effective Time, by virtue of the Merger and without any action on the part of the holder of any shares of Company Common Stock or any shares of capital stock of MergerCo:

(a) Each issued and outstanding share of Company Common Stock owned by Parent, MergerCo or any other direct or indirect Subsidiary (as defined in Section 10.2 hereof) of Parent (each, a "*Parent Subsidiary*" and collectively, the "*Parent Subsidiaries*") or by the Company or any other direct or indirect Subsidiary of the Company (each, a "*Company Subsidiary*" and collectively, the "*Company Subsidiaries*"), including, without limitation, shares of Company Common Stock in the treasury of the Company immediately prior to the Effective Time, shall be canceled and retired and cease to exist without any conversion thereof and no payment or distribution shall be made with respect thereto.

(b) Each share of Company Common Stock issued and outstanding immediately prior to the Effective Time, other than (i) those shares referred to in Section 3.1(a) and (ii) Dissenting Shares (as defined herein), shall be canceled and shall be converted automatically into and represent the right to receive (A) such number of shares of Parent Common Stock as is equal to the Conversion Ratio (as defined herein) (the "*Stock Consideration*") and (B) a cash amount equal to the Per Share Cash Consideration (as defined herein) (the "*Cash Consideration*") (the Stock Consideration and the Cash Consideration, collectively, the "*Merger Consideration*").

(c) The "*Conversion Ratio*" shall be the result obtained by dividing (i) 3,200,000 shares of Parent Common Stock, as adjusted in the event of any stock split, stock dividend, reverse stock split or similar event affecting the Parent Common Stock, by (ii) the number of shares of outstanding Company Common Stock immediately prior to the Effective Time.

(d) The "*Per Share Cash Merger Consideration*" shall be the result obtained by dividing (i) Nine Million Dollars (\$9,000,000) (the "*Cash Merger Consideration*"), by (ii) the number of shares of outstanding Company Common Stock immediately prior to the Effective Time.

(e) Each share of common stock, par value \$0.01 per share, of MergerCo (the "*MergerCo Common Stock*") issued and outstanding immediately prior to the Effective Time shall remain

A-3

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

outstanding and shall represent one validly issued, fully paid and non-assessable share of common stock, par value \$0.01 per share, of the Surviving Corporation.

(f) All shares of Company Common Stock, when converted as provided in Section 3.1(b), shall no longer be outstanding and shall automatically be canceled and retired and shall cease to exist, and each certificate previously evidencing such shares shall thereafter represent only the right to receive the Merger Consideration and cash in lieu of fractional shares of Parent Common Stock in accordance with Sections 3.1(b) and 4.1(e) and any distribution or dividend as provided under Section 4.1(c), in each case without interest. The holders of certificates previously evidencing shares of Company Common Stock outstanding immediately prior to the Effective Time shall cease to have any rights with respect to the Company Common Stock except as otherwise provided herein or by law and, upon the surrender of such certificates in accordance with the provisions of Article III hereof, shall only represent the right to receive for their shares of Company Common Stock, the Merger Consideration and cash in lieu of fractional shares of Parent Common Stock in accordance with Sections 3.1(b) and 4.1(e) and any distribution or dividend as provided under Section 4.1(c), in each case without interest.

(g) If at the time of the Closing, the aggregate value of the Stock Consideration (other than cash in lieu of fractional shares) is less than forty percent (40%) of the sum of (x) the aggregate value of the Merger Consideration and (y) the value of the payments made for Dissenting Shares and all other conditions to the Closing set forth in Article VIII have been satisfied (or waived by the party entitled to waive such condition), then:

(i) the Merger Consideration will be adjusted by increasing the value of the Stock Consideration and decreasing the Cash Consideration so that the aggregate value of the Stock Consideration (other than cash in lieu of fractional shares) constitutes forty percent (40%) of the sum of (A) the aggregate value of the Merger Consideration and (B) the aggregate value of the payments made for Dissenting Shares; and

(ii) the aggregate value of the Merger Consideration is the same as before any adjustments.

For purposes of this Section 3.1(g) only, the value of the Stock Consideration will be the trading price for a share of Parent Common Stock on the Nasdaq National Market ("Nasdaq") as of the time of the Closing as determined for federal income tax purposes. For purposes of this Section 3.1(g) only, the value of the payments made for Dissenting Shares will be deemed to be the aggregate value of the Merger Consideration that the holders of Dissenting Shares would have received if they had not elected to exercise their appraisal rights.

3.2. *Appraisal Rights.*

(a) Notwithstanding anything in this Agreement to the contrary, any shares of Company Common Stock ("*Dissenting Shares*") which are issued and outstanding immediately prior to the Effective Time and which are held by stockholders of the Company who have timely filed with the Company, before the taking of the vote of the stockholders of the Company to approve the Merger and adopt this Agreement, written objections to such approval and adoption stating their intention to demand payment for such shares of Company Common Stock, and who have not voted such shares of Company Common Stock in favor of the approval of the Merger and the adoption of this Agreement will not be converted as described in Section 3.1 hereof, but will thereafter constitute only the right to receive payment of the fair value of such shares of Company Common Stock in accordance with the applicable provisions of the DGCL (the "*Appraisal Rights Provisions*"); *provided, however*, that all shares of Company Common Stock held by stockholders who shall have failed to perfect or who effectively shall have withdrawn or lost their rights to appraisal of such shares of Company Common Stock under the Appraisal Rights Provisions shall

A-4

thereupon be deemed to have been canceled and retired and to have been converted, as of the Effective Time, into the right to receive the Merger Consideration, without interest, in the manner provided in Section 3.1 hereof. Persons who have perfected statutory rights with respect to Dissenting Shares as aforesaid will not be paid by the Surviving Corporation as provided in this Agreement and will have only such rights as are provided by the Appraisal Rights Provisions with respect to such Dissenting Shares. Notwithstanding anything in this Agreement to the contrary, if Parent or MergerCo abandons or is finally enjoined or prevented from carrying out, or the stockholders rescind their approval of the Merger and adoption of, this Agreement, the right of each holder of Dissenting Shares to receive the fair value of such Dissenting Shares in accordance with the Appraisal Rights Provisions will terminate, effective as of the time of such abandonment, injunction, prevention or rescission.

(b) The Company shall give Parent (i) prompt notice of any demands for appraisal received by the Company, withdrawals of such demands, and any other instruments served pursuant to the DGCL and received by the Company and (ii) the opportunity to direct all negotiations and proceedings with respect to demands for appraisal under the DGCL. The Company shall not, except with the prior

written consent of Parent, make any payment with respect to any demands for appraisal or offer to settle any such demands.

(c) Each dissenting stockholder who becomes entitled under the DGCL to payment for Dissenting Shares shall receive payment therefor after the Effective Time from the Surviving Corporation (but only after the amount thereof shall have been agreed upon or finally determined pursuant to the DGCL) and such Dissenting Shares shall be canceled.

3.3. *Company Stock Options, Company Warrants and Related Matters.*

(a) At the Effective Time, each option to purchase shares of Company Common Stock (collectively, the "*Company Options*") granted under the B.I. Systems Corporation 1994 Omnibus Equity Incentive Plan, as amended (the "*1994 Plan*"), the Company's 1998 Stock Option Plan, as amended (the "*1998 Plan*"), the Company's 1998 Non-Employee Director and Consultant Stock Option Plan, as amended (the "*Director Plan*"), and the Company's 2002 Stock Option Plan, as amended (the "*2002 Plan*" and the 2002 Plan together with the 1994 Plan, the 1998 Plan and the Director Plan, the "*Company Stock Option Plans*"), which is outstanding as of immediately prior to the Effective Time and which has not been exercised or canceled prior thereto, whether or not then vested and exercisable, shall be terminated as provided in this Section 3.3(a) without payment by the Company of any consideration in connection therewith except as contemplated by the Restructuring Plan (as defined in Section 5.27). The Company shall take all actions within its power reasonably necessary to ensure that (i) all Company Options, to the extent not exercised prior to the Effective Time, shall terminate and be cancelled as of the Effective Time and thereafter be of no further force or effect, (ii) no Company Options are granted after the date of this Agreement, and (iii) at the Effective Time, the Company Stock Option Plans and all Company Options issued thereunder shall terminate. If and only if Parent so requests, the Company shall take all actions necessary to ensure that all or any requested portion of the Company Options accelerate prior to the Effective Time. With respect to any Company Option that has not been exercised and does not terminate in accordance with its terms prior to the Effective Time, the Company shall exercise reasonable efforts obtain, prior to the Effective Time, the written consent in a form acceptable to Parent from each holder of a Company Option providing for, among other things, the termination of such Company Option (each such document, an "*Option Termination*"). Notwithstanding the foregoing, if any holder of a Company Option not exercised or terminated prior to the Effective Time refuses to execute an Option Termination, the Company shall take all actions within its power reasonably necessary to cause each such Company Option outstanding as of the Effective Time to be automatically converted at the Effective Time into an option (a "*Converted Option*") to purchase that number of shares of Parent Common Stock equal to the

A-5

number of shares of Company Common Stock issuable immediately prior to the Effective Time upon exercise of the Company Option (without regard to actual restrictions on exercisability) multiplied by the Option Exchange Ratio (with the number of shares rounded down to the nearest whole share), with an exercise price per share of Parent Common Stock equal to the exercise price per share of Company Common Stock which existed under the corresponding Company Option divided by the Option Exchange Ratio (with the exercise price rounded up to the nearest whole cent), and with other terms and conditions that are the same as the terms and conditions of such Company Option immediately before the Effective Time; *provided, however*, that in no event shall the aggregate number of shares of Parent Common Stock subject to Converted Options held by persons who as of the Effective Time are not employees of the Company exceed twenty thousand (20,000) shares; *provided further* that in no event shall the aggregate number of shares of Parent Common Stock subject to Converted Options held by persons who as of the Effective Time are employees of the Company exceed one hundred thousand (100,000) shares. "*Option Exchange Ratio*" means the sum of (x) the Conversion Ratio plus (y) the quotient of (A) the Per Share Cash Merger Consideration divided by (B) the closing price of a share of Parent Common Stock on Nasdaq on the last full trading day immediately prior to the Closing Date, rounded to the nearest third decimal place.

(b) At the Effective Time, each warrant to purchase shares of Company Common Stock (the "*Company Warrants*") which is outstanding as of immediately prior to the Effective Time and which has not been exercised or canceled prior thereto, whether or not then vested and exercisable, shall be terminated as provided in this Section 3.3(b) without payment by the Company of any consideration in connection therewith. The Company shall take all actions necessary to ensure that (i) all Company Warrants to the extent not exercised prior to the Effective Time, shall terminate and be cancelled as of the Effective Time and thereafter be of no further force or effect, and (ii) no Company Warrants are granted after the date of this Agreement. With respect to any Company Warrant that has not been exercised and does not terminate in accordance with its terms prior to the Effective Time, the Company shall obtain, prior to the Effective Time, the written consent in a form acceptable to Parent from each holder of a Company Warrant providing for, among other things, the termination of such Company Warrant and any registration rights held by such holder with respect to the Company Common Stock (each such document, an "*Warrant Termination*").

(c) The Company's 2000 Employee Stock Purchase Plan, as amended (the "*Company Stock Purchase Plan*"), shall be terminated as of the Effective Date, and each participant in the Company Stock Purchase Plan on such date shall be deemed to have exercised his or her option under the Company Stock Purchase Plan on such date and shall acquire from the Company (i) such number of whole shares of Company Common Stock as his or her accumulated payroll deductions on such date will purchase at the price specified in

the Company Stock Purchase Plan with the entire credit balance in such participant's Stock Purchase Account (as defined in the Company Stock Purchase Plan) (treating the last business day prior to the Effective Date as the Offering Termination Date (as defined in the Company Stock Purchase Plan) for all purposes of the Company Stock Purchase Plan) and (ii) cash in the amount of any remaining balance in such participant's account; *provided, however*, that any participant that has given notice to the Company prior to the third to last business day prior to the Effective Date in accordance with the Company Stock Purchase Plan that such participant requests the distribution of his or her entire credit balance in cash shall receive cash in the amount of the balance in such participant's Stock Purchase Account in lieu of purchasing Company Common Stock thereunder.

A-6

ARTICLE IV

PAYMENT OF SHARES

4.1. *Payment for Shares of Company Common Stock.*

(a) At or prior to the Effective Time, Parent shall deposit, or otherwise take all steps necessary to cause to be deposited, with such bank or trust company designated by Parent (the "Exchange Agent") certificates representing the shares of Parent Common Stock, the cash in lieu of fractional shares and the Cash Merger Consideration (such cash and certificates for shares of Parent Common Stock being hereinafter referred to as the "*Exchange Fund*") to be issued pursuant to Section 3.1 and paid pursuant to this Article IV in exchange for all of the outstanding shares of Company Common Stock.

(b) Promptly after the Effective Time, Parent shall cause the Exchange Agent to mail to each holder of record of a certificate or certificates other than the Company, Parent, MergerCo, any Company Subsidiary or any Parent Subsidiary previously evidencing shares of Company Common Stock outstanding (i) a letter of transmittal which shall specify that delivery shall be effected, and risk of loss and title to such certificates shall pass, only upon delivery of such certificates to the Exchange Agent and shall be in such form and have such other provisions as Parent may reasonably specify and (ii) instructions for use in effecting the surrender of such certificates previously evidencing shares of Company Common Stock in exchange for the Merger Consideration and cash in lieu of fractional shares of Parent Common Stock. Upon surrender of a certificate previously evidencing shares of Company Common Stock to the Exchange Agent together with such letter of transmittal, duly executed and completed in accordance with the instructions thereto, the holder of such certificate shall be entitled to receive in exchange therefor (x) a certificate representing the Stock Consideration to which such holder shall be entitled, and (y) a check representing the amount of Cash Consideration to which such holder shall be entitled *plus* (z) the amount of cash in lieu of fractional shares, if any, *plus* the amount of any dividends, or distributions, if any, pursuant to paragraph (c) below, in all cases after giving effect to any required withholding tax. No interest will be paid or accrued on the cash in lieu of fractional shares or on the dividend or distribution, if any, payable to holders of certificates previously evidencing shares of Company Common Stock pursuant to this Section 4.1. In the event of a transfer of ownership of Company Common Stock which is not registered in the transfer records of the Company, a certificate representing the proper Stock Consideration, together with a check for the proper Cash Consideration *plus* the cash to be paid in lieu of fractional shares of Parent Common Stock *plus*, to the extent applicable, the amount of any dividend or distribution, if any, payable pursuant to paragraph (c) below, in all cases after giving effect to any required withholding tax may be issued to a transferee if the certificate representing shares of such Company Common Stock is presented to the Exchange Agent, accompanied by all documents required to evidence and effect such transfer, including signature medallion guarantee, and to evidence that any applicable stock transfer taxes have been paid.

(c) Notwithstanding any other provisions of this Agreement, no dividends or other distributions on Parent Common Stock shall be paid with respect to any shares of Company Common Stock represented by a certificate until such certificate is surrendered for exchange as provided herein; *provided, however*, that subject to the effect of applicable laws, following surrender of any such certificate, there shall be paid to the holder of the certificates representing whole shares of Parent Common Stock issued in exchange therefor, without interest, (i) at the time of such surrender, the amount of dividends or other distributions with a record date after the Effective Time and a payment date prior to surrender theretofore payable with respect to such whole shares of Parent Common Stock and not paid, less the amount of any withholding taxes which may be required thereon, and (ii) at the appropriate payment date, the amount of dividends

A-7

or other distributions with a record date after the Effective Time but prior to surrender and a payment date subsequent to surrender payable with respect to such whole shares of Parent Common Stock, less the amount of any withholding taxes which may be required thereon.

(d) At and after the Effective Time, there shall be no transfers on the stock transfer books of the Company of any of the shares of Company Common Stock. If, after the Effective Time, certificates previously evidencing shares of Company Common Stock are presented to the Surviving Corporation, they shall be canceled and exchanged for the Merger Consideration and cash in lieu of fractional shares, if any, in accordance with this Section 4.1 (plus dividends and distributions to the extent set forth in Section 4.1(c), if any).

(e) No fractional shares of Parent Common Stock shall be issued upon the surrender for exchange of certificates previously evidencing shares of Company Common Stock, and such fractional share interest shall not entitle its owner to vote, to receive dividends, or to any other rights as a stockholder of Parent. In lieu of the issuance of any fractional share of Parent Common Stock pursuant to Section 3.1(b), each holder of Company Common Stock upon surrender of a certificate previously evidencing shares of Company Common Stock for exchange shall be paid an amount in cash (without interest), rounded to the nearest cent, determined by multiplying (i) the average per share closing price of a share of Parent Common Stock as reported on Nasdaq over the five (5) trading days immediately preceding the date of the Closing by (ii) the fraction of a share of Parent Common Stock which such holder would otherwise be entitled to receive under this Section 4.1.

(f) Any portion of the Exchange Fund (including the proceeds of any investments thereof, which shall accrue solely for the account of Parent, and any shares of Parent Common Stock) that remains unclaimed by the former stockholders of the Company one (1) year after the Effective Time shall be delivered to the Surviving Corporation. Any former stockholders of the Company who have not theretofore complied with this Article IV shall thereafter look only to the Surviving Corporation for payment of their Merger Consideration and cash in lieu of fractional shares, (plus dividends and distributions to the extent set forth in Section 4.1(c), if any), as determined pursuant to this Agreement, without any interest thereon. Notwithstanding any of the foregoing, none of Parent, MergerCo, the Company, the Exchange Agent or any other person shall be liable to any former holder of shares of Company Common Stock for any amount properly delivered to a public official pursuant to applicable abandoned property, escheat or similar laws. In the event any certificate previously evidencing shares of Company Common Stock shall have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming such certificate to be lost, stolen or destroyed in form acceptable to Parent and its transfer agent and registrar and, if required by the Surviving Corporation and/or Parent's transfer agent and registrar, the posting by such person of a bond in such amount as the Surviving Corporation may direct as indemnity against any claim that may be made against it with respect to such certificate or in such amount as the transfer agent and registrar of the Parent Common Stock requires, the Exchange Agent or the Surviving Corporation will issue in exchange for such lost, stolen or destroyed certificate the Merger Consideration and cash in lieu of fractional shares (plus, to the extent applicable, dividends and distributions payable pursuant to Section 4.1(c)) in each case without interest.

A-8

ARTICLE V

REPRESENTATIONS AND WARRANTIES OF THE COMPANY

Except as set forth in the disclosure letter delivered at or prior to the execution hereof to Parent and MergerCo, which shall refer to the relevant Sections of this Agreement (the "*Company Disclosure Schedule*"), the Company represents and warrants to Parent and MergerCo as follows:

5.1. *Existence; Good Standing; Authority; Compliance With Law.*

(a) The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has the requisite corporate or other power and authority to own, operate, lease and encumber its properties and to carry on its business as it is now being conducted. The Company is duly licensed or qualified to do business as a foreign corporation and is in good standing under the laws of any other jurisdiction in which the character of the properties owned, leased or operated by it therein

or in which the transaction of its business makes such license or qualification necessary, except where the failure to be so licensed or qualified or to be in good standing could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect (as hereinafter defined). For purposes of this Agreement, a "*Company Material Adverse Effect*" means any change, effect, event, occurrence, condition or development that is or is reasonably likely to be materially adverse to (i) the business, operations, assets, liabilities, properties, results of operations, prospects or condition (financial or otherwise) of the Company and each Company Subsidiary, taken as a whole, or (ii) the ability of the Company to perform its obligations under this Agreement.

(b) Each of the Company Subsidiaries is a corporation, partnership or limited liability company (or similar entity or association in the case of those Company Subsidiaries organized and existing other than under the laws of a state of the United States) duly incorporated or organized, validly existing and in good standing under the laws of its jurisdiction of incorporation or organization, has the requisite corporate or other power and authority to own, operate, lease and encumber its properties and to carry on its business as it is now being conducted, and is duly licensed or qualified to do business and is in good standing in each jurisdiction in which the ownership of its property or the conduct of its business requires such license or qualification, except for jurisdictions in which such failure to be so licensed or qualified or to be in good standing could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect. The Company is in physical possession of all original stock certificates of the Company Subsidiaries.

(c) Neither the Company nor any of the Company Subsidiaries is in violation of any order of any court, governmental authority or arbitration board or tribunal, or any law, ordinance, bylaw, judgment, decree, order, arbitration, concession, grant, governmental rule or regulation to which the Company or any Company Subsidiary or any of their respective properties or assets is subject, where such violation, alone or together with all other violations, could reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect. The Company and the Company Subsidiaries have obtained all licenses, permits, approvals and other authorizations and have taken all actions required by applicable law or governmental regulations in connection with their businesses as currently conducted, except where the failure to obtain any such license, permit, approval or authorization or to take any such action, alone or together with all other failures, could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect. All such licenses, permits, approvals and other authorizations are in full force and effect. No violations are or have been recorded in respect of any such license, permit, approval or other authorization; to the knowledge of the Company, no event has occurred that would allow revocation or termination or that would result in the impairment of the Company's or any Company Subsidiary's rights with respect to any such license, permit, approval or authorization;

A-9

and no proceeding is pending or, to the knowledge of the Company, threatened to revoke, limit or enforce any such license, permit, approval or authorization, except in each case for violations, revocations, terminations and proceedings which could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect.

(d) True, complete and accurate copies of the Certificate of Incorporation of the Company (the "*Company Certificate*") and the Bylaws of the Company (the "*Company Bylaws*") and the other charter documents, bylaws, organizational documents and partnership, limited liability company and joint venture agreements (and in each such case, all amendments thereto) of the Company and each of the Company Subsidiaries have been delivered to Parent prior to the date of this Agreement, and, except as set forth in Section 5.1(d) of the Company Disclosure Schedule, no amendments thereto are pending. Such charter documents, bylaws, organizational documents and agreements are listed in Section 5.1(d) of the Company Disclosure Schedule. The Company is not in violation of any provisions of the Company Certificate or the Company Bylaws, and no Company Subsidiary is in violation of any of the provisions of its equivalent organizational documents.

5.2. *Authorization, Validity and Effect of Agreements.* The Company has the requisite power and authority to enter into and consummate the Transactions and to execute and deliver this Agreement. The Company Board has approved this Agreement and the Transactions and has resolved to recommend that the holders of Company Common Stock adopt and approve this Agreement at the stockholders' meeting of the Company to be held in accordance with the provisions of Section 7.4. Subject only to the adoption of this Agreement by the holders of a majority of the outstanding shares of Company Common Stock, the execution and delivery by the Company of this Agreement and the consummation of the Transactions have been duly authorized by all requisite corporate action on the part of the Company. As of the date hereof, all of the directors and executive officers of the Company have indicated that they presently intend to vote all shares of Company Common Stock that they own to approve this Agreement and the Transactions at the stockholders' meeting of the Company to be held in accordance with the provisions of Section 7.4. This Agreement has been duly executed and delivered by the Company and, assuming due and valid authorization, execution and delivery hereof by Parent and MergerCo, is a valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, subject to applicable bankruptcy, insolvency, moratorium or other similar laws relating to creditors' rights and general principles of equity.

5.3. *Capitalization.* The authorized capital stock of the Company consists of 60,000,000 shares of Company Common Stock, par value \$0.001 per share, and 15,000,000 shares of preferred stock, par value \$0.001 per share (the "*Company Preferred Stock*"). As of the date of this Agreement, (a) 31,257,198 shares of Company Common Stock were issued and outstanding, (b) 7,965,720 shares of Company Common Stock were authorized and reserved for issuance pursuant to the Company Stock Option Plans, subject to adjustment on the terms set forth in the Company Stock Option Plans, (c) 1,000,000 shares of Company Common Stock were authorized and reserved for issuance pursuant to the Company Stock Purchase Plan, (d) 3,115,833 Company Options were outstanding under the Company Stock Option Plans, (e) 125,000 Company Warrants were outstanding, (f) no Company Options were outstanding other than under the Company Stock Option Plans, (g) no shares of Company Preferred Stock were issued and outstanding, and (h) no shares of Company Common Stock and no shares of Company Preferred Stock were held in the treasury of the Company. As of the date of this Agreement, the Company had no shares of Company Common Stock or Company Preferred Stock reserved for issuance other than as described above. All issued and outstanding shares of capital stock of the Company are, and all shares of capital stock of the Company which may be issued pursuant to the exercise of outstanding Company Options and outstanding Company Warrants will be, duly authorized, validly issued, fully paid, nonassessable and free of any preemptive rights. All issued and outstanding shares of capital stock of the Company were, and all shares of capital stock of the Company which may be issued pursuant to the exercise of outstanding Company Options and outstanding Company Warrants will be, issued in compliance with and in accordance with the applicable requirements of the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (the "*Exchange Act*"), the Securities Act of 1933, as amended and the rules and regulations promulgated thereunder, (the "*Securities Act*" and together with the Exchange Act, the "*Securities Laws*") and applicable state securities and "*Blue Sky*" laws. The Company has no outstanding bonds, debentures, notes or other obligations the holders of which have the right to vote (or which are convertible into or exercisable for securities having the right to vote) with the stockholders of the Company on any matter. Section 5.3 of the Company Disclosure Schedule sets forth a complete and accurate list of the Company Options as of the date of this Agreement, including the name of the person to whom each Company Option has been granted, the number of shares subject to each Company Option, the per share exercise price for each Company Option, the vesting schedule for each Company Option, and the Company Stock Option Plan, if applicable, under which each Company Option has been issued. Section 5.3 of the Company Disclosure Schedule sets forth a complete and accurate list of the Company Warrants, including the name of the person to whom each Company Warrant has been granted, the number of shares subject to each Company Warrant, the per share exercise price for each Company Warrant, and the vesting schedule for each Company Warrant. Except as set forth in Section 5.3 of the Company Disclosure Schedule, there are no options, warrants, calls, subscriptions, convertible securities, or other rights, agreements or commitments which obligate the Company to issue, transfer or sell any shares of capital stock of the Company. Except as set forth in Section 5.3 of the Company Disclosure Schedule, the vesting schedule of all Company Options and Company Warrants shall not be changed or affected by the execution of this Agreement or the consummation of the Transactions. The Company has previously provided Parent with true, complete and accurate copies of all forms of option agreements with respect to the Company Options and a true, complete and accurate list of options issued under each such form of option agreement. The Company has previously provided Parent with true, complete and accurate copies of all warrant agreements with respect to the Company Warrants. Except as set forth in Section 5.3 of the Company Disclosure Schedule, there are no agreements or understandings to which the Company or any Company Subsidiary is a party with respect to the voting of any shares of capital stock of the Company or which restrict the transfer of any such shares, nor does the Company have knowledge of any third-party agreements or understandings with respect to the voting of any such shares or which restrict the transfer of any such shares. Except as set forth in Section 5.3 of the Company Disclosure Schedule, there are no outstanding contractual obligations of the Company or any Company Subsidiary to

repurchase, redeem or otherwise acquire any shares of capital stock, partnership interests or any other securities of the Company or any Company Subsidiary. Except as set forth in Section 5.3 of the Company Disclosure Schedule, neither the Company nor any Company Subsidiary is under any obligation, contingent or otherwise, by reason of any agreement to register the offer and sale or resale of any of their securities under the Securities Act.

5.4. *Subsidiaries.* Section 5.4 of the Company Disclosure Schedule contains a complete and accurate list of all of the Company Subsidiaries. Except as set forth in Section 5.4 of the Company Disclosure Schedule, the Company owns directly or indirectly all of the outstanding shares of capital stock or other equity interests of each of the Company Subsidiaries. Each of the outstanding shares of capital stock of each of the Company Subsidiaries having corporate form is duly authorized, validly issued, fully paid, nonassessable and free of any preemptive rights. Except as set forth in Section 5.4 of the Company Disclosure Schedule, each of the outstanding shares of capital stock or other equity interest of each of the Company Subsidiaries is owned, directly or indirectly, by the Company free and clear of all liens, pledges, security interests, claims or other encumbrances. Except as set forth in Section 5.4 of the Company Disclosure Schedule, there are no options, warrants, calls, subscriptions, convertible securities, or other rights, agreements or commitments which obligate any Company Subsidiary to issue, transfer or sell any shares of its capital stock or other equity interests. The following information for each Company Subsidiary as of the date of this Agreement is set forth in Section 5.4 of the Company Disclosure Schedule: (a) its name and jurisdiction of incorporation or organization; (b) its authorized capital stock, share capital or other equity interest; and (c) the name of each stockholder or equity interest holder and the number of issued and outstanding shares of capital stock, share capital or other equity interest held by each such holder.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

5.5. *Other Interests.* Except as set forth in Section 5.5 of the Company Disclosure Schedule, neither the Company nor any Company Subsidiary owns directly or indirectly any interest or investment (whether equity or debt) in any corporation, partnership, limited liability company, joint venture, business, trust or other entity (other than investments in short-term investment securities). Except as set forth in Section 5.5 of the Company Disclosure Schedule, there are no outstanding contractual obligations of the Company or any Company Subsidiary to acquire any shares of capital stock, partnership interests or other securities of any such entity in which it owns an interest or holds an investment. To the knowledge of the Company, there is no dispute among the equity holders of any entity in which the Company and the Company Subsidiaries own less than all of the equity interests therein.

5.6. *No Violation; Governmental Consents.* Except as set forth in Section 5.6 of the Company Disclosure Schedule, none of the execution, delivery or performance of this Agreement by the Company, the consummation by the Company of the Transactions, or the compliance by the Company with any of the provisions hereof, will conflict with or result in a breach of any provision of the Company Certificate or the Company Bylaws. Except as set forth in Section 5.6 of the Company Disclosure Schedule, the execution, delivery and performance of this Agreement by the Company, the consummation by the Company of the Transactions, and the compliance by the Company with the provisions hereof, will not violate, or conflict with, or result in a breach of any provision of, or constitute a default (or an event which, with notice or lapse of time or both, would constitute a default) under, or result in the termination or in a right of termination or cancellation of, or accelerate the performance required by, or result in the creation of any lien, security interest, charge or encumbrance upon any of the properties of the Company or the Company Subsidiaries under, or result in being declared void, voidable or without further binding effect, any of the terms, conditions or provisions of (a) any note, bond, mortgage, indenture or deed of trust to which the Company or any of the Company Subsidiaries is a party, or by which the Company or any of the Company Subsidiaries or any of their properties or assets is bound, (b) any license, franchise, permit, lease, contract, agreement or other instrument, commitment or obligation to which the Company or any of the Company Subsidiaries is a

A-12

party, or by which the Company or any of the Company Subsidiaries or any of their properties or assets is bound, or (c) any order, writ, judgment, injunction, decree, law (including common law), statute, rule or regulation applicable to the Company or any Company Subsidiary or any of their properties or assets, except as otherwise could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect. Other than the filings provided for in Section 1.2 or required pursuant to the Exchange Act or applicable state securities and "Blue Sky" laws, the execution and delivery of this Agreement by the Company does not, and the performance of and compliance with this Agreement by the Company and consummation of the Transactions does not, require any authorization, consent or approval of, permit from, or declaration, filing or registration with, any governmental or regulatory authority, except where the failure to obtain any such authorization, consent or approval of, permit from, or declaration, filing or registration with, any governmental or regulatory authority could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect.

5.7. *Commission Documents.* The Company has filed all required forms, reports, exhibits, schedules, statements and other documents with the Commission since the date the Company became subject to the reporting requirements of the Exchange Act (as such documents may have been amended since the time of filing, collectively, the "*Company SEC Reports*"), all of which were prepared in accordance with the applicable requirements of the Exchange Act, the Securities Act and the rules and regulations promulgated thereunder (the "*Securities Laws*"). As of their respective dates, the Company SEC Reports (a) complied as to form in all material respects with the applicable requirements of the Securities Laws and (b) did not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements made therein, in the light of the circumstances under which they were made, not misleading. Each of the consolidated balance sheets of the Company included in or incorporated by reference into the Company SEC Reports (including the related notes and schedules) fairly presents the consolidated financial position of the Company and the Company Subsidiaries as of its date and each of the consolidated statements of income, retained earnings and cash flows of the Company included in or incorporated by reference into the Company SEC Reports (including any related notes and schedules) fairly presents the results of operations, retained earnings or cash flows, as the case may be, of the Company and the Company Subsidiaries for the periods set forth therein (subject, in the case of unaudited statements, to normal year-end audit adjustments which would not be material in amount or effect), in each case in accordance with generally accepted accounting principles ("*GAAP*") consistently applied during the periods involved, except as may be noted therein and except, in the case of the unaudited statements, as permitted by Form 10-Q pursuant to Section 13 or 15(d) of the Exchange Act. No Company Subsidiary is required to file any form, report or document with the Commission.

5.8. *Litigation.* Except as set forth in Section 5.8 of the Company Disclosure Schedule, there are (a) no continuing orders, injunctions or decrees of any court, arbitrator or governmental authority to which the Company or any Company Subsidiary is a party or by which any of its properties or assets are bound or to which any of its directors, officers, employees or agents, in such capacities, is a party or by which any of its properties or assets are bound, and (b) no actions, suits or proceedings pending against the Company or any Company Subsidiary or against any of its directors, officers, employees or agents, in such capacities, or, to the knowledge of the Company, threatened against the Company or any Company Subsidiary or against any of its directors, officers, employees or agents, at law or in equity, or before or by any federal or state commission, board, bureau, agency or instrumentality or any arbitration or other private dispute resolution mechanism.

5.9. *Absence of Certain Changes.* Except as set forth in Section 5.9 of the Company Disclosure Schedule, since December 31, 2001, (a) the Company and the Company Subsidiaries have conducted their businesses only in the ordinary course of business, (b) neither the Company nor any of the Company Subsidiaries has taken any of the actions or permitted to occur any of the events specified in

A-13

Section 7.2 hereof, and (c) up to and including the date of this Agreement, there has not been any change, effect, event, occurrence, non-occurrence, condition or development which has had or could reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect.

5.10. *No Undisclosed Liabilities.* Except as set forth in Section 5.10 of the Company Disclosure Schedule, neither the Company nor any of the Company Subsidiaries has any material liabilities or obligations of any nature (whether known or unknown, whether asserted or unasserted, whether absolute or contingent, whether accrued or unaccrued, whether liquidated or unliquidated and whether due or to become due, including any liability for Taxes (as defined in Section 5.11) and any material obligations or liabilities whether or not of the nature or type required to be disclosed under GAAP) other than such liabilities or obligations that have been specifically disclosed or provided in the Company SEC Reports.

5.11. *Taxes.*

(a) The Company and each of the Company Subsidiaries has paid or caused to be paid all federal, state, provincial, local and foreign taxes, fees, levies, duties, tariffs, imposts and other charges of any kind (together with any and all interest, penalties, additions to tax and additional amounts imposed with respect thereto) imposed by any government or taxing authority, including, without limitation: taxes or other charges on or with respect to income, franchises, windfall or other profits, gross receipts, property, sales, use, capital stock, payroll, employment, social security (including, without limitation, in the United Kingdom, National Insurance contributions), worker's compensation, disability, unemployment compensation or net worth; taxes or other charges in the nature of excise, withholding, ad valorem, stamp, transfer, value added or gains taxes; license, registration and documentation fees; and duties, tariffs and similar charges (collectively, "*Taxes*"), required to be paid by it whether disputed or not and including any obligations to indemnify or otherwise assume or succeed to another's Tax liability except for Taxes the failure to withhold or pay which could not, when added with any penalties applicable thereto, reasonably be expected to have a Company Material Adverse Effect.

(b) The Company and each of the Company Subsidiaries has withheld and paid all Taxes required to have been withheld and paid in connection with any amounts paid or owing to any employee, independent contractor, creditor, stockholder, or other third party except for Taxes the failure to withhold or pay which could not, when added with any penalties applicable thereto, reasonably be expected to have a Company Material Adverse Effect. The Company Subsidiary operating in the United Kingdom has correctly operated the "Pay as You Earn" system.

(c) The Company and each of the Company Subsidiaries has in accordance with applicable law filed all material reports, returns, declarations, statements or other information required to be supplied to a taxing authority in connection with Taxes (collectively, "*Tax Returns*"), and all such Tax Returns correctly and accurately set forth the amount of any Taxes relating to the applicable period. The Company has delivered or made available to Parent true, complete and accurate copies of all Tax Returns, and of all examination reports and statements of deficiencies assessed against or agreed to by the Company or any Company Subsidiary with respect to such Tax Returns.

(d) Neither the Internal Revenue Service ("*IRS*") nor any other governmental authority is now asserting or, to the knowledge of the Company, threatening to assert against the Company or any Company Subsidiary any deficiency or claim for additional Taxes. No written claim has ever been made by, and no stockholder or director or manager or person responsible for Tax matters of the Company or its Subsidiaries expects a claim to be made by, an authority in a jurisdiction where the Company or a Company Subsidiary does not file reports and returns that the Company or such Company Subsidiary is or may be subject to taxation by that jurisdiction. There are no security interests on any of the assets of the Company and the Company Subsidiaries that arose in connection with any failure (or alleged failure) to pay any Taxes.

A-14

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

(e) Except as set forth in Section 5.11(e) of the Company Disclosure Schedule, there has not been any audit of any Tax Return filed by the Company or any Company Subsidiary, no audit of any Tax Return of the Company or any Company Subsidiary is in progress, and neither the Company nor any Company Subsidiary has been notified in writing by any tax authority that any such audit is contemplated or pending. Except as set forth in Section 5.11(e) of the Company Disclosure Schedule, no extension of time with respect to any date on which a Tax Return was or is to be filed by the Company or any Company Subsidiary is in force, and no waiver or agreement by the Company or any Company Subsidiary is in force for the extension of time for the assessment or payment of any Taxes.

(f) Except as set forth in Section 5.11(f) of the Company Disclosure Schedule, the most recent audited financial statements contained in the Company SEC Reports reflect an adequate reserve for all Taxes payable by the Company and the Company Subsidiaries for all taxable periods and portions thereof through the date of such financial statements in accordance with GAAP, whether or not shown as being due on any Tax Returns.

(g) Except as set forth in Section 5.11(g) of the Company Disclosure Schedule, neither the Company nor any Company Subsidiary is a party to any agreement providing for the allocation, indemnification or sharing of Taxes with any person other than the Company or the Company Subsidiaries. The Company has provided Parent with true, complete and accurate copies of any such agreements.

(h) Except as set forth in Section 5.11(h) of the Company Disclosure Schedule, neither the Company nor any Company Subsidiary has ever been (or has ever had any liability for unpaid Taxes under Treasury Regulations Section 1.1502-6 (or comparable provisions of federal, state or local law) because it once was) a member of an "affiliated group" (as defined in Section 1504(a) of the Code), except for any group of which the Company and the Company Subsidiaries are the only members. No Company Subsidiary formed in the United Kingdom is, ever has been, or is treated, as a member of a group for value added tax purposes.

(i) Except as set forth in Section 5.11(i) of the Company Disclosure Schedule, neither the Company nor any Company Subsidiary (i) has made any payments, is obligated to make any payments or is a party to any agreement that under certain circumstances could obligate it to make any payments that will not be deductible under Section 280G of the Code (or any similar provision of state, local or foreign law), (ii) has filed a consent under Section 341(f) of the Code concerning collapsible corporations or (iii) was, at any time during the period specified in Section 897(c)(1)(A)(ii) of the Code, a United States real property holding corporation within the meaning of Section 897(c)(2) of the Code.

(j) Neither the Company nor any Company Subsidiary will be required to include any item of income in, or exclude any deduction from, taxable income for any taxable period (or portion thereof) ending after the Closing Date as a result of any: (i) change in method of accounting for a taxable period ending on or prior to the Closing Date; (ii) "closing agreement" as described in Section 7121 of the Code (or any corresponding or similar provision of state, local or foreign income Tax law) executed on or prior to the Closing Date; (iii) intercompany transactions or any excess loss account described in Treasury Regulations under Section 1502 of the Code (or any corresponding or similar provision of state, local or foreign income Tax law); (iv) installment sale or open transaction disposition made on or prior to the Closing Date; or (v) prepaid amount received on or prior to the Closing Date.

(k) No Company Common Stock is owned by any Company Subsidiary.

A-15

(l) The merger of Cartesian Technologies, Inc. with and into Cartesian Acquiring Corporation, which was at the time a wholly owned subsidiary of the Company, qualified as a tax-free reorganization under Section 368(a) of the Code.

(m) Neither the Company nor any Company Subsidiary has ever participated in any way in any confidential corporate tax shelter within the meaning of temporary Treasury Regulations Section 301.6111-2T(a)(2).

5.12. *Properties.*

(a) Neither the Company nor any Company Subsidiary owns any real property. Section 5.12(a) of the Company Disclosure Schedule lists all real property leased or subleased to or by the Company or any of the Company Subsidiaries and lists the dates of and parties to each such lease, the dates and parties to each amendment, modification and supplement to each such lease, the term of such lease, and any extension options thereunder. The Company has delivered to Parent true, complete and accurate copies of the leases and subleases (each as amended to date) listed in Section 5.12(a) of the Company Disclosure Schedule. Except as set forth in

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Section 5.12(a) of the Company Disclosure Schedule, with respect to each such lease and sublease:

(i) the lease or sublease is a valid, binding and enforceable obligation of the Company or the Company Subsidiary, as the case may be, subject to applicable bankruptcy, insolvency, moratorium or other similar laws relating to creditors' rights and general principles of equity;

(ii) neither the Company nor any Company Subsidiary, or to the knowledge of the Company, any other party, is in breach or violation of, or default under, any such lease or sublease, and no event has occurred, is pending or, to the knowledge of the Company, is threatened, which, after the giving of notice or the lapse of time or both, would constitute a breach or default by the Company or a Company Subsidiary, or to the knowledge of the Company, any other party under such lease or sublease;

(iii) neither the Company nor any Company Subsidiary has assigned, transferred, conveyed, mortgaged, deeded in trust or encumbered any interest in the leasehold or subleasehold;

(iv) there are no Encumbrances (as hereinafter defined), easements, covenants or other restrictions applicable to the real property subject to such lease or sublease, except for easements, covenants and other restrictions which do not, individually or in the aggregate, materially impair the current uses or the occupancy by the Company or the Company Subsidiary, as the case may be, of the property subject thereto;

(v) to the knowledge of the Company, during the last two years there have been no dealings with respect to any of the leasehold or subleasehold properties other than at arms length including, without limitation, dealings with respect to properties in the United Kingdom at an undervalue which may give rise to a claim for improper stamping or setting aside; and

(vi) to the knowledge of the Company there are no structural or other defects in respect of the buildings and structures on or comprising any of the leasehold or subleasehold properties.

(b) Except as set forth in Section 5.12(b) of the Company Disclosure Schedule, the Company and the Company Subsidiaries own good title, free and clear of all liens, mortgages, pledges, charges, security interests or other encumbrances (collectively, "Encumbrances"), to all property and assets necessary to conduct the business of the Company as currently conducted, except for (i) Encumbrances reflected in the Company's consolidated balance sheet at December 31, 2001 included in the Company SEC Reports, (ii) Encumbrances or imperfections of title which do not materially detract from the value or materially interfere with the present or presently contemplated

A-16

use of the assets subject thereto or affected thereby, and (iii) Encumbrances for current Taxes not yet due and payable. The Company and the Company Subsidiaries, as lessees, have the right under valid and subsisting leases to use, possess and control all personalty leased by the Company or the Company Subsidiaries as now used, possessed and controlled by the Company or the Company Subsidiaries, as applicable. All of the machinery, equipment and other tangible personal property and assets owned or used by the Company and the Company Subsidiaries are in reasonably good condition, maintenance and repair, except for ordinary wear and tear, are useable in the ordinary course of business consistent with past practices, and are reasonably adequate and suitable for the uses to which they are being put.

5.13. *Intellectual Property.*

(a) Section 5.13(a) of the Company Disclosure Schedule contains a complete and accurate list of all Patents (as hereinafter defined) owned by the Company or any Company Subsidiary or otherwise used in the Business (as hereinafter defined) ("Company Patents"), registered Marks (as hereinafter defined) and unregistered Marks under which the Company sells or distributes Products (as hereinafter defined) owned by the Company or any Company Subsidiary or otherwise used in the Business ("Company Marks") and registered Copyrights (as hereinafter defined) owned by the Company or any Company Subsidiary or otherwise used in the Business ("Company Copyrights"). Except as set forth in Section 5.13(a) of the Company Disclosure Schedule:

(i) the Company or one of the Company Subsidiaries owns or possesses rights to use, without payment to a third party, all of the Intellectual Property Assets necessary for the operation of the Business, free and clear of all Encumbrances;

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

(ii) all Company Patents, Company Marks and Company Copyrights which are issued by or registered with, as applicable, the U.S. Patent and Trademark Office, the U.S. Copyright Office or in any similar office or agency anywhere in the world are currently in compliance with formal legal requirements (including, without limitation, as applicable, payment of filing, examination and maintenance fees, proofs of working or use, timely post-registration filing of affidavits of use and incontestability and renewal applications) except for such non-compliance as could not reasonably be expected to result in the abandonment, expiration or lapse of any Company Patent, Company Mark or Company Copyright and, to the Company's knowledge, are valid and enforceable;

(iii) there are no pending, or, to the Company's knowledge, threatened claims against the Company, any Company Subsidiary or any of their respective employees alleging that (A) any of the Company Intellectual Property Assets or the Business infringes the rights of others under any Intellectual Property Assets ("*Third Party Rights*") or (B) the Company, any Company Subsidiary or any of their respective employees have misappropriated any Third Party Right;

(iv) neither the Business nor any Company Intellectual Property Asset infringes any Third Party Right (other than any Patent) or, to the Company's knowledge, any Patent, and none of the Company, the Company Subsidiaries or any of their respective employees have misappropriated any Third Party Right;

(v) neither the Company nor any Company Subsidiary has received any written communications alleging any of the Company Intellectual Property Assets is invalid or unenforceable;

(vi) except as set forth in Section 5.13(a)(vi) of the Company Disclosure Schedule, no current or former employee or consultant of the Company or any Company Subsidiary owns any rights in or to any of the Company Intellectual Property Assets;

A-17

(vii) the Company is not aware of any violation or infringement by a third party of any of the Company Intellectual Property Assets;

(viii) the Company and each Company Subsidiary has taken reasonable security measures to protect the secrecy, confidentiality and value of all Trade Secrets used by the Company and/or any Company Subsidiary (the "*Company Trade Secrets*"), including, without limitation, requiring all employees and consultants of the Company and each Company Subsidiary and all other persons with access to Company Trade Secrets to execute a binding confidentiality agreement, a true and correct copy of which has been provided to Parent, and, to the Company's knowledge, there has not been any breach by any party to such confidentiality agreements;

(ix) except as set forth in Section 5.13(a)(ix) of the Company Disclosure Schedule, (A) neither the Company nor any Company Subsidiary has directly or indirectly granted any rights, licenses or interests in the source code of any software in or provided with any Product, and (B) if the Company or one of the Company Subsidiaries, as applicable, developed the source code of any software in or provided with any Product, neither the Company nor any Company Subsidiary has provided or disclosed the source code of any such software in or provided with any Product to any person or entity;

(x) the software in or provided with any of the Products perform in accordance with their documented specifications and as the Company and/or the Company Subsidiaries have warranted to its customers;

(xi) none of the Products intentionally contain any "viruses", "time-bombs", "key-locks", or any other devices intentionally created that could disrupt or interfere with the operation of the Products or the integrity of the data, information or signals they produce in a manner materially adverse to the Company, any Company Subsidiary or any licensee or recipient; and

(xii) the Company and all Company Subsidiaries have complied in all material respects with their obligations under the Data Protection Act 1998 (UK).

(b) Except for licenses or agreements for computer software which is generally commercially available, the per copy cost of which is less than \$2,500, all licenses or other agreements under which the Company and/or any Company Subsidiary is granted rights by others in Company Intellectual Property Assets are listed in Section 5.13(b) of the Company Disclosure Schedule. All such licenses

or other agreements are in full force and effect, and, to the knowledge of the Company, there is no material default by any party thereto. All of the rights of the Company and the Company Subsidiaries under such licenses or other agreements are freely assignable. True and complete copies of all such licenses or other agreements, and any amendments thereto, have been provided to Parent, and to the knowledge of the Company, the licensors under the licenses and other agreements under which the Company and/or any Company Subsidiary is granted rights have all requisite power and authority to grant the rights purported to be conferred thereby.

(c) Except for licenses or agreements for proprietary drivers, firmware or system software distributed to customers with any of the Products or any other software distributed to customers in the ordinary course of business consistent with past practices (collectively, "*Customer Licenses*"), all licenses or other agreements under which the Company and/or any Company Subsidiary has granted rights to others in Company Intellectual Property Assets are listed in Section 5.13(c) of the Company Disclosure Schedule. All such licenses or other agreements and the Customer Licenses are in full force and effect, and, to the knowledge of the Company there is no material default by any party thereto. All of the rights of the Company and/or any Company Subsidiary under such licenses or other agreements and the Customer Licenses are freely assignable. True and complete copies of all such licenses or other agreements, and any amendments thereto, have been provided

A-18

to Parent, and the Company and/or a Company Subsidiary has all requisite power and authority to grant the rights purported to be conferred thereby and under the Customer Licenses.

(d) For purposes of this Agreement,

(i) "*Business*" means the business of the Company and/or the Company Subsidiaries as currently conducted and proposed to be conducted.

(ii) "*Company Intellectual Property Assets*" means all Intellectual Property Assets owned by the Company or any Company Subsidiary or otherwise used in the Business. "*Company Intellectual Property Assets*" includes, without limitation, the Products, Company Patents, Company Marks, Company Copyrights and Company Trade Secrets.

(iii) "*Intellectual Property Assets*" means:

(A) patents, patent applications and patent rights (collectively, "*Patents*");

(B) trade names, trade dress, logos, packaging design, slogans, Internet domain names, registered and unregistered trademarks and service marks and related registrations and applications for registration (collectively, "*Marks*");

(C) copyrights in both published and unpublished works and all copyright registrations and applications (collectively, "*Copyrights*");

(D) know-how, trade secrets, confidential or proprietary information, research in progress, invention, discoveries, invention disclosures (whether or not patented), algorithms, data, designs, processes, formulae, drawings, schematics, blueprints, flow charts, models, strategies, prototypes, techniques, Beta testing procedures and Beta testing results (collectively, "*Trade Secrets*"); and

(E) goodwill, franchises, licenses, permits, consents, approvals, and claims of infringement against third parties.

(iv) "*Products*" means those instruments, software, licenses, consumables, other products and services designed, manufactured, marketed, sold and/or distributed by the Company and/or any Company Subsidiary and any other sources from which the Company and/or any Company Subsidiary derives revenues. A complete list of the Products from which the Company or any Company Subsidiary derives revenues is provided on Section 5.13(d)(iv) of the Company Disclosure Schedule attached hereto.

A-19

5.14. *Environmental Matters.*

(a) As used in this Agreement, (i) "*Environmental Laws*" shall mean all environmental or health and safety-related federal, state and local laws, rules, regulations, ordinances and binding and enforceable orders, and (ii) "*Hazardous Materials*" means any pollutant, contaminant, toxic substance, hazardous waste, hazardous material, or hazardous substance, or any oil, petroleum, or petroleum product, as defined in or pursuant to the United States Resource Conservation and Recovery Act, the United States Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), the Federal Clean Water Act and any other federal, state or local Environmental Law, all as amended through the date of this Agreement, as well as any regulations promulgated pursuant thereto, and, to the extent not included in the foregoing, any medical waste.

(b) The Company and the Company Subsidiaries are in compliance with all Environmental Laws, except for any noncompliance that could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect.

(c) Except as set forth in Section 5.14(c) of the Company Disclosure Schedule, (i) neither the Company nor any Company Subsidiary has entered into or been subject to any consent decree, compliance order, or administrative order under any Environmental Law, (ii) there is no administrative or judicial enforcement proceeding pending, or to the knowledge of the Company, threatened, against the Company or any Company Subsidiary under any Environmental Law, (iii) neither the Company nor any Company Subsidiary has received written notice under the citizen suit provision of any Environmental Law, (iv) neither the Company nor any Company Subsidiary or, to the knowledge of the Company, any legal predecessor of the Company or any Company Subsidiary, has received any written notice that it is potentially responsible under any Environmental Law for costs of response or for damages to natural resources, as those terms are defined under the Environmental Laws, at any location, (v) neither the Company nor any Company Subsidiary or, to the knowledge of the Company, any legal predecessor of the Company or any Company Subsidiary, has received any written request for information, notice, demand letter, or formal or informal complaint or claim under any Environmental Law or with respect to environmental matters, and (vi) the Company and the Company Subsidiaries have no knowledge that any of the above will be forthcoming.

(d) Neither the Company nor any Company Subsidiary has generated, manufactured, refined, transported, treated, stored, handled, disposed, transferred, produced or processed any Hazardous Materials, except in compliance with all applicable Environmental Laws except for any noncompliance that, either individually or in the aggregate, could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect.

(e) Neither the Company nor any Company Subsidiary has transported or disposed of, or allowed or arranged for any third party to transport or dispose of, any waste containing Hazardous Materials to or at any location included on the National Priorities List, as defined under CERCLA, or, to the Company's knowledge, any location proposed for inclusion on that list or at any location on any analogous state list.

(f) Except as set forth in Section 5.14(f) of the Company Disclosure Schedule, (i) neither the Company nor any Company Subsidiary has released (as that term is defined in CERCLA) any Hazardous Material on, in, under or at any real property owned or leased by the Company or any Company Subsidiary, and (ii) the Company has no knowledge of any release (as that term is defined in CERCLA) on, in, under or at the real property owned or leased by the Company or any Company Subsidiary or predecessor entity of Hazardous Materials, in either event in quantities or concentrations requiring remediation or clean-up under applicable Environmental Laws.

A-20

(g) Except as set forth in Section 5.14(g) of the Company Disclosure Schedule, to the knowledge of the Company, there is no hazardous waste treatment, storage or disposal facility, underground storage tank, landfill, surface impoundment, underground injection well, friable asbestos or polychlorinated biphenyls (PCBs), as those terms are defined under any Environmental Laws, located at any of the real property owned or leased by the Company or any Company Subsidiary or predecessor entity or facilities utilized by the Company or the Company Subsidiaries.

(h) No lien has been imposed on any real property owned or, to the knowledge of the Company, leased by the Company or any Company Subsidiary by any governmental agency at the federal, state or local level in connection with the presence on or off such

property of any Hazardous Material.

5.15. *Employee Benefit Plans.*

(a) Section 5.15(a) of the Company Disclosure Schedule sets forth a complete and accurate list of every Employee Program (as hereinafter defined) that has been maintained by the Company or an Affiliate (as hereinafter defined) at any time during the three-year period prior to the date hereof.

(b) Each Employee Program which has been maintained by the Company or an Affiliate at any time during the three-year period prior to the date hereof and which has been intended to qualify under Section 401(a) or 501(c)(9) of the Code has received a favorable determination or approval letter from the IRS regarding its qualification under such section and has, in fact, been qualified under the applicable section of the Code from the effective date of such Employee Program through and including the Closing Date (or, if earlier, the date of the final distribution of all of such Employee Program's assets). No event or omission has occurred which would reasonably be expected to cause any such Employee Program to lose its qualification or otherwise fail to satisfy the relevant requirements to provide tax-favored benefits under the applicable Code Section (including, without limitation, Code Sections 105, 125, 401(a) and 501(c)(9)). Each asset held under any such Employee Program may be liquidated or terminated without the imposition of any redemption fee, surrender charge or comparable liability. No partial termination (within the meaning of Section 411(d)(3) of the Code) has occurred with respect to any Employee Program.

(c) Neither the Company nor any Affiliate knows, nor should any of them reasonably know, of any failure of any party to comply with any applicable laws with respect to the Employee Programs by the Company or any Affiliate at any time during the three-year period prior to the date hereof. With respect to any Employee Program maintained by the Company or any Affiliate at any time during the three-year period prior to the date hereof, there has been no (i) "prohibited transaction" as defined in Section 406 of the Employee Retirement Income Security Act of 1974, as amended ("*ERISA*"), or Code Section 4975, (ii) material failure to comply with any provision of ERISA, other applicable law, or any agreement, or (iii) non-deductible contribution, which, in the case of any of (i), (ii) or (iii), could reasonably be expected to subject the Company or any Affiliate to material liability either directly or indirectly (including, without limitation, through any obligation of indemnification or contribution) for any damages, penalties or taxes, or any other loss or expense. No litigation or governmental administrative proceeding (or investigation) or other proceeding (other than those relating to routine claims for benefits) is pending or, to the Company's knowledge, threatened with respect to any such Employee Program. All payments and/or contributions required to have been made (under the provisions of any agreements or other governing documents or applicable law) with respect to all Employee Programs maintained by the Company or any Affiliate at any time during the three-year period prior to the date hereof, either have been made or have been accrued (and all such unpaid but accrued amounts are described in Section 5.15(c) of the Company Disclosure Schedule).

A-21

(d) Neither the Company nor any Affiliate has incurred any liability under Title IV of ERISA which has not been paid in full. There has been no "accumulated funding deficiency" (whether or not waived) with respect to any Employee Program maintained by the Company or any Affiliate and subject to Code Section 412 or ERISA Section 302. With respect to any Employee Program maintained by the Company or any Affiliate at any time during the three-year period prior to the date hereof and subject to Title IV of ERISA, there has been no (nor will there be any as a result of the Transactions) (i) "reportable event," within the meaning of ERISA Section 4043 or the regulations thereunder, for which the notice requirement is not waived by the regulations thereunder, and (ii) event or condition which presents a material risk of a plan termination or any other event that would reasonably be expected to cause the Company or any Affiliate to incur a material liability or have a lien imposed on its assets under Title IV of ERISA. Except as described in Section 5.15(d) of the Company Disclosure Schedule, no Employee Program maintained by the Company or any Affiliate and subject to Title IV of ERISA (other than a Multiemployer Plan (as hereinafter defined)) has any "unfunded benefit liabilities" within the meaning of ERISA Section 4001(a)(18). Neither the Company nor any Affiliate has ever maintained a Multiemployer Plan. None of the Employee Programs maintained by the Company or any Affiliate at any time during the three-year period prior to the date hereof has ever provided health care or any other non-pension benefits to any employees after their employment is terminated (other than as required by part 6 of subtitle B of Title I of ERISA or applicable state continuation coverage law) or has ever promised to provide such post-termination benefits.

(e) With respect to each Employee Program maintained by the Company, true, complete and accurate copies of the following documents (if applicable to such Employee Program) have previously been delivered to Parent: (i) all documents embodying or governing such Employee Program, and any funding medium for the Employee Program (including, without limitation, trust agreements) as they may have been amended to the date hereof; (ii) the most recent IRS determination or approval letter with respect to such Employee Program under Code Section 401(a) or 501(c)(9), and any applications for determination or approval subsequently

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

filed with the IRS; (iii) the three most recently filed IRS Forms 5500, with all applicable schedules and accountants' opinions attached thereto; (iv) the three most recent actuarial valuation reports completed with respect to such Employee Program; (v) the summary plan description for such Employee Program (or other descriptions of such Employee Program provided to employees) and all modifications thereto; (vi) any insurance policy (including any fiduciary liability insurance policy or fidelity bond) related to such Employee Program; (vii) any registration statement or other filing made pursuant to any federal or state securities law; and (viii) all correspondence to and from any state or federal agency within the last three years with respect to such Employee Program.

(f) Each Employee Program maintained by the Company or any Affiliate required to be listed in Section 5.15(a) of the Company Disclosure Schedule may be amended, terminated, or otherwise modified by the Company to the greatest extent permitted by applicable law, including the elimination of any and all future benefit accruals under any Employee Program and no employee communications or provision of any Employee Program document has failed to effectively reserve the right of the Company or the Affiliate to so amend, terminate or otherwise modify such Employee Program.

(g) Each Employee Program maintained by the Company (including each non-qualified deferred compensation arrangement) has been maintained in compliance with all applicable requirements of federal and state securities laws including (without limitation, if applicable) the requirements that the offering of interests in such Employee Program be registered under the Securities Act and/or state "Blue Sky" laws.

(h) Each Employee Program maintained by the Company or an Affiliate has complied in all material respects with the applicable notification and other applicable requirements of the

A-22

Consolidated Omnibus Budget Reconciliation Act of 1985, Health Insurance Portability and Accountability Act of 1996, the Newborns' and Mothers' Health Protection Act of 1996, the Mental Health Parity Act of 1996, and the Women's Health and Cancer Rights Act of 1998.

(i) For purposes of this Section:

(i) "*Employee Program*" means (A) all employee benefit plans within the meaning of ERISA Section 3(3), including, but not limited to, multiple employer welfare arrangements (within the meaning of ERISA Section 3(40)), plans to which more than one unaffiliated employer contributes and employee benefit plans (such as foreign or excess benefit plans) which are not subject to ERISA; (B) all stock option plans, stock purchase plans, bonus or incentive award plans, severance pay policies or agreements, deferred compensation agreements, supplemental income arrangements, vacation plans, and all other employee benefit plans, agreements, and arrangements (including any informal arrangements) not described in (A) above, including without limitation, any arrangement intended to comply with Code Section 120, 125, 127, 129 or 137; and (C) all plans or arrangements providing compensation to employee and non-employee directors. In the case of an Employee Program funded through a trust described in Code Section 401(a) or an organization described in Code Section 501(c)(9), or any other funding vehicle, each reference to such Employee Program shall include a reference to such trust, organization or other vehicle.

(ii) An entity "*maintains*" an Employee Program if such entity sponsors, contributes to, or provides benefits under or through such Employee Program, or has any obligation (by agreement or under applicable law) to contribute to or provide benefits under or through such Employee Program, or if such Employee Program provides benefits to or otherwise covers employees of such entity (or their spouses, dependents, or beneficiaries).

(iii) An entity is an "*Affiliate*" of the Company if it (A) is considered a single employer with the Company under ERISA Section 4001(b) or part of the same "controlled group" as the Company for purposes of ERISA Section 302(d)(8)(C) or (B) was considered a single employer with, or part of the same controlled group as, the Company, but solely to the extent that the Company has or will have liability with respect to any Employee Program maintained by such Affiliate that is no longer considered such a single employer or controlled group member.

(iv) "*Multiemployer Plan*" means an employee pension or welfare benefit plan to which more than one unaffiliated employer contributes and which is maintained pursuant to one or more collective bargaining agreements.

(j) Other than the pension scheme disclosed in Section 5.15(a) of the Company Disclosure Schedule (the "Pension Scheme"), there are no schemes funds or arrangements to which the Company Subsidiaries operating in the United Kingdom have contributed or under which the Company Subsidiaries operating in the United Kingdom have any liability or moral obligation and which provides for or in respect of any person benefits on or as a consequence of any person dying, retiring, becoming incapacitated (whether permanently or temporarily) attaining a specified age or completing a specified period of service. The Pension Scheme is a defined contribution scheme and does not provide for a certain level of benefit to be paid to any of its members on death, retirement, incapacitation (permanent or temporary), reaching a specified age or completing a specified period of service. Except as disclosed in Section 5.15(a) of the Company Disclosure Schedule, no promises have been made to any members as to the amount of contributions that will be made to the Pension Scheme or the amount of benefits that will or may be received by any member. The Pension Scheme is an exempt approved scheme for the purposes of Chapter I of Part XIV of the Income and Corporation Taxes Act 1988 or capable of approval as such and is not a contracted out scheme for the purposes of the Social Security Pension Act 1975. All

A-23

contributions and premiums payable to the Pension Scheme by the Company Subsidiaries operating in the United Kingdom and any of its employees accrued due have been paid. Except as disclosed in Section 5.15(a) of the Company Disclosure Schedule, the Company Subsidiaries operating in the United Kingdom do not operate any scheme pursuant to which employees thereof (or their successors) will receive any payment on death.

5.16. *Labor Relations and Employment.*

(a) Except as set forth in Section 5.16(a) of the Company Disclosure Schedule, (i) there is no labor strike, picketing of any nature, material labor dispute, slowdown or any other concerted interference with normal operations, stoppage or lockout pending or to the knowledge of the Company, threatened against or affecting the Company or any Company Subsidiary, (ii) there are no union claims or demands to represent the employees of the Company or any Company Subsidiary or Contingent Workers (as defined in Section 5.16(c)), neither the Company nor any Company Subsidiary has any collective bargaining obligations with respect to any of its employees or Contingent Workers, and there are no current union organizing activities among the employees of the Company or any Company Subsidiary or Contingent Workers, (iii) neither the Company nor any Company Subsidiary is a party to or bound by any collective bargaining or similar agreement with any labor organization, or work rules or practices agreed to with any labor organization or employee association, applicable to employees of the Company or any Company Subsidiary, and (iv) with respect to bargaining obligations disclosed in Section 5.16 of the Company Disclosure Schedule, the Company and the Company Subsidiaries have bargained and continues to bargain in good faith. With respect to the Transactions, any notice required under any labor law has been given.

(b) As of the date of this Agreement, the Company and the Company Subsidiaries employ a total of 163 full-time employees and 6 part-time employees. Section 5.16(b) of the Company Disclosure Schedule contains a true and complete list of all current directors, officers and employees of, and consultants to, the Company and the Company Subsidiaries and the current job title of each such individual as of the date hereof. A true and complete list of the annual compensation of each such individual as of the date hereof has been provided to Parent. The Company and the Company Subsidiaries are in compliance with all applicable laws and regulations respecting labor, employment, fair employment practices, work place safety and health, terms and conditions of employment, and wages and hours, except where the failure to be in such compliance could not, individually or in the aggregate, reasonably be expected to result in a Company Material Adverse Effect. Except as set forth in Section 5.16(b) of the Company Disclosure Schedule, neither the Company nor any Company Subsidiary has any policy, plan or program of paying severance pay or any form of severance compensation in connection with the termination of the employees of the Company and the Company Subsidiaries. The Company and the Company Subsidiaries are, and at all time since November 6, 1986 have been, in compliance with the requirements of the Immigration Reform Control Act of 1986 except for such non-compliance as could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect. Except as set forth in Section 5.16(b) of the Company Disclosure Schedule, neither the Company nor any Company Subsidiary has implemented any plant closing or layoff of employees that could implicate the Worker Adjustment and Retraining Notification Act of 1988, as amended, or any similar foreign, state, provincial, or local law, regulation or ordinance. All terminations and layoffs of employees that have occurred in the ninety (90) days prior to the date of this Agreement are set forth in Section 5.16(b) of the Company Disclosure Schedule.

(c) Except as set forth in Section 5.16(c) of the Company Disclosure Schedule, neither the Company nor any Company Subsidiary employs or uses any independent contractors, temporary employees, leased employees or any other servants or agents compensated other than through reportable wages paid by the Company or any Company Subsidiary (collectively, "*Contingent*

A-24

Workers"). Except as set forth in Section 5.16(c) of the Company Disclosure Schedule, to the extent that the Company or any Company Subsidiary employs or uses Contingent Workers, it has properly classified and treated them in accordance with applicable laws and for purposes of all benefit plans and perquisites except as could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect.

5.17. *No Brokers.* Neither the Company nor any of the Company Subsidiaries has entered into any contract, arrangement or understanding with any person or firm which may result in the obligation of such entity or Parent or MergerCo to pay any finder's fees, brokerage or agent's commissions or other like payments in connection with the negotiations leading to this Agreement or consummation of the Transactions, except that the Company has retained U.S. Bancorp Piper Jaffray Inc. ("*Piper Jaffray*") as its financial advisor in connection with the Transactions. The Company has provided to Parent true, complete and accurate copies of all agreements (including any amendments thereto) between the Company and Piper Jaffray pursuant to which Piper Jaffray would be entitled to any payment relating to the Transactions and no oral or other understandings with Piper Jaffray exist except as set forth therein. Other than the foregoing arrangements, the Company is not aware of any claim for payment of any finder's fees, brokerage or agent's commissions or other like payments in connection with the negotiations leading to this Agreement or consummation of the Transactions.

5.18. *Opinion of Financial Advisor.* The Company Board has received the opinion of Piper Jaffray to the effect that, as of July 16, 2002, the Merger Consideration is fair to the Company's stockholders from a financial point of view, and a true, complete and accurate signed copy of such opinion has been, or promptly upon receipt thereof will be, delivered to Parent. The Company has been authorized by Piper Jaffray to permit the inclusion of such opinion in its entirety in the Proxy Statement (as defined in Section 7.5).

5.19. *Vote Required.* The affirmative vote of the holders of a majority of the outstanding shares of Company Common Stock outstanding on the record date for the meeting of the Company's stockholders Meeting is the only vote of the holders of any class or series of the Company's capital stock necessary to approve the Transactions and adopt this Agreement.

5.20. *Takeover Laws.* The Company Board has taken appropriate actions and votes such that the provisions of Section 203 of the DGCL and all other applicable takeover statutes will not apply to this Agreement, the Voting Agreement or any of the Transactions. No foreign or state take-over law is applicable to this Agreement, the Voting Agreement or any of the Transactions.

5.21. *Contracts.*

(a) Section 5.21(a) of the Company Disclosure Schedule lists all Scheduled Contracts (as hereinafter defined) of the Company and the Company Subsidiaries, and except as set forth in Section 5.21(a) of the Company Disclosure Schedule, each Scheduled Contract is valid and binding on the Company or such Company Subsidiary and is in full force and effect and enforceable in accordance with its terms, subject to applicable bankruptcy, insolvency, moratorium or other similar laws relating to creditors' rights and general principles of equity. Except as set forth in Section 5.21(a) of the Company Disclosure Schedule, neither the Company nor any Company Subsidiary is in default or has received notice of any violation or default under any such Scheduled Contract and, to the knowledge of the Company, no other party is in default under any of the Scheduled Contracts (in each case other than defaults and violations that could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect), and no such violations or defaults will be triggered by the execution, delivery and performance of this Agreement by the Company or the consummation of the Transactions. For purposes of this Agreement, "*Scheduled Contracts*" shall mean (i) all contracts, agreements or understandings with customers, suppliers and distributors of the Company and the Company Subsidiaries involving any payments in an amount, individually or in the aggregate, in excess of \$50,000, (ii) all acquisition,

A-25

merger, asset purchase or sale agreements entered into by the Company or any Company Subsidiary, (iii) all non-competition agreements and other agreements or obligations which purport to limit in any respect the manner in which, or the localities in which, all or any material portion of the business of the Company or any Company Subsidiary may be conducted, (iv) all transactions, agreements, arrangements or understandings with any affiliate of the Company or any Company Subsidiary that would be required to be disclosed under Item 404 of Regulation S-K of Title 17, Part 229 of the Code of Federal Regulations ("*Regulation S-K*"), (v) all voting or other agreements governing how any shares of Company Common Stock shall be voted, (vi) all agreements which provide for, or relate to, the incurrence by the Company or any Company Subsidiary of indebtedness for borrowed money (including any interest rate or foreign currency swap, cap, collar, hedge or insurance agreements, or options or forwards on such agreements, or other similar agreements for the purpose of managing the interest rate or foreign exchange risk associated with its financing), (vii) all contracts or other agreements which would prohibit or materially delay the consummation of the Transactions, (viii) all joint venture agreements to which the Company or any Company Subsidiary is a party, (ix) all agreements or other arrangements related to the

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

licensing of assets by or to the Company or any Company Subsidiary, and (x) all other agreements within the meaning set forth in Item 601(b)(10) of Regulation S-K.

(b) Except as set forth in Section 5.21(b) of the Company Disclosure Schedule, the execution and delivery of this Agreement by the Company does not, and the performance of and compliance with this Agreement by the Company and consummation of the Transactions does not, require any authorization, consent or approval of any third party under (i) any Scheduled Contract, (ii) any other contract required to be scheduled pursuant to Section 5.21(a), or (iii) any other contract where the failure to obtain such authorization, consent or approval could reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect.

(c) Except as set forth in the Company Disclosure Schedule, neither the Company nor any of the Company Subsidiaries is a party to any oral or written (i) employment, severance, retention or termination agreements or consulting agreements not terminable on less than thirty (30) days notice, (ii) union or collective bargaining agreement, (iii) agreement with any executive officer or other key employee of the Company or any of the Company Subsidiaries the benefits of which are contingent or vest, or the terms of which are materially altered, upon the occurrence of a transaction involving the Company or any of the Company Subsidiaries of the nature contemplated by this Agreement, (iv) agreement with respect to any executive officer or other key employee of the Company or any of the Company Subsidiaries providing any term of employment or compensation guarantee or (v) agreement or plan, including any stock option, stock appreciation right, restricted stock or stock purchase plan, any of the benefits of which will be increased, or the vesting of the benefits of which will be accelerated, by the occurrence of any of the Transactions or the value of any of the benefits of which will be calculated on the basis of any of the Transactions.

5.22. *Collectibility of Accounts Receivable.* All of the accounts receivable of the Company and the Company Subsidiaries shown in the consolidated financial statements included or incorporated by reference in the Company SEC Reports or acquired thereafter are valid and enforceable claims and arose in connection with arms' length transactions conducted in the ordinary course of business and, to the knowledge of the Company, are not subject to setoff or counterclaim.

5.23. *Inventory.* Except as set forth in Section 5.23 of the Company Disclosure Schedule, all inventory of the Company, including, without limitation, raw materials, work in process and finished products, packaging, items purchased for distribution or resale and items which have been ordered or purchased by the Company and the Company Subsidiaries, including, without limitation, inventory shown in the consolidated financial statements included or incorporated by reference in the Company SEC Reports or acquired thereafter (collectively, "Inventory"): (a) was acquired or manufactured in the ordinary course of business consistent with past practice; (b) is of good and merchantable quality, free

A-26

of any defect or deficiency; and (c) is saleable or usable for the purposes for which intended (except in each case as could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect). The Company and the Company Subsidiaries have good and valid title to all of their Inventory, free and clear of all Encumbrances, other than as set forth in Section 5.23 of the Company Disclosure Schedule.

5.24. *Accounting Policies.* The significant accounting policies, including without limitation, those policies related to revenue recognition, utilized by the Company and the Company Subsidiaries in preparing the Company's financial statements are as set forth in Section 5.24 of the Company Disclosure Schedule and Note 2 of the Company's consolidated financial statements filed as part of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2001 and Item 7 of such Form 10-K, and such policies are in conformity with GAAP and have been consistently applied. All estimates made by management in connection with the preparation of such financial statements were made in accordance with these accounting policies, in good faith and on the basis of management's reasonable beliefs. The financial statements included or incorporated by reference in the Company SEC Reports were prepared in accordance with such accounting policies.

5.25. *Backlog.*

(a) The Company defines "backlog" as a written purchase order signed by a customer and received by the Company, which purchase order authorizes the Company to ship the product or provide the service identified in the purchase order at a specified price on specified terms and conditions. Based on this definition, the Company's backlog at July 12, 2002 was \$1.6 million (excluding blanket orders for chemicals and reagents totaling \$2.4 million); *provided* that such customers may modify or terminate such purchase orders at any time prior to shipment. No revenues have been recognized by the Company or the Company Subsidiaries with respect to this backlog. None of such orders have been, or to the knowledge of the Company are threatened to be cancelled or reduced.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

(b) The summary of shipments and orders received by the Company and the Company Subsidiaries during the six-month period ended June 30, 2002, attached hereto as Section 5.25(b) of the Company Disclosure Schedule, is, as of the date hereof, true, correct and complete in all material respects. Section 5.25(b) of the Company Disclosure Schedule sets forth for each month in such six-month period (i) the backlog at the end of each month, (ii) shipments made during each month and (iii) the orders received for each month.

5.26. *Customers, Distributors and Suppliers.*

(a) A complete and accurate list of all customers, representatives and distributors (whether pursuant to a commission, royalty or other arrangement) who accounted for more than 5% of the sales of the Company and the Company Subsidiaries for the fiscal year ended December 31, 2001, showing, with respect to each, the name, address and dollar amount involved (collectively, the "*Customers and Distributors*") has been provided to Parent. Section 5.26(a) of the Company Disclosure Schedule is a complete and accurate list of the suppliers of the Company and the Company Subsidiaries to whom during the fiscal year ended December 31, 2001, the Company and the Company Subsidiaries made payments aggregating \$10,000 or more, showing, with respect to each, the name, address and dollar amount involved (the "*Suppliers*"). The relationships of the Company and the Company Subsidiaries with their Customers, Distributors and Suppliers are good commercial working relationships and, to the knowledge of the Company, neither the announcement of the Transactions nor the consummation thereof will adversely affect any of such relationships. No Customer, Distributor or Supplier has cancelled, materially modified, or otherwise terminated its relationship with the Company or any Company Subsidiary, or has decreased materially its usage or purchase of the services or products of the Company or any Company Subsidiary or its services, supplies or materials furnished to the Company or any

A-27

Company Subsidiary, nor, to the knowledge of the Company, does any Customer, Distributor or Supplier have any plan or intention to do any of the foregoing.

(b) Section 5.26(b) of the Company Disclosure Schedule sets forth by position of employment (as opposed to by name) all persons granted authority to enter into (on behalf of the Company or any Company Subsidiary) oral or written agreements or arrangements with any customer, supplier or distributor related to the offering of discounts, extended warranties, service contracts, bundling of any Products, rights of return or any other agreements or arrangements and the nature of such authority, and neither the Company nor any Company Subsidiary is a party to any such agreements or arrangements other than those entered into in accordance with such authority.

5.27. *Restructuring Plan.* The restructuring plan and its effects on the Company (collectively, the "*Restructuring Plan*") has been provided to Parent and was prepared in good faith based on reasonable assumptions made by the Company at the time the Restructuring Plan was made, and as of the date hereof, nothing has occurred to make such assumptions upon which the Restructuring Plan is based no longer reasonable. All severance and termination costs and expenses required by law, contract or otherwise are set forth in the Restructuring Plan.

5.28. *Product Liability and Warranty.*

(a) There are no events, conditions, circumstances, activities, practices, incidents, actions, omissions or plans which could reasonably be expected to give rise to any liability or obligation or otherwise form the basis of any claim based on or related to any product that is or was designed, formulated, manufactured, processed, distributed, sold or placed in the stream of commerce by the Company or any Company Subsidiary or any service provided by or on behalf of the Company or any Company Subsidiary, except as could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect. All products, including the packaging and advertising related thereto, which were designed, formulated, manufactured, processed, distributed, sold or placed in the stream of commerce by the Company or any Company Subsidiary or any services provided by or on behalf of the Company or any Company Subsidiary complied with applicable permits, applicable laws or applicable industry or customer standards, except as otherwise would not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect, and there have not been and there are no defects or deficiencies in such services or products.

(b) Section 5.28(b) of the Company Disclosure Schedule sets forth the Company's standard product and service warranties on each of the products or services that the Company distributes, services, markets, sells or produces for itself, a customer or a third party. Other than such warranties, the Company provides no other warranties, guarantees or rights of return on any product or service.

5.29. *Certain Business Practices.* No director, officer, agent or employee of the Company or any Company Subsidiary, has, directly or indirectly, (a) made or agreed to make any contribution, payment or gift to any government official, employee or agent where either the contribution, payment or gift or the purpose thereof was illegal under the laws of any federal, state, local or foreign jurisdiction, (b) established or maintained any unrecorded fund or asset for any purpose or made any false entries on the books and records of the Company or any of the

Company Subsidiaries for any reason, (c) made or agreed to make any contribution, or reimbursed any political gift or contribution made by any other person, to any candidate for federal, state, local or foreign public office or (d) paid or delivered any fee, commission or any other sum of money or item of property, however characterized, to any finder, agent, government official or other party, in the United States or any other country, which in any manner relates to the assets, business or operations of the Company or the Company Subsidiaries, which the Company, such Company Subsidiary or each officer, director, agent or employee

A-28

knew or had reason to believe to have been illegal under any federal, state or local laws (or any rules or regulations thereunder) of the United States or any other country having jurisdiction.

5.30. *Insurance.* The Company and the Company Subsidiaries maintain insurance policies (the "*Insurance Policies*") against all risks of a character and in such amounts as are usually insured against by similarly situated companies in the same or similar businesses. Section 5.30 of the Company Disclosure Schedule contains a complete and accurate list of all Insurance Policies. Each Insurance Policy is in full force and effect and is valid, outstanding and enforceable, and all premiums due thereon have been paid in full. The Company and the Company Subsidiaries have complied in all material respects with provisions of each Insurance Policy under which any of them is the insured party. No insurer under any Insurance Policy has canceled or generally disclaimed liability under any such policy or, to the knowledge of the Company, indicated any intent to do so or not to renew any such policy. All material claims under the Insurance Policies have been filed in a timely fashion.

5.31. *Reorganization.* Neither the Company nor any Company Subsidiary has taken any action, or as the date of this Agreement, is aware of any fact that would jeopardize the qualification of the Merger as a tax-free reorganization under Sections 368(a)(1)(A) and 368(a)(2)(D) of the Code. Without limiting the foregoing, neither the Company nor any Company Subsidiary has disposed of any assets that would (i) prevent MergerCo from acquiring at least 90 percent of the fair market value of the net assets and 70 percent of the fair market value of the gross assets held by the Company and the Company Subsidiaries within the meaning of Revenue Procedure 86-42 or (ii) violate the "substantially all" rule under Section 368(a)(2)(D) of the Code and the corresponding Treasury Regulations. Except as set forth in Section 5.31 of the Company Disclosure Schedule, the Company has not redeemed any part of its outstanding stock or affected a distribution with respect to such stock for a period of two years before the Closing Date. Any redemption set forth in Section 5.31 of the Company Disclosure Schedule was not done in contemplation of the Transactions. The Company has not taken any action that would prevent Parent from preserving a proprietary interest in the Company within the meaning of Treasury Regulations Section 1.368-1(e). No Company Subsidiary has acquired within the last two years any stock of Parent or taken any other action that would prevent Parent from preserving a proprietary interest in the Company within the meaning of Treasury Regulations Section 1.368-1(e). There is no plan or intention by the Company or any Company Subsidiary to acquire stock of the Company or the Parent Common Stock issued in the Merger.

5.32. *Ownership of Parent Common Stock; Affiliates and Associates.* As of the date of this Agreement, neither the Company nor any of its affiliates or associates (as such terms are defined under the Exchange Act) (a) beneficially owns, directly or indirectly, or (b) is a party to any agreement, arrangement or understanding for the purpose of acquiring, holding, voting or disposing of any shares of capital stock of Parent.

5.33. *Compliance with the Hart-Scott-Rodino Act.* No person or entity, directly or indirectly through fiduciaries, agents, controlled entities, or other means, holds fifty percent (50%) or more of the outstanding voting securities of, or has the contractual right to designate fifty percent (50%) or more of the directors of, the Company. In addition, the Company and the Company Subsidiaries, on a consolidated basis, have less than (a) \$100,000,000 of total assets, as stated on the last regularly prepared consolidated balance sheet of the Company and the Company Subsidiaries; and (b) \$100,000,000 of annual net sales.

5.34. *No Contracts with Affiliates.* Except as disclosed in Section 5.34 of the Company Disclosure Schedule, neither the Company nor any Company Subsidiary has entered into any agreement, contract, subcontract, lease, understanding, instrument, note, option, warranty, purchase order, license, sublicense, insurance policy or legally binding commitment or undertaking of any nature with any of its officers, directors or stockholders, except pursuant to the Stock Option Plans and employment agreements, or consulting agreements in each case as set forth in Section 5.34 of the Company

A-29

Disclosure Schedule. Except as set forth in Section 5.34 of the Company Disclosure Schedule, the Company has no accounts or loans receivable from any person, firm or corporation which is affiliated with the Company or any Company Subsidiary or from any director, officer or employee of the Company or any Company Subsidiary.

5.35. *Disclosure.* The representations, warranties and statements by the Company in this Agreement, the Company Disclosure Schedule and the certificates delivered pursuant hereto do not contain any untrue statement of a material fact and, when taken together with each other, do not omit to state a material fact necessary to make such representations, warranties and statements, in the light of the circumstances under which they are made, not misleading.

A-30

ARTICLE VI

REPRESENTATIONS AND WARRANTIES OF PARENT AND MERGERCO

Except as set forth in the disclosure schedules delivered at or prior to the execution hereof to the Company, which shall refer to the relevant Sections of this Agreement (the "*Parent Disclosure Schedule*"), each of Parent and MergerCo represents and warrants to the Company as follows:

6.1. *Existence; Good Standing; Authority; Compliance with Law.*

(a) Each of Parent and MergerCo is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has the requisite corporate or other power and authority to own, operate, lease and encumber its properties and to carry on its business as it is now being conducted. Each of Parent and MergerCo is duly licensed or qualified to do business as a foreign corporation and is in good standing under the laws of any other jurisdiction in which the character of the properties owned, leased or operated by it therein or in which the transaction of its business makes such license or qualification necessary, except where the failure to be so licensed or qualified could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect (as hereinafter defined). For purposes of this Agreement, a "*Parent Material Adverse Effect*" means any change, effect, event, occurrence, condition or development that is or is reasonably likely to be materially adverse to (i) the business, operations, assets, liabilities, properties, results of operations, prospects or condition (financial or otherwise) of Parent and each Parent Subsidiary, taken as a whole, or (ii) the ability of Parent and MergerCo to perform their respective obligations under this Agreement.

(b) Each of the Parent Subsidiaries is a corporation, partnership or limited liability company (or similar entity or association in the case of those Parent Subsidiaries organized and existing other than under the laws of a state of the United States) duly incorporated or organized, validly existing and in good standing under the laws of its jurisdiction of incorporation or organization, has the requisite corporate or other power and authority to own, operate, lease and encumber its properties and to carry on its business as it is now being conducted, and is duly licensed or qualified to do business and is in good standing in each jurisdiction in which the ownership of its property or the conduct of its business requires such license or qualification, except for jurisdictions in which such failure to be so licensed or qualified or to be in good standing could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect.

(c) Neither Parent nor any of the Parent Subsidiaries is in violation of any order of any court, governmental authority or arbitration board or tribunal, or any law, ordinance, bylaw, judgment, decree, order, arbitration, concession, grant, governmental rule or regulation to which Parent or any Parent Subsidiary or any of their respective properties or assets is subject, where such violation, alone or together with all other violations, could reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect. Parent and the Parent Subsidiaries have obtained all licenses, permits, approvals and other authorizations and have taken all actions required by applicable law or governmental regulations in connection with their businesses as currently conducted, except where the failure to obtain any such license, permit, approval or authorization or to take any such action, alone or together with all other failures, could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect. All licenses, permits, approvals and other authorizations required under such laws and regulations are in full force and effect. No violations are or have been recorded in respect of any such license, permit, approval or other authorization; to the knowledge of Parent, no event has occurred that would allow revocation or termination or that would result in the impairment of Parent's or any Parent Subsidiary's rights with respect to any such license, permit, approval or authorization; and no proceeding is pending or, to the knowledge of Parent, threatened to revoke,

A-31

limit or enforce any such license, permit, approval or authorization, except in each case for violations, revocations, terminations and proceedings which could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect.

(d) True, complete and accurate copies of the Certificate of Incorporation of Parent (the "*Parent Certificate*") and the Bylaws of Parent (the "*Parent Bylaws*") (and in each such case, all amendments thereto) have been delivered to the Company prior to the date of this Agreement, and no amendments thereto are pending. Parent is not in violation of any provisions of the Parent Certificate or the Parent Bylaws.

6.2. *Authorization, Validity and Effect of Agreements.* Each of Parent and MergerCo has the requisite power and authority to enter into and consummate the Transactions and to execute and deliver this Agreement. The Board of Directors of Parent (the "*Parent Board*") has approved this Agreement and the Transactions. The Board of Directors of MergerCo and the sole stockholder of MergerCo have approved this Agreement and the Transactions. The execution and delivery by Parent and MergerCo of this Agreement and the consummation of the Transactions have been duly authorized by all requisite corporate action on the part of Parent and MergerCo. This Agreement has been duly executed and delivered by Parent and MergerCo and, assuming due and valid authorization, execution and delivery thereof by the Company, is a valid and binding obligation of Parent and MergerCo, enforceable against Parent and MergerCo in accordance with its terms, subject to applicable bankruptcy, insolvency, moratorium or other similar laws relating to creditors' rights and general principles of equity.

6.3. *Capitalization.*

(a) The authorized capital stock of Parent consists of 80,000,000 shares of Parent Common Stock, par value \$0.01 per share, and 5,000,000 shares of preferred stock, par value \$0.01 per share (the "*Parent Preferred Stock*"). As of the date of this Agreement, (a) 26,792,932 shares of Parent Common Stock were issued and outstanding, (b) 2,965,117 shares of Parent Common Stock were authorized and reserved for issuance pursuant to Parent's 1996 Stock Option and Grant Plan and Parent's 2002 Stock Option and Incentive Plan (the "*Parent Stock Option Plans*"), subject to adjustment on the terms set forth in the Parent Stock Option Plans, (c) 476,925 shares of Parent Common Stock were authorized and reserved for issuance pursuant to Parent's Employee Stock Purchase Plan, (d) options to purchase 1,388,150 shares of Parent Common Stock (the "*Parent Options*") were outstanding under the Parent Stock Option Plans, (e) no shares of Parent Preferred Stock were issued and outstanding, and (f) 4,660,784 shares of Parent Common Stock and no shares of Parent Preferred Stock were held in the treasury of the Company. As of the date of this Agreement, Parent had no shares of Parent Common Stock or Parent Preferred Stock reserved for issuance other than as described above. All issued and outstanding shares of capital stock of Parent are, and all shares of capital stock of Parent which may be issued pursuant to the exercise of outstanding Parent Options will be, duly authorized, validly issued, fully paid, nonassessable and free of any preemptive rights. All issued and outstanding shares of capital stock of Parent were, and all shares of capital stock of the Parent which may be issued pursuant to the exercise of outstanding Parent Options will be, issued in compliance with and in accordance with the applicable requirements of the Securities Laws and applicable state securities and "Blue Sky" laws. Parent has no outstanding bonds, debentures, notes or other obligations the holders of which have the right to vote (or which are convertible into or exercisable for securities having the right to vote) with the stockholders of Parent on any matter. Except for the Parent Options (all of which have been issued under the Parent Stock Option Plans) and Parent's Employee Stock Purchase Plan, there are no options, warrants, calls, subscriptions, convertible securities, or other rights, agreements or commitments which obligate Parent to issue, transfer or sell any shares of capital stock of Parent. Except as set forth in the Parent SEC Reports (as defined below) or as could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect,

A-32

there are no agreements or understandings to which Parent or any Parent Subsidiary is a party with respect to the voting of any shares of capital stock of Parent or which restrict the transfer of any such shares, nor does Parent have knowledge of any third-party agreements or understandings with respect to the voting of any such shares or which restrict the transfer of any such shares. Except as set forth in the Parent SEC Reports or as could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect, there are no outstanding contractual obligations of Parent or any Parent Subsidiary to repurchase, redeem or otherwise acquire any shares of capital stock, partnership interests or any other securities of Parent or any Parent Subsidiary. Except as set forth in the Parent SEC Reports or as could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect, neither Parent nor any Parent Subsidiary is under any obligation, contingent or otherwise, by reason of any agreement to register the offer and sale or resale of any of their securities under the Securities Act.

(b) The authorized capital stock of MergerCo consists of 1,000 shares of MergerCo Common Stock, of which 1,000 shares were outstanding as of the date of this Agreement and owned by Parent. MergerCo is a direct wholly owned subsidiary of Parent, was formed solely for the purpose of engaging in the Transactions, has engaged in no other business activities and has conducted its operations only as contemplated by this Agreement.

6.4. *No Violation; Governmental Consents.* Except as could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect, none the execution, delivery or performance by Parent and MergerCo of this Agreement, the consummation by Parent and MergerCo of the Transactions, or the compliance by Parent and MergerCo with any of the provisions hereof, will conflict with or result in a breach of any provisions of the Parent Certificate, the Parent Bylaws, the MergerCo Certificate or the MergerCo Bylaws. The execution, delivery and performance by Parent and MergerCo of this Agreement, the consummation by Parent and MergerCo of the Transactions, and the compliance by Parent and MergerCo with any of the provisions hereof, will not violate, or conflict with, or result in a breach of any provision of, or constitute a default (or an event which, with notice or lapse of time or both, would constitute a default) under, or result in the termination or in a right of termination or cancellation of, or accelerate the performance required by, or result in the creation of any lien, security interest, charge or encumbrance upon any of the properties of Parent or the Parent Subsidiaries under, or result in being declared void, voidable or without further binding effect, any of the terms, conditions or provisions of (a) any note, bond, mortgage, indenture or deed of trust, (b) any license, franchise, permit, lease, contract, agreement or other instrument, commitment or obligation to which Parent or any of the Parent Subsidiaries is a party, or by which Parent or any of the Parent Subsidiaries or any of their properties or assets is bound, or (c) any order, writ, judgment, injunction, decree, law (including common law), statute, rule or regulation applicable to Parent or any Parent Subsidiary or any of their properties or assets, except as otherwise could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect. Other than the filings provided for in Section 1.2 of this Agreement or required pursuant to the Exchange Act or applicable state securities and "Blue Sky" laws, and based upon the accuracy of the Company's representations and warranties contained in Section 5.33 hereof, the execution and delivery of this Agreement by Parent and MergerCo does not, and the performance of and compliance with this Agreement by Parent and MergerCo and consummation of the Transactions does not, require any authorization, consent or approval of, permit from, or declaration, filing or registration with, any governmental or regulatory authority, except where the failure to obtain any such authorization, consent or approval of, permit from, or declaration, filing or registration with, any governmental or regulatory authority could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect.

6.5. *Commission Documents.* Parent has filed all required forms, reports, schedules, statements and other documents with the Commission since the date Parent became subject to the reporting

A-33

obligations of the Exchange Act (as such documents may have been amended since the time of filing, collectively, the "*Parent SEC Reports*"), all of which were prepared in accordance with the applicable requirements of the Securities Laws. As of their respective dates, the Parent SEC Reports (a) complied as to form in all material respects with the applicable requirements of the Securities Laws and (b) did not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements made therein, in the light of the circumstances under which they were made, not misleading. Each of the consolidated balance sheets of Parent included in or incorporated by reference into the Parent SEC Reports (including the related notes and schedules) fairly presents the consolidated financial position of Parent and the Parent Subsidiaries as of its date and each of the consolidated statements of income, retained earnings and cash flows of Parent included in or incorporated by reference into the Parent SEC Reports (including any related notes and schedules) fairly presents the results of operations, retained earnings or cash flows, as the case may be, of Parent and the Parent Subsidiaries for the periods set forth therein (subject, in the case of unaudited statements, to normal year-end audit adjustments which would not be material in amount or effect), in each case in accordance with GAAP consistently applied during the periods involved, except as may be noted therein and except, in the case of the unaudited statements, as permitted by Form 10-Q pursuant to Section 13 or 15(d) of the Exchange Act. No Parent Subsidiary is required to file any form, report or document with the Commission.

6.6. *Litigation.* Except as set forth in the Parent SEC Reports or as otherwise disclosed to the Company, there is no litigation, suit, action or proceeding pending or, to the knowledge of Parent, threatened against Parent or MergerCo, as to which there is a reasonable likelihood of an adverse determination and which, if adversely determined, individually or in the aggregate with all such other litigation, suits, actions or proceedings, could reasonably be expected to (a) have a Parent Material Adverse Effect, (b) materially and adversely affect the ability of Parent and MergerCo to perform their respective obligations under this Agreement or (c) prevent the consummation of any of the Transactions.

6.7. *Absence of Certain Changes.* Since March 31, 2002 and except as otherwise publicly disclosed, (a) Parent and the Parent Subsidiaries have conducted their businesses only in the ordinary course of business, and (b) up to and including the date of this Agreement, there has not been any change, effect, event, occurrence, non-occurrence, condition or development which has had or could reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect.

6.8. *No Undisclosed Liabilities.* Neither Parent nor any of the Parent Subsidiaries has any material liabilities or obligations of any nature (whether known or unknown, whether asserted or unasserted, whether absolute or contingent, whether accrued or unaccrued, whether liquidated or unliquidated and whether due or to become due, including any liability for Taxes and any material obligations or liabilities whether or not of the nature or type required to be disclosed under GAAP) other than such liabilities or obligations that have been specifically disclosed or provided in the Parent SEC Reports.

6.9. *Intellectual Property.* Parent or one of the Parent Subsidiaries owns or possesses rights to use all of the Intellectual Property Assets necessary for the operation of the business of Parent in the manner now conducted, free and clear of all Encumbrances, except where the failure to own or have such rights could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect.

6.10. *Environmental Matters.* Parent is in compliance with all Environmental Laws, except for any noncompliance that, either individually or in the aggregate, could not reasonably be expected to have a Parent Material Adverse Effect. Except as could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect, (i) Parent has not entered into or been subject to any consent decree, compliance order, or administrative order under any Environmental

A-34

Law, (ii) there is no administrative or judicial enforcement proceeding pending, or to the knowledge of Parent, threatened, against Parent under any Environmental Law, (iii) Parent has not received written notice under the citizen suit provision of any Environmental Law, (iv) Parent has not received any written notice that it is potentially responsible under any Environmental Law for costs of response or for damages to natural resources, as those terms are defined under the Environmental Laws, at any location, (v) Parent has not received any written request for information, notice, demand letter, or formal or informal complaint or claim under any Environmental Law or with respect to environmental matters, and (vi) Parent has no knowledge that any of the above will be forthcoming. Parent has not generated, manufactured, refined, transported, treated, stored, handled, disposed, transferred, produced or processed any Hazardous Materials, except in compliance with all applicable Environmental Laws except for any noncompliance that, either individually or in the aggregate, could not reasonably be expected to have a Parent Material Adverse Effect.

6.11. *Employee Benefit Plans.*

(a) Each Employee Program maintained by Parent or an Affiliate and which has been intended to qualify under Section 401(a) or 501(c)(9) of the Code has, in fact, been qualified under the applicable section of the Code from the effective date of such Employee Program through and including the Closing Date except for any failure that could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect. To Parent's knowledge, no event or omission has occurred which would reasonably be expected to cause any such Employee Program to lose its qualification or otherwise fail to satisfy the relevant requirements to provide tax-favored benefits under the applicable Code Section (including, without limitation, Code Sections 105, 125, 401(a) and 501(c)(9)) except for any failure that could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect.

(b) Neither Parent nor any Affiliate knows, nor should any of them reasonably know, of any material failure of any party to comply with any applicable laws with respect to the Employee Programs that have ever been maintained by Parent or any Affiliate. With respect to any Employee Program maintained by Parent or any Affiliate, there has been no (i) "prohibited transaction" as defined in Section 406 of ERISA, or Code Section 4975, (ii) material failure to comply with any provision of ERISA, other applicable law, or any agreement, or (iii) non-deductible contribution, which, in the case of any of (i), (ii) or (iii), could reasonably be expected to subject Parent or any Affiliate to material liability either directly or indirectly (including, without limitation, through any obligation of indemnification or contribution) for any damages, penalties or taxes, or any other loss or expense. No material litigation, governmental administrative proceeding (or investigation) or other proceeding (other than those relating to routine claims for benefits) is pending or, to Parent's knowledge, threatened with respect to any such Employee Program.

(c) Neither Parent nor any Affiliate has incurred any material liability under Title IV of ERISA which has not been paid in full. There has been no "accumulated funding deficiency" (whether or not waived) with respect to any Employee Program maintained by Parent or any Affiliate and subject to Code Section 412 or ERISA Section 302. With respect to any Employee Program maintained by Parent or any Affiliate and subject to Title IV of ERISA, there has been no (nor will there be any as a result of the Transactions) (i) "reportable event," within the meaning of ERISA Section 4043 or the regulations thereunder, for which the notice requirement is not waived by the regulations thereunder, and (ii) event or condition which presents a material risk of a plan termination or any other event that would reasonably be expected to cause Parent or any Affiliate to incur a material liability or have a lien imposed on its assets under Title IV of ERISA. No Employee Program maintained by Parent or any Affiliate and subject to Title IV of ERISA (other than a Multiemployer Plan (as hereinafter defined)) has any "unfunded benefit liabilities" within the meaning of ERISA Section 4001(a)(18). Neither Parent nor any Affiliate has ever maintained a Multiemployer Plan.

A-35

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

(d) For purposes of this Section: An entity is an "Affiliate" of Parent if it (A) is considered a single employer with Parent under ERISA Section 4001(b) or part of the same "controlled group" as Parent for purposes of ERISA Section 302(d)(8)(C) or (B) was considered a single employer with, as part of the same controlled group as, Parent, but solely to the extent that Parent as or will have liability with respect to any Employee Program maintained by such Affiliate that is no longer considered such a single employer or controlled group member.

6.12. *Labor Relations and Employment.* (a) There is no labor strike, picketing of any nature, material labor dispute, slowdown or any other concerted interference with normal operations, stoppage or lockout pending or to the knowledge of Parent, threatened against or affecting Parent, (b) there are no union claims or demands to represent the employees of Parent, Parent does not have any collective bargaining obligations with respect to any of its employees, and there are no current union organizing activities among the employees of Parent, (c) Parent is not a party to or bound by any collective bargaining or similar agreement with any labor organization, or work rules or practices agreed to with any labor organization or employee association, applicable to employees of Parent, and (d) with respect to bargaining obligations, Parent has bargained and continues to bargain in good faith. Parent is in compliance with all applicable laws and regulations respecting labor, employment, fair employment practices, work place safety and health, terms and conditions of employment, and wages and hours, except where the failure to be in such compliance could not, individually or in the aggregate, reasonably be expected to result in a Parent Material Adverse Effect. Parent is, and at all time since November 6, 1986 have been, in compliance with the requirements of the Immigration Reform Control Act of 1986 except for such non-compliance as could not have, individually or in the aggregate, a Parent Material Adverse Effect.

6.13. *No Brokers.* Neither Parent nor any of the Parent Subsidiaries has entered into any contract, arrangement or understanding with any person or firm which may result in the obligation of such entity or the Company to pay any finder's fees, brokerage or agent's commissions or other like payments in connection with the negotiations leading to this Agreement or consummation of the Transactions. Other than the Company's arrangements with Piper Jaffray, Parent is not aware of any claim for payment of any finder's fees, brokerage or agent's commissions or other like payments in connection with the negotiations leading to this Agreement or consummation of the Transactions.

6.14. *No Stockholder Vote Required.* No vote by the holders of Parent Common Stock is necessary to approve the Transactions and adopt this Agreement.

6.15. *Takeover Laws.* The Parent Board has taken appropriate actions and votes such that the provisions of Section 203 of the DGCL and all other applicable takeover statutes will not apply to this Agreement, the Voting Agreement or any of the Transactions.

6.16. *Material Contracts.* The Parent SEC Reports list all material Contracts of Parent and the Parent Subsidiaries, and each such material Contract is valid and binding on Parent or such Parent Subsidiary and is in full force and effect and enforceable in accordance with its terms, subject to applicable bankruptcy, insolvency, moratorium or other similar laws relating to creditors' rights and general principles of equity. Except as set forth in the Parent SEC Reports or as otherwise disclosed to the Company, neither Parent nor any Parent Subsidiary is in default or has received notice of any violation or default under any such material Contract and, to the knowledge of Parent, no other party is in default under any of such material Contracts (in each case other than defaults and violations that, individually or in the aggregate, could not reasonably be expected to have a Parent Material Adverse Effect), and no such violations or defaults will be triggered by the execution, delivery and performance of this Agreement by Parent or the consummation of the Transactions.

6.17. *Accounting Policies.* The significant accounting policies, including without limitation, those policies related to revenue recognition, utilized by Parent and the Parent Subsidiaries in preparing Parent's financial statements are as set forth in Note 2 of Parent's consolidated financial statements

A-36

filed as part of Parent's Annual Report on Form 10-K for the fiscal year ended December 31, 2001 and Item 7 of such Form 10-K, and such policies are in conformity with GAAP and have been consistently applied.

6.18. *Certain Business Practices.* No director, officer, agent or employee of Parent, has, directly or indirectly, (a) made or agreed to make any contribution, payment or gift to any government official, employee or agent where either the contribution, payment or gift or the purpose thereof was illegal under the laws of any federal, state, local or foreign jurisdiction, (b) established or maintained any unrecorded fund or asset for any purpose or made any false entries on the books and records of Parent for any reason, (c) made or agreed to make any contribution, or reimbursed any political gift or contribution made by any other person, to any candidate for federal, state, local or foreign public office or (d) paid or delivered any fee, commission or any other sum of money or item of property, however characterized, to any finder, agent, government official or other party, in the United States or any other country, which in any manner relates to the assets, business or operations of Parent, which Parent or each officer, director, agent or employee knew or had reason to believe to have been illegal under any federal, state or local laws (or any rules or regulations thereunder) of the United States or any other country having jurisdiction.

6.19. *Reorganization.*

(a) Neither Parent nor any of its affiliates (as such term is defined under the Exchange Act) has taken or agreed to take any action (other than actions contemplated by this Agreement) that could reasonably be expected to prevent the Merger from constituting a "reorganization" under Section 368(a) of the Code. Parent is not aware of any agreement, plan or other circumstance that could reasonably be expected to prevent the Merger from so qualifying.

(b) Following the Merger, MergerCo has no plan or intention to issue additional shares that would result in Parent losing control of MergerCo within the meaning of Section 368(c) of the Code.

(c) Parent has no plan or intention to reacquire, and, to Parent's knowledge, no person related to Parent within the meaning of Treasury Regulations Section 1.368-1(e)(2) has a plan or intention to acquire, any of the Parent Common Stock issued in the Merger, other than pursuant to a share repurchase program described in Revenue Ruling 99-58.

(d) No Company Common Stock is directly owned by the Parent, MergerCo or any other Parent Subsidiary.

6.20. *Ownership of Company Common Stock; Affiliates and Associates.* As of the date of the Agreement, neither Parent nor any of its affiliates or associates (as such terms are defined under the Exchange Act) (a) beneficially owns, directly or indirectly, or (b) is a party to any agreement, arrangement or understanding for the purpose of acquiring, holding, voting or disposing of any shares of capital stock of the Company.

6.21. *Compliance with the Hart-Scott-Rodino Act.* No person or entity, directly or indirectly through fiduciaries, agents, controlled entities, or other means, holds fifty percent (50%) or more of the outstanding voting securities of, or has the contractual right to designate fifty percent (50%) or more of the directors of, Parent. In addition, Parent and the Parent Subsidiaries, on a consolidated basis, have less than (a) \$100,000,000 of total assets, as stated on the last regularly prepared consolidated balance sheet of Parent and the Parent Subsidiaries; and (b) \$100,000,000 of annual net sales.

A-37

ARTICLE VII

COVENANTS

7.1. *No Solicitations.*

(a) The Company represents and warrants that it has terminated, and caused its Subsidiaries and affiliates, and their respective officers, directors, employees, investment bankers, attorneys, accountants and other advisors or representatives to terminate, any discussions or negotiations relating to, or that could reasonably be expected to lead to, any Acquisition Proposal (as hereinafter defined). Except as permitted by this Agreement, the Company shall not, and shall not authorize or permit any Company Subsidiary or any of its or their respective officers, directors or employees or any investment banker, financial advisor, attorney, accountant or other representative retained by the Company or any Company Subsidiary to, directly or indirectly, (i) solicit, initiate or encourage (including by way of furnishing non-public information), or take any other action to facilitate, any inquiries, discussions or the making of any proposal that constitutes, or could reasonably be expected to lead to, an Acquisition Proposal, (ii) participate in any discussions or negotiations, or otherwise communicate in any way with any person (other than Parent or MergerCo), regarding an Acquisition Proposal or (iii) enter into any agreement, arrangement or understanding regarding an Acquisition Proposal or requiring it to abandon, terminate or fail to consummate the Transactions. Without limiting the foregoing, it is understood that any violation of the restrictions set forth in the preceding sentence by any officer, director or employee of the Company or any Company Subsidiary or any investment banker, financial advisor, attorney, accountant or other representative retained by the Company or any Company Subsidiary shall be deemed to be a breach of this Section 7.1 by the Company. Notwithstanding the foregoing, at any time prior to the date on which this Agreement is approved by the stockholders of the Company at the meeting referred to in Section 7.4, in response to a Superior Proposal (as hereinafter defined) that did not result from a breach of this Section 7.1, the Company may (x) furnish non-public information with respect to the Company and the Company Subsidiaries to the person who made such Superior Proposal pursuant to a confidentiality agreement on terms no more favorable to such person than the Confidentiality Agreement (as hereinafter defined) and (y) participate in discussions or negotiations with such person regarding such Superior Proposal, if the Company Board determines in good faith (based on the advice of its outside legal counsel and after consultation with its financial adviser and based upon such other matters as it deems relevant) that failing to take such action would constitute a breach of its fiduciary duties under applicable law.

(b) The Company Board shall not (i) withdraw or modify, or propose to withdraw or modify, in a manner adverse to Parent or MergerCo, its approval or recommendation of this Agreement or the Merger, (ii) approve or recommend, or propose to approve or recommend, any Acquisition Proposal, (iii) approve or recommend, or propose to approve or recommend, or execute or enter into a letter of intent, agreement in principle, definitive agreement or other agreement relating to an Acquisition Proposal (other than a confidentiality agreement described in the last sentence of Section 7.1(a) hereof), or (iv) resolve to do any of the foregoing. Notwithstanding the foregoing, the Company Board may withdraw or modify, in a manner adverse to Parent or MergerCo, its approval or recommendation of this Agreement or the Merger if, in response to a Superior Proposal that has not been withdrawn and that did not otherwise result from a breach of this Section 7.1, the Company Board shall have determined in good faith (based on advice of its outside legal counsel and after consultation with its financial adviser and based upon such other matters as it deems relevant) that failing to take such action would constitute a breach of its fiduciary duties under applicable law; *provided, however*, that prior to taking any such action, the Company shall have given Parent at least forty-eight (48) hours written notice of the Company Board's intention to take such action and the opportunity to meet with the Company, its financial advisors and its legal counsel. Nothing contained in this Section 7.1(b) shall limit the Company's

A-38

obligation to hold and convene the meeting of the Company's stockholders referred to in Section 7.4 (including, without limitation, regardless of whether the recommendation or approval of the Company Board of this Agreement or the Merger shall have been withdrawn or modified).

(c) The Company shall promptly (and in any event within 24 hours) advise Parent and MergerCo orally and in writing of any Acquisition Proposal (including any amendments or proposed amendments thereof), or any request or inquiry received by the Company or any Company Subsidiary with respect to, or that could reasonably be expected to lead to, an Acquisition Proposal, including, in each case, the identity of the person making any such Acquisition Proposal, request or inquiry and the terms and conditions thereof, and shall provide to Parent and MergerCo any written materials received by the Company or any Company Subsidiary in connection therewith. The Company shall keep Parent and MergerCo fully informed of the status of the discussions related to such Acquisition Proposal, request or inquiry, including, without limitation, by promptly (and in any event within 12 hours) providing Parent with all written materials that it receives in connection with any such Acquisition Proposal. The Company agrees not to release any person from, or waive any provisions of, any confidentiality or standstill agreement to which the Company is a party (other than the Confidentiality Agreement).

(d) Nothing contained in this Section 7.1 shall prohibit the Company from at any time taking and disclosing to its stockholders a position contemplated by Rule 14d-9 or Rule 14e-2 under the Exchange Act.

(e) As used in this Agreement, the term "*Acquisition Proposal*" shall mean any proposed or actual tender offer, merger, consolidation or other business combination involving the Company, or sale, lease or other disposition, directly or indirectly, by merger, consolidation, share exchange or otherwise, of any material assets or securities of the Company or the Company Subsidiaries, or any transaction which is similar in form, substance or purpose to any of the foregoing transactions; *provided, however*, that the term "*Acquisition Proposal*" shall not include the Merger and the other Transactions.

(f) As used in this Agreement, the term "*Superior Proposal*" shall mean an unsolicited, bona fide written offer made by a third party to consummate an Acquisition Proposal, which Acquisition Proposal is reasonably likely to be consummated, and that (i) the Company Board determines in good faith, after consulting with its outside legal counsel and its financial advisor, would, if consummated, be reasonably likely to result in a transaction that is more favorable to the stockholders of the Company than the transactions contemplated hereby (taking into account all legal, financial, regulatory and other aspects of the proposal and the person making the proposal), (ii) is not conditioned on obtaining financing (and with respect to which Parent has received written evidence of such person's ability to fully finance its Acquisition Proposal), (iii) is for one hundred percent (100%) of the Company Common Stock and (iv) the Company Board determines is, based on the advice of Piper Jaffray (or any other nationally recognized investment banking firm), more favorable to the stockholders of the Company from a financial point of view than the transactions contemplated hereby.

7.2. *Conduct of Business by the Company.* During the period from the date of this Agreement to the Effective Time, except as otherwise contemplated by this Agreement, the Company shall and shall cause each of the Company Subsidiaries to carry on their respective businesses in the usual, regular and ordinary course, consistent with past practice, and use their reasonable best efforts to preserve intact their present business organizations, keep available the services of their present advisors, managers, officers and employees and preserve their relationships with customers, suppliers, licensors and others having business dealings with them and continue existing contracts as in effect on the date hereof (for

the term provided in such contracts). Without limiting the generality of the foregoing, neither the Company nor any of the Company Subsidiaries will (except as expressly permitted by this Agreement,

A-39

as expressly set forth in the Restructuring Plan or in Section 7.2 of the Company Disclosure Schedule, or to the extent that Parent shall otherwise consent in writing):

- (a) split, combine or reclassify or redeem, purchase or otherwise acquire any shares of its capital stock or other securities or declare, set aside or pay any dividend or other distribution (whether in cash, stock, or property or any combination thereof) in respect of any shares of its capital stock or other securities, except for dividends paid by any Company Subsidiary to the Company or any Company Subsidiary that is, directly or indirectly, wholly owned by the Company and except for any reverse stock split with a record date prior to the Effective Time declared for the purpose of complying with the Nasdaq listing qualifications;
- (b) authorize for issuance, issue or sell or agree or commit to issue or sell (whether through the issuance or granting of options, warrants, commitments, subscriptions, rights to purchase or otherwise) any stock of any class or any other securities or equity equivalents (including, without limitation, stock appreciation rights) (other than the issuance of shares of Company Common Stock upon the exercise of Company Options outstanding on the date of this Agreement in accordance with their present terms);
- (c) authorize, commit to or make any equipment purchases or capital expenditures other than in the ordinary course of business and consistent with past practice and in an amount not in excess of \$25,000 individually or \$100,000 in the aggregate;
- (d) (i) acquire, sell, lease, license, encumber, transfer or dispose of any assets outside the ordinary course of business which are material to the Company or any of the Company Subsidiaries (whether by asset acquisition, stock acquisition or otherwise), except pursuant to obligations in effect on the date hereof as set forth in Section 7.2(d) of the Company Disclosure Schedule, or (ii) enter into, modify or amend any agreement or other arrangement related to the licensing of Intellectual Property Assets by or to the Company or any Company Subsidiary except in the ordinary course of business consistent with past practice;
- (e) incur any amount of indebtedness for borrowed money (except for additional borrowings under the Company's existing credit facility with Comerica Bank as the same exists without amendment on the date hereof), guarantee any indebtedness, issue or sell debt securities, make any loans, advances or capital contributions, mortgage, pledge or otherwise encumber any material assets, or create or suffer any material lien thereupon;
- (f) pay, discharge or satisfy any claims, liabilities or obligations (absolute, accrued, asserted or unasserted, contingent or otherwise), other than any payment, discharge or satisfaction (i) in the ordinary course of business consistent with past practice, or (ii) in connection with the Transactions;
- (g) change any of the accounting principles or practices used by it (except as required by GAAP, in which case written notice shall be provided to Parent and MergerCo prior to any such change);
- (h) with respect to Taxes of or affecting the Company or any Company Subsidiary, make, change or revoke any election, change any accounting period, adopt or change any accounting method, file any amended Tax return, enter into any closing agreement, settle any Tax claim or assessment relating to the Company or any Company Subsidiary, surrender any right to claim a refund of Taxes, consent to any extension or waiver of the limitation period applicable to any Tax claim or assessment, fail to timely file any Tax return, take a position on a Tax return not in keeping with prior practice or take or omit to take any other action, if such election, adoption, change, amendment, agreement, settlement, surrender, consent or other action or omission is outside the ordinary course of business or could have the effect of materially increasing the

A-40

present or future Tax liability or materially decreasing any present or future Tax asset of the Company or any Company Subsidiary;

- (i) except as required by law and except for permitted increases in employee salary deferral or salary reduction contributions to any Employee Program, (i) enter into, adopt, amend or increase benefits under any Employee Program, (ii) enter into, adopt, amend or

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

renew any agreement, arrangement, plan or policy between the Company or any of the Company Subsidiaries and one or more of their respective directors, officers, employees, agents or consultants, (iii) except for normal increases in the ordinary course of business consistent with past practice, increase in any manner the compensation or fringe benefits of any director, officer, employee, agent or consultant or (iv) pay any benefit not required by any Employee Program or arrangement as in effect on the date hereof;

(j) adopt any amendments to the Company Certificate or the Company Bylaws or any of the organizational documents of the Company Subsidiaries, except as expressly provided by the terms of this Agreement;

(k) adopt a plan of complete or partial liquidation or resolutions providing for or authorizing such a liquidation or a dissolution, merger, consolidation, restructuring, recapitalization or reorganization;

(l) settle or compromise any pending or threatened litigation related to the Transactions or settle or compromise any other material litigation (whether or not commenced prior to the date of this Agreement);

(m) amend any term of any outstanding security of the Company or any Company Subsidiary;

(n) modify or amend any Scheduled Contract or waive, release or assign any rights or claims under any Scheduled Contract;

(o) enter into any agreement or other arrangement that is material to the business of the Company or any Company Subsidiary;

(p) license, assign or otherwise transfer to any person or entity any rights to the Intellectual Property Assets outside the ordinary course of business or fail to maintain or enforce in a manner consistent with past practice any of the Intellectual Property Assets;

(q) permit any insurance policy naming the Company or any Company Subsidiary as a beneficiary or a loss payable payee to be canceled or terminated without obtaining a replacement insurance policy in a comparable amount and against comparable risks and losses;

(r) terminate the employment of any officer of the Company or any Company Subsidiary;

(s) discourage customers, employees, suppliers, lessors, and other associates of the Company and the Company Subsidiaries from maintaining the materially same business relationships with the Company and the Company Subsidiaries after the date of this Agreement as were maintained prior to the date of this Agreement;

(t) enter into any oral or written agreement or arrangement with any customer or distributor related to the offering of discounts, extended warranties, service contracts, bundling of any Products, rights of return or any other agreements or arrangements, other than agreements or arrangements (i) with a term of less than ninety (90) days, (ii) entered into in the ordinary course of business consistent with past practices and (iii) recorded in accordance with GAAP;

(u) amend or restate any of the Company SEC Reports or any financial statements contained therein;

A-41

(v) engage in any action that could reasonably be expected to cause the Merger to fail to qualify as a "reorganization" under Section 368(a) of the Code;

(w) take or agree to take any action which would make any of the representations and warranties of the Company contained in this Agreement untrue or incorrect as of the date when made in any material respect if such action had then been taken; or

(x) enter into any agreement, contract, commitment or arrangement with respect to, or authorize, recommend, propose or announce an intention to do, any of the foregoing.

7.3. *Restructuring Plan.* During the period from the date of this Agreement to the Effective Time, the Company shall, and shall cause each of the Company Subsidiaries to, implement the Restructuring Plan in a commercially reasonable manner, in good faith and in compliance with all applicable laws.

7.4. Meeting of Company Stockholders.

(a) Promptly after the date hereof, the Company will take all action necessary in accordance with the DGCL and the Company Certificate and Company Bylaws to convene a meeting of its stockholders to be held as promptly as reasonably practicable after the Form S-4 (as defined below) is declared effective by the Commission, for the purpose of voting upon this Agreement and the Merger. Subject to Section 7.1, the Company will use its reasonable best efforts to solicit from its stockholders proxies in favor of the adoption and approval of this Agreement and the approval of the Merger and will take all other action necessary or advisable to secure the vote or consent of its stockholders as required by the rules of Nasdaq or the DGCL to obtain such approvals. Notwithstanding anything to the contrary contained in this Agreement, the Company may adjourn or postpone the meeting of its stockholders to the extent necessary to ensure that any necessary supplement or amendment to the Proxy Statement is provided to the Company's stockholders in advance of a vote on the Merger and this Agreement or, if as of the time for which the meeting of the Company's stockholders is originally scheduled (as set forth in the Proxy Statement) there are insufficient shares of Company Common Stock represented (either in person or by proxy) to constitute a quorum necessary to conduct the business of the meeting of the Company's stockholders. The Company shall ensure that the meeting of the Company's stockholders is called, noticed, convened, held and conducted, and that all proxies solicited by the Company in connection with the meeting of the Company's stockholders are solicited, in compliance with DGCL, the Company Certificate and the Company Bylaws, the rules of Nasdaq and all other applicable legal requirements. The Company's obligation to call, give notice of, convene and hold the meeting of its stockholders in accordance with this Section 7.4(a) shall not be limited to or otherwise affected by the commencement, disclosure, announcement or submission to the Company of any Acquisition Proposal.

(b) Subject to Section 7.1: (i) the Board of Directors of Company shall unanimously recommend that Company's stockholders vote in favor of and adopt and approve this Agreement and the Merger at the meeting of the Company's stockholders; (ii) the Proxy Statement shall include a statement to the effect that the Board of Directors of the Company has unanimously recommended that the Company's stockholders vote in favor of and adopt and approve this Agreement and the Merger at the meeting of the Company's stockholders; and (iii) neither the Board of Directors of the Company nor any committee thereof shall withdraw, amend or modify, or propose or resolve to withdraw, amend or modify in a manner adverse to Parent, the unanimous recommendation of the Board of Directors of the Company that the Company's stockholders vote in favor of and adopt and approve this Agreement and the Merger.

A-42

7.5. Proxy Statement; Registration Statement; Filing Cooperation.

(a) As promptly as practicable after the execution of this Agreement, the Company and Parent shall prepare and Parent shall file with the Commission, under the Exchange Act and the Securities Act, a registration statement on Form S-4 (such registration statement, together with any amendments or supplements thereto, the "*Form S-4*") which shall include a proxy statement/prospectus and form of proxy (such proxy statement/prospectus together with any amendments or supplements thereto, the "*Proxy Statement*") relating to the stockholders' meeting of the Company and the vote of the stockholders of the Company with respect to this Agreement and the Transactions. Parent will cause the Form S-4 to comply as to form in all material respects with the applicable provisions of the Securities Act and the rules and regulations thereunder, and the Company will cause the Proxy Statement to comply as to form in all material respects with the applicable provisions of the Exchange Act and the rules and regulations thereunder. Each of Parent and the Company shall furnish all information about itself and its business and operations and all necessary financial information to the other as the other may reasonably request in connection with the preparation of the Proxy Statement and the Form S-4. Parent shall use its reasonable best efforts, and the Company will cooperate with Parent, to have the Form S-4 declared effective by the Commission as promptly as practicable (including clearing the Proxy Statement with the Commission). Each of Parent and the Company agrees promptly to correct any information provided by it for use in the Proxy Statement and the Form S-4 if and to the extent that such information shall have become false or misleading in any material respect, and the Company further agrees to take all steps necessary to amend or supplement the Proxy Statement and, in the case of Parent, the Form S-4, and the Company further agrees to take all steps necessary to cause the Proxy Statement and, in the case of Parent, the Form S-4, as so amended or supplemented, to be filed with the Commission and to be disseminated to the Company's stockholders as and to the extent required by applicable federal and state securities laws. Each of Parent and the Company agrees that the information provided by it for inclusion in the Proxy Statement or the Form S-4 and each amendment or supplement thereto, at the time of mailing thereof and at the time of the meeting of stockholders of the Company, will not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. Each of the Company and Parent will advise the other, and deliver copies (if any) to the other, promptly after either receives notice thereof, of any request by the Commission for amendment of the Proxy Statement or the Form S-4 or comments thereon and responses thereto or requests by the Commission for additional information, or notice of the time when the Form S-4 or Proxy Statement has become effective or any supplement or amendment has been filed, the issuance of any stop order or the suspension of the qualification of the

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

securities issuable in connection with the Merger for offering or sale in any jurisdiction.

(b) The Proxy Statement shall include the recommendation of the Company Board in favor of the adoption and approval of this Agreement and the approval of the Merger (subject to the terms of Section 7.1).

(c) The Company shall use its reasonable best efforts to promptly mail the Proxy Statement to its stockholders.

(d) The Company shall cooperate with Parent and its advisors in connection with any filings to be made by Parent, including, without limitation, filings under the Securities Act and the Exchange Act or pursuant to state securities laws, and shall furnish all information required in connection therewith. Such cooperation shall include, but not be limited to, obtaining any consent to inclusion of the Company's financial statements and the reports of the Company's independent public accountants with respect thereto in any filing made pursuant to any federal or state securities laws (and any public disclosure related thereto).

A-43

7.6. *Nasdaq Listing Application.* Parent shall promptly prepare and submit to Nasdaq all reports, applications and other documents that may be necessary or desirable to enable all of the shares of Parent Common Stock that will be outstanding or will be reserved for issuance at the Effective Time to be listed on Nasdaq. Each of Parent and the Company shall furnish all information about itself and its business and operation and all necessary financial information to the other as the other may reasonably request in connection with such Nasdaq listing process. Each of Parent and the Company agrees promptly to correct any information provided by it for use in the Nasdaq listing process if and to the extent that such information shall have become false or misleading in any material respect. Each of Parent and the Company will advise and deliver copies (if any) to the other parties, promptly after it receives notice thereof, of any request by Nasdaq for amendment of any submitted materials or comments thereon and responses thereto or requests by Nasdaq for additional information.

7.7. *Additional Agreements; Regulatory Filings.*

(a) Subject to the terms and conditions herein provided, each of the parties hereto agrees to use its best efforts to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary, proper or advisable to consummate and make effective as promptly as practicable the Transactions and to cooperate with each other in connection with the foregoing, including the taking of such actions as are necessary to obtain any necessary consents, approvals, orders, exemptions and authorizations by or from any public or private third party, including, without limitation, any that are required to be obtained under any federal, state or local law or regulation or any contract, agreement or instrument to which the Company or any Company Subsidiary is a party or by which any of their respective properties or assets are bound, to defend all lawsuits or other legal proceedings challenging this Agreement or the consummation of the Transactions, to cause to be lifted or rescinded any injunction or restraining order or other order adversely affecting the ability of the parties to consummate the Transactions, and to effect all necessary registrations and submissions of information requested by governmental authorities. For purposes of the foregoing sentence, the obligation of the Company, Parent and MergerCo to use their respective "best efforts" to obtain waivers, consents and approvals to loan agreements, leases and other contracts shall not include any obligation to agree to an adverse modification of the terms of such documents or to prepay or incur additional obligations to such other parties, and the obligation of the Company, Parent and MergerCo to use their respective "best efforts" to take all actions to do all things necessary, proper or advisable to consummate the Transactions shall not include any obligation to divest any of their respective assets.

(b) Without limiting the generality of the foregoing, as promptly as practicable, Parent and the Company each shall properly prepare and file any other filings required under federal or state law relating to the Merger and the other Transactions (including filings, if any, required under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, or under state securities laws) (collectively, "*Regulatory Filings*"). Each of Parent and the Company shall promptly notify the other of the receipt of any comments on, or any request for amendments or supplements to, any Regulatory Filings by any Governmental Entity or official, and each of Parent and the Company shall supply the other with copies of all correspondence between it and each of its Subsidiaries and representatives, on the one hand, and any other appropriate governmental official, on the other hand, with respect to any Regulatory Filings. The Company and Parent shall keep the other apprised of the status of matters relating to the completion of the Transactions and work cooperatively in connection with obtaining any consents from Governmental Entities, including, without limitation:

(i) promptly notifying the other of, and if in writing, furnishing the other with copies of (or, in the case of material oral communications, advise the other orally of) any communications from or with any Governmental Entity with respect to the Merger or any of the other Transactions; (ii) permitting the other party to review and discuss in advance, and considering in good faith the views of one another in connection with, any proposed written (or

any material proposed oral) communication with any Governmental Entity; (iii) not participating in any meeting with any Governmental Entity unless it consults with the other party in advance and to the extent permitted by such Governmental Entity gives the other party the opportunity to attend and participate thereat; (iv) furnishing the other party with copies of all correspondence, filings and communications (and memoranda setting forth the substance thereof) between it and any Governmental Entity with respect to this Agreement and the Transactions; and (v) furnishing the other party with such necessary information and assistance as such other party may reasonably request in connection with its preparation of necessary filings or submissions of information to any Governmental Entity. The Company and Parent may, as each deems advisable and necessary, reasonably designate any competitively sensitive material provided to the other under this Section 7.7(b) as "outside counsel only." Such materials and the information contained therein shall be given only to the outside legal counsel of the recipient and shall not be disclosed by such outside counsel to employees, officers or directors of the recipient unless express written permission is obtained in advance from the source of the materials (the Company or Parent, as the case may be) or its legal counsel.

7.8. *Affiliates.* Section 7.8 of the Company Disclosure Schedule contains a complete and accurate list of names and addresses of those persons who may be deemed to be in the Company's reasonable judgment, "affiliates" (each such person, an "*Affiliate*") of the Company within the meaning of Rule 145 promulgated under the Securities Act as of the date hereof. The Company shall provide Parent such information and documents as Parent reasonably requests for purposes of reviewing such list. The Company shall advise the persons identified on the list of the resale restrictions imposed by applicable securities laws and shall use its reasonable best efforts to deliver or cause to be delivered to Parent, prior to the Closing Date, from each of the Affiliates, an Affiliate Letter in the form attached hereto as Exhibit A. Parent shall be entitled to place appropriate legends on the certificates evidencing any shares of Parent Common Stock to be received by such Affiliates pursuant to the terms of this Agreement, and to issue appropriate stop transfer instructions to the transfer agent for such shares of Parent Common Stock, consistent with the terms of such legends.

7.9. *Fees and Expenses.* Subject to Section 9.2 hereof and except as otherwise expressly provided herein, whether or not the Merger is consummated, all fees, costs and expenses incurred in connection with this Agreement and the Transactions shall be paid by the party incurring such fees, costs or expenses, *provided, however*, whether or not the Merger is consummated, all fees, costs and expenses incurred in connection with (i) the preparation, printing, filing and mailing of the Proxy Statement and the Form S-4 and (ii) any filing fees paid pursuant to filings, if any, made under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, shall be paid 50% by the Company, on the one hand, and 50% by Parent, on the other hand.

7.10. *Officers' and Directors' Indemnification.* The Surviving Corporation agrees that all rights to indemnification existing in favor of, and all limitations on the personal liability of, the directors, officers, employees and agents of the Company and the Company Subsidiaries (collectively, the "*Indemnified Parties*") provided for in the Company Certificate or the Company Bylaws as in effect as of the date hereof with respect to matters occurring prior to the Effective Time, and including the Merger and the other Transactions, shall continue in full force and effect for a period of not less than six (6) years from the Effective Time. Prior to the Effective Time, the Company shall purchase an extended reporting period endorsement (a so called "*tail policy*") under the Company's existing directors' and officers' liability insurance coverage for the Company and the Company's directors and officers in a form acceptable to the Company and Parent which shall provide the Company and such directors and officers with coverage for six (6) years following the Effective Time of not less than the existing coverage under, and have other terms not materially less favorable on the whole to, the insured persons than the directors' and officers' liability insurance coverage presently maintained by the Company so long as the aggregate cost of the directors' and officers' liability insurance for such six

(6) year period is \$360,000 or less (the "*Maximum Insurance Premium*"); *provided, however*, that the Company agrees to cooperate in good faith with Parent in order to obtain the lowest premium for the above-referenced coverage. In the event that the Maximum Insurance Premium is insufficient for the above-referenced coverage, the Company may spend up to the Maximum Insurance Premium to purchase such lesser coverage that may be obtained for the Maximum Insurance Premium. This Section 7.10 is intended for the benefit of, and to grant third-party rights to, the Indemnified Parties and shall be binding on all successors and assigns of Parent, the Company and the Surviving Corporation.

7.11. *Access to Information; Confidentiality.* From the date hereof until the Effective Time, the Company shall, and shall cause each of the Company Subsidiaries and each of the Company's and the Company Subsidiaries' respective officers, employees and agents to, afford to Parent and to the officers, employees and agents of Parent complete access at all reasonable times to such officers, employees, agents, properties, books, records and contracts, and shall furnish to Parent such financial, operating and other data and information as Parent may reasonably

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

request. Prior to the Effective Time, Parent and MergerCo shall hold in confidence all such information on the terms and subject to the conditions contained in that certain mutual confidentiality agreement between Parent and the Company dated April 22, 2002 (the "Confidentiality Agreement"). The Company hereby waives the provisions of the Confidentiality Agreement as and to the extent necessary to permit the making and consummation of the Transactions.

7.12. *Financial and Other Statements.* During the term of this Agreement, the Company shall also provide to Parent the following documents and information:

(a) Contemporaneously therewith, the Company shall furnish to Parent a copy of each Annual Report on Form 10-K, Quarterly Report on Form 10-Q, and Current Report on Form 8-K filed by the Company with the Commission and each such report shall be in compliance with the Securities Laws and with all representation and warranties contained in this Agreement applicable to Company SEC Reports.

(b) As soon as practicable, the Company shall furnish to Parent copies of all such financial statements and reports as it or any Company Subsidiary shall send to its stockholders, the Commission or any other regulatory authority, to the extent any such reports furnished to any such regulatory authority are not confidential and except as legally prohibited thereby.

(c) Promptly upon receipt thereof, the Company shall furnish to Parent copies of all internal control reports submitted to the Company or any Company Subsidiary by its independent accountants in connection with each annual, interim or special audit of the books of the Company or any such Company Subsidiary made by such accountants.

(d) As soon as practicable, the Company shall furnish to Parent (i) monthly profit and loss statements, (ii) a listing of accounts receivable, including aging, as of the end of each month, (iii) inventory analysis as of the end of each month, (iv) a listing of accounts payable, including aging, as of the end of each month, (v) a listing of the summary of shipments and orders received as of the end of each month and (vi) such additional financial data as Parent may reasonably request.

7.13. *Advice of Change.* Each party shall promptly advise the other of (i) any change, effect, event, occurrence, non-occurrence, condition or development which could reasonably be expected to cause any representation or warranty contained in this Agreement to be untrue or inaccurate in any material respect, and (ii) any material failure of such party to comply with or satisfy any covenant, condition or agreement to be complied with or satisfied by it under this Agreement. The Company shall promptly advise Parent and MergerCo of any change, effect, event, occurrence, non-occurrence, condition or development that has had or could reasonably be expected to have, individually or in the

A-46

aggregate, a Company Material Adverse Effect, and Parent shall promptly advise the Company of any change, effect, event, occurrence, non-occurrence, condition or development that has had or could reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect.

7.14. *Public Announcements.* The Company and Parent shall consult with each other before issuing any press release or otherwise making any public statements with respect to this Agreement or any of the Transactions and shall not issue any such press release or make any such public statement without the prior consent of the other party, which consent shall not be unreasonably withheld; *provided, however*, that a party may, without the prior consent of the other party, issue such press release or make such public statement as may be required by law or the applicable rules of any stock exchange if it has used its best efforts to consult with the other party and to obtain such party's consent but has been unable to do so in a timely manner. In this regard, the parties shall make a joint public announcement of this Agreement and the Transactions no later than (i) the close of trading on Nasdaq on the day this Agreement is signed, if such signing occurs during a business day or (ii) the opening of trading on Nasdaq on the business day following the date on which this Agreement is signed, if such signing does not occur during a business day.

7.15. *Employee Benefit Arrangements.*

(a) Subject to applicable law, following the Effective Time, the employees of the Company and the Company Subsidiaries will be eligible to participate in the health and welfare plans and 401(k) plans of Parent, one of its affiliates or the Surviving Corporation as in effect on the date thereof on terms substantially similar to those provided to similarly situated employees of Parent or any Parent Subsidiary. Until such time as Parent causes employees of the Company and the Company Subsidiaries to be eligible to participate in the health and welfare plans of Parent or one of its affiliates or the Surviving Corporation, employees of the Company and the Company Subsidiaries will continue to be eligible to participate in the Company's health and welfare plans (other than stock option or stock purchase plans) on substantially similar terms to those currently in effect. Nothing in this Section 7.15 or elsewhere in this Agreement shall be construed to create a right in any employee to employment with Parent, the Surviving Corporation or any other

Parent Subsidiary, and the employment of each continuing employee shall be "at will" employment.

(b) If any employee of the Company or any of the Company Subsidiaries becomes a participant in any employee benefit plan, practice or policy of Parent, any of its affiliates or the Surviving Corporation, such employee shall be given credit under such plan for all service prior to the Effective Time with the Company and the Company Subsidiaries and prior to the time such employee becomes such a participant, for purposes of eligibility (including, without limitation, waiting periods) and vesting (but not for the actual accrual of benefits), and such employees will be given credit for such service for purposes of any vacation policy. In addition, if any employees of the Company or any of the Company Subsidiaries employed as of the Closing Date become covered by a medical plan of Parent, any of its affiliates or the Surviving Corporation, such medical plan shall not impose any exclusion on coverage for preexisting medical conditions with respect to such employees to which they would not have been subject had they participated or continued to participate in the medical plan of the Company and the Company Subsidiaries.

(c) Unless otherwise directed in writing by Parent at least five days prior to the Effective Time, the Company shall take (or cause to be taken) all actions necessary or appropriate to terminate, effective immediately prior to the Effective Time, any Employee Program sponsored by the Company or any Company Subsidiary (or in which the Company or any Company Subsidiary participate) that contains a cash or deferred arrangement intended to qualify under Section 401(k) of the Code. The Company shall also take (or cause to be taken) such other action in furtherance of terminating such 401(k) plans as Parent may reasonably require.

A-47

7.16. *Delisting.* Each of the parties hereto agrees to cooperate with each other in taking, or causing to be taken, all actions necessary to delist the Company Common Stock from Nasdaq, provided that such delisting shall not be effective until after the Effective Time.

7.17. *Further Assurances.* At and after the Effective Time, the officers and directors of the Surviving Corporation will be authorized to execute and deliver, in the name and on behalf of the Company or MergerCo, any deeds, bills of sale, assignments or assurances and to take and do, in the name and on behalf of the Company or MergerCo, any other actions and things to vest, perfect or confirm on record or otherwise in the Surviving Corporation any and all right, title and interest in, to and under any of the rights, properties or assets of the Company acquired or to be acquired by the Surviving Corporation as a result of, or in connection with, the Merger.

7.18. *Tax-Free Reorganization.* Parent, MergerCo and the Company will execute and deliver to the tax counsel of Company, or Goodwin Procter LLP as described in Section 8.2(e), certificates in customary form as are reasonably requested by such counsel in connection with the delivery by such tax counsel of the opinion described in Section 8.2(e). Except as otherwise required by law, each of Parent, MergerCo and the Company agrees to file its tax returns in a manner that is consistent with the Merger qualifying as a tax-free reorganization under Sections 368(a)(1)(A) and 368(a)(2)(D) of the Code. None of Parent, MergerCo or the Company will knowingly take or cause to be taken any action that, or knowingly fail to take or cause to be taken any action the failure of which reasonably would be expected to affect adversely the qualification of the Merger as a tax-free reorganization under Sections 368(a)(1)(A) and 368(a)(2)(D) of the Code. Each of Parent, MergerCo and the Company will use its reasonable best efforts to cause the Merger to qualify as a tax-free reorganization under Sections 368(a)(1)(A) and 368(a)(2)(D). The Company will not redeem or make any distribution with respect to its stock. No Company Subsidiary will acquire any Company Common Stock. Following the Merger, Parent will cause MergerCo to continue the Company's historic business or to use a significant portion of the Company's historic business assets in a business, in each case within the meaning of Section 1.368-1(d) of the Treasury Regulations, assuming that the assets of, and the business conducted by, the Company on the Closing Date constitute the Company's historic business assets and historic business, respectively.

A-48

ARTICLE VIII

CONDITIONS TO THE MERGER

8.1. *Conditions to the Obligations of Each Party to Effect the Merger.* The respective obligations of each party to effect the Merger shall be subject to the fulfillment or waiver, where permissible, at or prior to the Closing Date, of each of the following conditions:

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

(a) *Stockholders' Approval.* This Agreement and the Transactions, including the Merger, shall have been approved and adopted by the affirmative vote of the stockholders of the Company to the extent required by the DGCL and the Company Certificate.

(b) *No Injunctions, Orders or Restraints; Illegality.* No statute, order, decree, ruling or injunction (whether temporary, preliminary or permanent) (an "*Injunction*") shall have been enacted, entered, issued, promulgated or enforced by any Governmental Entity which prohibits the consummation of the Merger on the terms contemplated by this Agreement; *provided* that the party seeking to rely upon this condition has fully complied with and performed its obligations pursuant to Section 7.7 hereof.

(c) *Form S-4.* The Form S-4 shall have been declared effective by the Commission under the Securities Act, and no stop order suspending the effectiveness of the Form S-4 shall have been issued by the Commission, and no proceeding for that purpose shall have been initiated or, to the knowledge of Parent or the Company, threatened by the Commission.

(d) *Nasdaq Listing.* Parent shall have obtained the approval for the listing of the shares of Parent Common Stock issuable in the Merger on Nasdaq, subject to official notice of issuance.

8.2. *Conditions to Obligations of the Company.* The obligations of the Company to effect the Merger are further subject to the fulfillment or waiver, where permissible, at or prior to the Closing Date, of each of the following conditions:

(a) *Representations and Warranties.* The representations and warranties of Parent and MergerCo set forth herein shall be true and correct both when made and at and as of the Effective Date, as if made at and as of such time (except for representations and warranties that are expressly made as of a specified date, which shall be true and correct as of such date), except, with respect to the Effective Date, where the failure of such representations and warranties to be so true and correct (without giving effect to any limitation as to materiality or material adverse effect set forth therein), individually or in the aggregate, does not have, and could not reasonably be expected to have a Parent Material Adverse Effect; provided, however that notwithstanding the foregoing the representations and warranties contained in Section 6.21 shall be true and correct at and as of the Effective Date.

(b) *Performance of Obligations of Parent.* Parent shall have performed in all material respects all obligations required to be performed by it under this Agreement.

(c) *Officers' Certificate.* The Company shall have received a certificate of the Chief Executive Officer or President and the Chief Financial Officer of Parent, dated the Closing Date, to the effect that the statements set forth in paragraphs (a) and (b) of this Section 8.2 are true and correct.

(d) *Consents, Approvals, Etc.* All consents, authorizations, orders and approvals of (or filings or registrations with) any governmental commission, board, other regulatory body or third parties required to be made or obtained by Parent and the Parent Subsidiaries and affiliated entities in connection with the execution, delivery and performance of this Agreement shall have been obtained or made, except where the failure to have obtained or made any such consent,

A-49

authorization, order, approval, filing or registration, could not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect.

(e) *Tax Opinion.* The Company shall have received a written opinion from its counsel, Jaffe, Raitt, Heuer & Weiss, P.C., in the form attached hereto as *Exhibit B*; *provided*, that if Jaffe, Raitt, Heuer & Weiss, P.C. is unwilling or unable to render such opinion, Goodwin Procter LLP may render such opinion to the Company in satisfaction of this Section 8.2(e). In connection with any such tax opinion, Parent, MergerCo and the Company will provide such representations as are accurate and are reasonably requested by counsel, which shall be entitled to rely upon such representations in rendering its opinion.

8.3. *Conditions to Obligations of Parent.* The obligation of Parent to effect the Merger is further subject to the fulfillment or waiver, where permissible, at or prior to the Closing Date, of each of the following conditions:

(a) *Representations and Warranties.* The representations and warranties of the Company set forth herein shall be true and correct both when made and at and as of the Effective Date, as if made at and as of such time (except for representations and warranties that are expressly made as of a specified date, which shall be true and correct as of such date), except, with respect to the

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Effective Date, where the failure of such representations and warranties to be so true and correct (without giving effect to any limitation as to materiality or material adverse effect set forth therein), individually or in the aggregate, does not have, and could not reasonably be expected to have a Company Material Adverse Effect; *provided, however* that notwithstanding the foregoing the representations and warranties contained in Section 5.33 shall be true and correct at and as of the Effective Date.

(b) *Performance of Obligations of the Company.* The Company shall have performed in all material respects all obligations required to be performed by it under this Agreement.

(c) *Absence of Company Changes.* From the date of this Agreement through the Closing Date, there shall not have occurred any change, effect, event, occurrence, condition or development concerning the Company and/or the Company Subsidiaries that individually or in the aggregate has had or could reasonably be expected to have a Company Material Adverse Effect other than (w) the taking of those actions expressly set forth in the Restructuring Plan provided that such actions are taken in accordance with applicable laws, (x) any change arising out of the announcement of the execution or existence of this Agreement or the existence of the Transactions, (y) any change arising out of conditions arising after the date hereof generally affecting the biotechnology, life sciences research or drug discovery industries which conditions must be proven and documented by the Company or (z) any change arising out of a material disruption or adverse change arising after the date hereof in general economic conditions or general conditions affecting the securities markets.

(d) For purposes of Section 8.3(a) (both as to representations and warranties when made and representations and warranties made at and as of the Effective Date) and Section 8.3(c) only, a change, effect, event, occurrence, condition or development described in clause (i) of the definition of Company Material Adverse Effect that is reasonably capable of monetization shall not be deemed to have a Company Material Adverse Effect, unless and until it has or is reasonably likely to have at least one of the following effects: (i) a reduction in net worth of the Company (on a consolidated basis) of \$1,000,000 or more excluding any non-cash charge or adjustment made solely as a result of an impairment test or assessment made in accordance with SFAS 142 (Goodwill and Other Intangible Assets) but only to the extent that such charge or adjustment was not the result of an inaccurate representation or warranty made by the Company in this Agreement or (ii) a reduction in historical revenues for any year or prospective revenues for fiscal year 2002 or any subsequent year of the Company (on a consolidated basis) of \$1,000,000 or more.

A-50

(e) *Officers' Certificate.* Parent shall have received a certificate of the Chief Executive Officer and the Chief Financial Officer of the Company to the effect that the statements set forth in paragraphs (a), (b) and (c) of this Section 8.3 are true and correct.

(f) *Consents, Approvals, Etc.* All consents, authorizations, orders and approvals of (or filings or registrations with) any governmental commission, board, other regulatory body or third parties required to be made or obtained by the Company and affiliated entities in connection with the execution, delivery and performance of this Agreement shall have been obtained or made, including without limitation those set forth in Section 5.21(b) of the Company Disclosure Schedule, except where the failure to have obtained or made any such consent, authorization, order, approval, filing or registration, could not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect. Notwithstanding the foregoing, the Company shall have obtained (i) written consent to assignment in connection with the Transactions as required under the leases with respect to (A) 4335 Varsity Drive, Ann Arbor, MI; (B) 4401 Varsity Drive, Ann Arbor, MI; (C) 17851 Sky Park Circle, Irvine, CA, and (D) 77865 Sky Park Circle, Irvine, CA, (ii) written consent to assignment in connection with the Transactions or a payoff letter under the loan facility with Comerica Bank, and (iii) written consent to assignment in connection with the Transactions under the merger agreement with Cartesian Technologies, Inc. and the related escrow agreement.

(g) *Affiliate Letters.* The Parent shall have received an executed copy of an Affiliate Letter from each Affiliate of the Company.

(h) *Treatment of Company Options, Company Warrants, Company Stock Purchase Plan.* The Company shall have taken any and all action necessary to cause the Company Options, the Company Warrants and the Company Stock Purchase Plan to be treated as provided for in Section 3.3; *provided, however*, that if all of the other conditions set forth in Article VIII shall have been satisfied or, if permissible, waived, and the aggregate number of shares of Parent Common Stock subject to Converted Options held by persons who as of the Effective Time are not employees of the Company is greater than twenty thousand (20,000) shares, Parent, at its election, will either (i) waive such requirement as set forth in the first proviso of the penultimate sentence of Section 3.3(a), or (ii) extend the Closing Date to October 18, 2002 or later.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

(i) *Dissenting Stockholders.* The number of shares for which the Company has received notice of the holder's intent to exercise appraisal rights under Section 262 of the DGCL shall not exceed five percent (5%) of the number of shares of outstanding Company Common Stock as of the record date of the meeting of the Company's stockholders.

(j) *Registration Rights.* The Company shall have taken any and all action necessary to terminate all outstanding registration rights with respect to the Company Common Stock, including, without limitation, those set forth in Section 5.3 of the Company Disclosure Schedule.

(k) *Indemnification Agreements.* The Company shall have taken any and all action necessary to terminate all indemnification agreements with continuing officers of the Company with respect to actions or events occurring after the Effective Time.

A-51

ARTICLE IX

TERMINATION, AMENDMENT AND WAIVER

9.1. *Termination.* This Agreement may be terminated at any time prior to the Effective Time, whether before or after the Company stockholders' approval hereof:

(a) by the mutual written consent of Parent or MergerCo and the Company.

(b) by either of the Company or Parent or MergerCo:

(i) if the required approval of the stockholders of the Company that is a condition to the obligations of Parent, MergerCo or the Company under Section 8.1 of this Agreement shall not have been obtained by reason of the failure to obtain the required vote upon a vote held at a duly held meeting of stockholders of the Company or at any adjournment thereof, *provided, however*, that the right to terminate this Agreement under this Section 9.1(b)(i) shall not be available to the Company where the failure to obtain Company stockholder approval shall have been caused by the action or failure to act of the Company and such action or failure to act constitutes a breach by the Company of this Agreement; or

(ii) if any Governmental Entity shall have enacted, entered, issued, promulgated or enforced a final and nonappealable Injunction (which Injunction the parties hereto shall have used their reasonable best efforts to lift), which prohibits the consummation of the Merger or the other Transactions on the terms contemplated by this Agreement (*provided* that the party seeking to rely upon this condition has fully complied with and performed its obligations pursuant to Section 7.7 hereof), or permanently enjoins the acceptance for payment of, or payment for, shares of Company Common Stock pursuant to the Merger;

(iii) if, without any material breach by the terminating party of its obligations under this Agreement, the Merger shall not have occurred on or before October 31, 2002 (the "*Termination Date*"); *provided, however*, that if the Commission elects to review the S-4, the Termination Date shall automatically be extended by the number of days (inclusive) from the date of the initial filing of the S-4 to the date of receipt of notification from the Commission that the S-4 is cleared; *provided*, further, that none of Parent, MergerCo or the Company shall terminate this Agreement prior to the Termination Date if the Merger has not occurred by reason of the pendency of a non-final Injunction, and Parent, MergerCo and the Company shall use their reasonable best efforts to have any such Injunction stayed or reversed; *provided*, that in no event shall the Termination Date be after December 31, 2002.

(c) by the Company, if Parent or MergerCo shall have breached any of their respective representations, warranties, covenants or other agreements contained in this Agreement, which breach has not been cured within ten (10) business days after the giving of written notice to Parent or MergerCo, except, in any case, for such breaches which have not had and are not reasonably likely to have, individually or in the aggregate, a Parent Material Adverse Effect.

(d) by Parent or MergerCo if:

(i) the Company shall have breached any representation, warranty, covenant or other agreement contained in this Agreement (other than those set forth in Section 7.1 hereof), which breach has not been cured within ten (10) business days after the giving of written notice to the Company, except, in any case, for such breaches which have not had and are not reasonably likely to have, individually or in the aggregate, a Company Material Adverse Effect;

(ii) (A) the Company shall have breached any representation, warranty, covenant or other agreement contained in Section 7.1 of this Agreement, or (B) any of the signatories to

A-52

the Voting Agreement (other than Parent) shall have breached any representation, warranty, covenant or agreement contained in the Voting Agreement and as a result of such breach of the Voting Agreement the condition set forth in Section 8.1(a) is not met;

(iii) if (A) the Company Board shall have withdrawn or modified in a manner adverse to Parent or MergerCo its approval or recommendation of this Agreement or the Transactions, approved or recommended any Acquisition Proposal, or approved, recommended, executed or entered into an agreement in principle or definitive agreement relating to an Acquisition Proposal (other than a confidentiality agreement described in the last sentence of Section 7.1(a) hereof), or proposed or resolved to do any of the foregoing, or (B) a tender or exchange offer relating to securities of the Company shall have been commenced by a third party and the Company shall not have sent to its securityholders pursuant to Rule 14e-2 under the Exchange Act, within ten business days after such tender or exchange offer is first published, sent or given, a statement disclosing that the Company recommends rejection of such tender or exchange offer.

For purposes of Section 9.1(d)(i) only, a change, effect, event, occurrence, condition or development described in clause (i) of the definition of Company Material Adverse Effect that is reasonably capable of monetization shall not be deemed to have a Company Material Adverse Effect, unless and until it has or is reasonably likely to have at least one of the following effects: (i) a reduction in net worth of the Company (on a consolidated basis) of \$1,000,000 or more excluding any non-cash charge or adjustment made solely as a result of an impairment test or assessment made in accordance with SFAS 142 (Goodwill and Other Intangible Assets) but only to the extent that such charge or adjustment was not the result of an inaccurate representation or warranty made by the Company in this Agreement or (ii) a reduction in historical revenues for any year or prospective revenues for fiscal year 2002 or any subsequent year of the Company (on a consolidated basis) of \$1,000,000 or more.

9.2. *Effect of Termination.*

(a) In the event of the termination of this Agreement pursuant to Section 9.1 hereof, this Agreement shall forthwith become null and void and have no effect, without any liability on the part of any party hereto or its affiliates, directors, officers or stockholders and all rights and obligations of any party hereto shall cease except for the agreements contained in Sections 7.9 and 7.11, this Section 9.2 and Article X; *provided, however*, that nothing contained in this Section 9.2 shall relieve any party from liability for fraud or willful breach of this Agreement.

(b) If Parent or MergerCo terminates this Agreement pursuant to Section 9.1(d)(ii)(A) or (iii) hereof, then the Company shall pay to Parent an amount in cash equal to One Million Three Hundred Thousand Dollars (\$1,300,000) (the "*Liquidated Amount*").

(c) Upon the termination of this Agreement by Parent or MergerCo pursuant to Section 9.1(d)(i) or (ii)(B) hereof the Company shall pay to Parent an amount in cash equal to the aggregate amount of Parent's and MergerCo's out-of-pocket expenses incurred in connection with pursuing the transactions contemplated hereby (including, without limitation, legal, accounting, investment banking and printing fees) (collectively, the "*Reimbursable Expenses*") (as such Reimbursable Expenses may be estimated by Parent and MergerCo in good faith prior to the date of such payment, subject to an adjustment payment between the parties upon Parent's definitive determination of such Reimbursable Expenses).

(d) Any payment required by this Section 9.2 shall be payable by the Company to Parent by wire transfer of immediately available funds to an account designated by Parent. Such payments shall be made no later than one (1) business day after the termination of this Agreement by Parent or MergerCo. Any adjustment payment between the parties upon Parent's definitive determination

A-53

of the Reimbursable Expenses pursuant to Section 9.2(c) hereof shall be made no later than one (1) business day after notice to the Company of such determination.

9.3. *Amendment.* This Agreement may be amended by the parties hereto by an instrument in writing signed on behalf of each of the parties hereto at any time before or after any approval hereof by the stockholders of the Company; *provided, however*, that after any such stockholder approval, no amendment shall be made which by law requires further approval by the stockholders of the Company without obtaining such approval.

9.4. *Extension; Waiver.* At any time prior to the Closing, the parties hereto may, to the extent legally allowed, (a) extend the time for the performance of any of the obligations or other acts of the other parties hereto, (b) waive any inaccuracies in the representations and warranties contained herein or in any document delivered pursuant hereto and (c) waive compliance with any of the agreements or conditions contained herein. Any agreement on the part of a party hereto to any such extension or waiver shall be valid only if set forth in a written instrument signed on behalf of such party.

ARTICLE X

GENERAL PROVISIONS

10.1. *Notices.* All notices and other communications given or made pursuant hereto shall be in writing and shall be deemed to have been duly given or made as of the date delivered or sent if delivered personally or sent by cable, telegram, telecopier or telex or sent by prepaid overnight carrier to the parties at the following addresses (or at such other addresses as shall be specified by the parties by like notice):

(a) if to Parent or MergerCo:

Harvard Bioscience, Inc.
84 October Hill Road
Holliston, Massachusetts 01746
Attention: David Green
Facsimile: (508) 429-8478

with a copy to:

Goodwin Procter LLP
Exchange Place
Boston, Massachusetts 02109
Attention: H. David Henken, P.C.
Facsimile: (617) 523-1231

(b) if to the Company:

Genomic Solutions Inc.
4355 Varsity Drive
Ann Arbor, Michigan 48108
Attention: Jeffrey S. Williams
Facsimile: (734) 975-4809

with a copy to:

Jaffe, Raitt, Heuer & Weiss, P.C.
One Woodward Avenue, Suite 2400
Detroit, Michigan 48226
Attention: Peter Sugar, Esq.

10.2. *Interpretation.* When a reference is made in this Agreement to subsidiaries of Parent, Merger Co or the Company, the word "*Subsidiary*" means any corporation more than fifty percent (50%) of whose outstanding voting securities, or any partnership, joint venture or other entity more than fifty percent (50%) of whose total equity interest, is directly or indirectly owned by Parent, MergerCo or the Company, as the case may be. The headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

10.3. *Non-Survival of Representations, Warranties, Covenants and Agreements.* Except for Articles I, II and IV, Sections 7.6, 7.8, 7.9, 7.10, 7.15, 7.17 and 7.18, the last sentence of Section 7.7, and Article X, none of the representations, warranties, covenants and agreements contained in this Agreement or in any instrument delivered pursuant to this Agreement shall survive the Effective Time or the termination of this Agreement (other than in the case of a termination to the extent provided for in Section 9.2(a)), and except as provided in the preceding parenthetical thereafter there shall be no liability on the part of either Parent, MergerCo or the Company or any of their respective officers, directors or stockholders in respect thereof.

10.4. *Miscellaneous.* This Agreement (a) constitutes, together with the Confidentiality Agreement, the Voting Agreement, the Employment Agreement, the Company Disclosure Schedule, and the Parent Disclosure Schedule, the entire agreement and supersedes all of the prior agreements and understandings, both written and oral, among the parties, or any of them, with respect to the subject matter hereof, (b) shall be binding upon and inure to the benefits of the parties hereto and their respective successors and assigns and is not intended to confer upon any other person (except as set forth below) any rights or remedies hereunder and (c) may be executed in two or more counterparts which together shall constitute a single agreement. Section 7.10 hereof is intended to be for the benefit of those persons described therein and the covenants contained therein may be enforced by such persons. The parties hereto agree that irreparable damage would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the parties shall be entitled to an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions hereof in the Delaware Courts (as hereinafter defined), this being in addition to any other remedy to which they are entitled at law or in equity.

10.5. *Assignment.* Except as expressly permitted by the terms hereof, neither this Agreement nor any of the rights, interests or obligations hereunder shall be assigned by any of the parties hereto without the prior written consent of the other parties, except that MergerCo may assign, in its sole discretion and without the consent of any other party, any and all of its rights, interests and obligations hereunder to Parent and/or one or more direct or indirect wholly owned Subsidiaries of Parent; *provided, however* that any such assignee of MergerCo shall (a) make the representations and warranties of MergerCo contained in Article VI and (b) comply with the covenants of MergerCo contained in Section 7.18.

10.6. *Severability.* If any provision of this Agreement, or the application thereof to any person or circumstance is held invalid or unenforceable, the remainder of this Agreement, and the application of such provision to other persons or circumstances, shall not be affected thereby, and to such end, the provisions of this Agreement are agreed to be severable.

10.7. *Choice of Law/Consent to Jurisdiction.* All disputes, claims or controversies arising out of this Agreement, or the negotiation, validity or performance of this Agreement, or the Transactions shall be governed by and construed in accordance with the laws of the State of Delaware without regard to its rules of conflict of laws. Each of the Company, Parent and MergerCo hereby irrevocably and unconditionally consents to submit to the sole and exclusive jurisdiction of the courts of the State of Delaware and of the United States District Court for the District of Delaware (the "*Delaware Courts*")

for any litigation arising out of or relating to this Agreement, or the negotiation, validity or performance of this Agreement, or the Transactions (and agrees not to commence any litigation relating thereto except in such courts), waives any objection to the laying of venue of any such litigation in the Delaware Courts and agrees not to plead or claim in any Delaware Court that such litigation brought therein has been brought in an inconvenient forum. Each of the parties hereto agrees, (a) to the extent such party is not otherwise subject to service of process in the State of Delaware, to appoint and maintain an agent in the State of Delaware as such party's agent for acceptance of legal process, and (b) that service of process may also be made on such party by prepaid certified mail with a proof of mailing receipt validated by the United States Postal Service constituting evidence of valid service. Service made pursuant to (a) or (b) above shall have the same legal force and effect as if served upon such party personally within the State of Delaware. For purposes of implementing the parties' agreement to appoint and maintain an agent for service

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

of process in the State of Delaware, each party does hereby appoint CT Corporation, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801, as such agent.

[Remainder of page intentionally left blank]

A-56

IN WITNESS WHEREOF, Parent, MergerCo and the Company have caused this Agreement to be executed as of the date first written above by their respective officers thereunto duly authorized.

HARVARD BIOSCIENCE, INC.

By: /s/ DAVID GREEN

Name: David Green
Title: President

HAG ACQ. CORP.

By: /s/ DAVID GREEN

Name: David Green
Title: President

GENOMIC SOLUTIONS INC.

By: /s/ JEFFREY S. WILLIAMS

Name: Jeffrey S. Williams
Title: President and Chief Executive Officer
A-57

ANNEX B

July 16, 2002

Board of Directors
Genomic Solutions Inc.
4355 Varsity Drive
Suite E
Ann Arbor, Michigan 48108

Members of the Board:

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

You have requested our opinion as of the date hereof as to the fairness, from a financial point of view, to the holders of common stock of Genomic Solutions Inc. (the "Company") of the Merger Consideration (as defined below) set forth in the draft Agreement and Plan of Merger (the "Agreement") proposed to be entered into among the Company, Harvard Bioscience, Inc. ("Parent") and a wholly-owned subsidiary of Parent ("Merger Sub"). The Agreement contemplates the merger (the "Transaction") of the Company with and into Merger Sub pursuant to which, among other things, the issued and outstanding shares of common stock of the Company will be converted into the right to receive an aggregate of 3,200,000 shares of the common stock of Parent and \$9,000,000 in cash (collectively, the "Merger Consideration"). The terms and conditions of the Transaction are more fully set forth in the Agreement.

U.S. Bancorp Piper Jaffray Inc. ("U.S. Bancorp Piper Jaffray"), as a customary part of our investment banking business, is engaged in the valuation of businesses and their securities in connection with mergers and acquisitions, underwriting and secondary distributions of securities, private placements and valuations for estate, corporate and other purposes. We have acted as financial advisor to the Company in connection with the Transaction and will receive a fee for services which is contingent upon consummation of the Transaction. We will also receive a fee from the Company for providing this opinion. This opinion fee is not contingent upon the consummation of the Transaction. The Company has also agreed to indemnify us against certain liabilities in connection with our services. In the ordinary course of our business, we and our affiliates may actively trade securities of the Company for our own account or the account of our customers and, accordingly, we may at any time hold a long or short position in such securities.

In arriving at our opinion, we have undertaken such review, analyses and inquiries as we deemed necessary and appropriate under the circumstances. Among other things, we have reviewed (i) the draft dated July 13, 2002 of the Agreement, (ii) certain publicly available financial, operating and business information related to the Company, (iii) certain internal financial information of the Company prepared for financial planning purposes and furnished by the management of the Company, (iv) to the extent publicly available, financial terms of certain acquisition transactions involving companies operating in industries deemed similar to that in which the Company operates, (v) to the extent publicly available, certain financial and securities data of selected public companies deemed comparable

B-1

to the Company or Parent, (vi) certain publicly available information relative to Parent, and (vii) certain publicly available market and securities data of the Company and Parent. We had discussions with members of the management of (a) the Company concerning the financial condition, current operating results and business outlook for both the Company on a stand-alone basis and the combined company resulting from the Transaction, and (b) Parent concerning the financial condition, current operating results and business outlook for Parent and the combined company and Parent's plans relating to such combined company.

We have relied upon and assumed the accuracy and completeness of the financial statements and other information provided by the Company and Parent or otherwise made available to us and have not assumed responsibility independently to verify such information. The Company does not publicly disclose internal financial information of the type provided to U.S. Bancorp Piper Jaffray in connection with U.S. Bancorp Piper Jaffray's review of the Transaction. Such information was prepared for financial planning purposes and was not prepared with the expectation of public disclosure. We have relied upon the assurances of the Company's management that the information provided has been prepared on a reasonable basis in accordance with industry practice, and, with respect to financial planning data, reflects the best currently available estimates and judgment of the Company's management and that they are not aware of any information or facts that would make the information provided to us incomplete or misleading. Similarly, Parent does not publicly disclose internal financial information. Accordingly, we have relied on published reports of research analysts in connection with our consideration of forward-looking financial information of Parent. We have not had access to management of Parent for the purpose of confirming the accuracy or completeness of any information in such published reports or for the purpose of preparation of any financial information regarding the combined company. We have assumed the Transaction will be consummated pursuant to the terms of the Agreement without amendments thereto and without waiver by any party of any conditions or obligations thereunder.

We have assumed that the Transaction contemplated by the Agreement will constitute a "reorganization" within the meaning of Section 368(a) of the United States Internal Revenue Code.

In arriving at our opinion, we have not performed any appraisals or valuations of any specific assets or liabilities of the Company or Parent, and have not been furnished with any such appraisals or valuations. We express no opinion regarding the liquidation value of the Company, Parent or any other entity. Without limiting the generality of the foregoing, we have undertaken no independent analysis of any pending or threatened litigation, possible unasserted claims or other contingent liabilities, to which the Company or its affiliates is a party or may be subject and, with your consent, our opinion makes no assumption concerning, and therefore does not consider, the possible assertions of claims, outcomes or damages arising out of any such matters.

This opinion is necessarily based upon the information available to us and facts and circumstances as they exist and are subject to evaluation on the date hereof; events occurring after the date hereof could materially affect the assumptions used in preparing this opinion. We are not

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

expressing any opinion herein as to the price at which shares of common stock of the Company or Parent have traded or may trade at any future time. We have not undertaken to reaffirm or revise this opinion or otherwise comment upon any events occurring after the date hereof and do not have any obligation to update, revise or reaffirm this opinion.

This opinion is directed to the Board of Directors of the Company and is not intended to be and does not constitute a recommendation to any stockholder of the Company. Our opinion does not address,

B-2

nor should it be construed to address, the relative merits of the Transaction, on the one hand, or any alternative business strategies or alternative transactions that may be available to the Company, on the other hand. We were not requested to opine as to, and this opinion does not address, the basic business decision to proceed with or effect the Transaction. Except with respect to the use of this opinion in connection with the prospectus/proxy statement relating to the Transaction, this opinion shall not be published or otherwise used, nor shall any public references to us be made, without our prior written approval.

Based upon and subject to the foregoing and based upon such other factors as we consider relevant, it is our opinion that as of the date hereof, the Merger Consideration to be paid in the Transaction to the holders of common stock of the Company pursuant to the Agreement is fair, from a financial point of view, to such stockholders.

Sincerely,

U.S. BANCORP PIPER JAFFRAY INC.

B-3

ANNEX C

DELAWARE GENERAL CORPORATION LAW

Section 262. Appraisal Rights.

(a) Any stockholder of a corporation of this State who holds shares of stock on the date of the making of a demand pursuant to subsection (d) of this section with respect to such shares, who continuously holds such shares through the effective date of the merger or consolidation, who has otherwise complied with subsection (d) of this section and who has neither voted in favor of the merger or consolidation nor consented thereto in writing pursuant to sec. 228 of this title shall be entitled to an appraisal by the Court of Chancery of the fair value of the stockholder's shares of stock under the circumstances described in subsections (b) and (c) of this section. As used in this section, the word "stockholder" means a holder of record of stock in a stock corporation and also a member of record of a nonstock corporation; the words "stock" and "share" mean and include what is ordinarily meant by those words and also membership or membership interest of a member of a nonstock corporation; and the words "depository receipt" mean a receipt or other instrument issued by a depository representing an interest in one or more shares, or fractions thereof, solely of stock of a corporation, which stock is deposited with the depository.

(b) Appraisal rights shall be available for the shares of any class or series of stock of a constituent corporation in a merger or consolidation to be effected pursuant to sec. 251 (other than a merger effected pursuant to sec. 251(g) of this title), sec. 252, sec. 254, sec. 257, sec. 258, sec. 263 or sec. 264 of this title:

(1)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Provided, however, that no appraisal rights under this section shall be available for the shares of any class or series of stock, which stock, or depository receipts in respect thereof, at the record date fixed to determine the stockholders entitled to receive notice of and to vote at the meeting of stockholders to act upon the agreement of merger or consolidation, were either (i) listed on a national securities exchange or designated as a national market system security on an interdealer quotation system by the National Association of Securities Dealers, Inc. or (ii) held of record by more than 2,000 holders; and further provided that no appraisal rights shall be available for any shares of stock of the constituent corporation surviving a merger if the merger did not require for its approval the vote of the stockholders of the surviving corporation as provided in subsection (f) of sec. 251 of this title.

(2)

Notwithstanding paragraph (1) of this subsection, appraisal rights under this section shall be available for the shares of any class or series of stock of a constituent corporation if the holders thereof are required by the terms of an agreement of merger or consolidation pursuant to secs. 251, 252, 254, 257, 258, 263 and 264 of this title to accept for such stock anything except:

a.

Shares of stock of the corporation surviving or resulting from such merger or consolidation, or depository receipts in respect thereof;

b.

Shares of stock of any other corporation, or depository receipts in respect thereof, which shares of stock (or depository receipts in respect thereof) or depository receipts at the effective date of the merger or consolidation will be either listed on a national securities exchange or designated as a national market system security on an interdealer quotation system by the National Association of Securities Dealers, Inc. or held of record by more than 2,000 holders;

c.

Cash in lieu of fractional shares or fractional depository receipts described in the foregoing subparagraphs a. and b. of this paragraph; or

C-1

d.

Any combination of the shares of stock, depository receipts and cash in lieu of fractional shares or fractional depository receipts described in the foregoing subparagraphs a., b. and c. of this paragraph.

(3)

In the event all of the stock of a subsidiary Delaware corporation party to a merger effected under sec. 253 of this title is not owned by the parent corporation immediately prior to the merger, appraisal rights shall be available for the shares of the subsidiary Delaware corporation.

(c) Any corporation may provide in its certificate of incorporation that appraisal rights under this section shall be available for the shares of any class or series of its stock as a result of an amendment to its certificate of incorporation, any merger or consolidation in which the corporation is a constituent corporation or the sale of all or substantially all of the assets of the corporation. If the certificate of incorporation contains such a provision, the procedures of this section, including those set forth in subsections (d) and (e) of this section, shall apply as nearly as is practicable.

(d) Appraisal rights shall be perfected as follows:

(1)

If a proposed merger or consolidation for which appraisal rights are provided under this section is to be submitted for approval at a meeting of stockholders, the corporation, not less than 20 days prior to the meeting, shall notify each of its stockholders who was such on the record date for such meeting with respect to shares for which appraisal rights are available pursuant to subsections (b) or (c) hereof that appraisal rights are available for any or all of the shares of the constituent corporations, and shall include in such notice a copy of this section. Each stockholder electing to demand the appraisal of such stockholder's shares shall deliver to the corporation, before the taking of the vote on the merger or consolidation, a written demand for appraisal of such stockholder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such stockholder's shares. A proxy or vote against the

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

merger or consolidation shall not constitute such a demand. A stockholder electing to take such action must do so by a separate written demand as herein provided. Within 10 days after the effective date of such merger or consolidation, the surviving or resulting corporation shall notify each stockholder of each constituent corporation who has complied with this subsection and has not voted in favor of or consented to the merger or consolidation of the date that the merger or consolidation has become effective; or

(2)

If the merger or consolidation was approved pursuant to sec. 228 or sec. 253 of this title, then, either a constituent corporation before the effective date of the merger or consolidation, or the surviving or resulting corporation within ten days thereafter, shall notify each of the holders of any class or series of stock of such constituent corporation who are entitled to appraisal rights of the approval of the merger or consolidation and that appraisal rights are available for any or all shares of such class or series of stock of such constituent corporation, and shall include in such notice a copy of this section. Such notice may, and, if given on or after the effective date of the merger or consolidation, shall, also notify such stockholders of the effective date of the merger or consolidation. Any stockholder entitled to appraisal rights may, within 20 days after the date of mailing of such notice, demand in writing from the surviving or resulting corporation the appraisal of such holder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such holder's shares. If such notice did not notify stockholders of the effective date of the merger or consolidation, either (i) each such constituent corporation shall send a second notice before the effective date of the merger

C-2

or consolidation notifying each of the holders of any class or series of stock of such constituent corporation that are entitled to appraisal rights of the effective date of the merger or consolidation or (ii) the surviving or resulting corporation shall send such a second notice to all such holders on or within 10 days after such effective date; provided, however, that if such second notice is sent more than 20 days following the sending of the first notice, such second notice need only to be sent to each stockholder who is entitled to appraisal rights and who has demanded appraisal of such holder's shares in accordance with this subsection. An affidavit of the secretary or assistant secretary or of the transfer agent of the corporation that is required to give either notice that such notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein. For purposes of determining the stockholders entitled to receive either notice, each constituent corporation may fix, in advance, a record date that shall be not more than 10 days prior to the date the notice is given, provided, that if the notice is given on or after the effective date of the merger or consolidation, the record date shall be such effective date. If no record date is fixed and the notice is given prior to the effective date, the record date shall be the close of business on the next day preceding the day on which the notice is given.

(e) Within 120 days after the effective date of the merger or consolidation, the surviving or resulting corporation or any stockholder who has complied with subsections (a) and (d) hereof and who is otherwise entitled to appraisal rights, may file a petition in the Court of Chancery demanding a determination of the value of the stock of all such stockholders. Notwithstanding the foregoing, at any time within 60 days after the effective date of the merger or consolidation, any stockholder shall have the right to withdraw such stockholder's demand for appraisal and to accept the terms offered upon the merger or consolidation. Within 120 days after the effective date of the merger or consolidation, any stockholder who has complied with the requirements of subsections (a) and (d) hereof, upon written request, shall be entitled to receive from the corporation surviving the merger or resulting from the consolidation a statement setting forth the aggregate number of shares not voted in favor of the merger or consolidation and with respect to which demands for appraisal have been received and the aggregate number of holders of such shares. Such written statement shall be mailed to the stockholder within 10 days after such stockholder's written request for such a statement is received by the surviving or resulting corporation or within 10 days after expiration of the period for delivery of demands for appraisal under subsection (d) hereof, whichever is later.

(f) Upon the filing of any such petition by a stockholder, service of a copy thereof shall be made upon the surviving or resulting corporation, which shall within 20 days after such service file in the office of the Register in Chancery in which the petition was filed a duly verified list containing the names and addresses of all stockholders who have demanded payment for their shares and with whom agreements as to the value of their shares have not been reached by the surviving or resulting corporation. If the petition shall be filed by the surviving or resulting corporation, the petition shall be accompanied by such a duly verified list. The Register in Chancery, if so ordered by the Court, shall give notice of the time and place fixed for the hearing of such petition by registered or certified mail to the surviving or resulting corporation and to the stockholders shown on the list at the addresses therein stated. Such notice shall also be given by 1 or more publications at least 1 week before the day of the hearing, in a newspaper of general circulation published in the City of Wilmington, Delaware or such publication as the Court deems advisable. The forms of the notices by mail and by publication shall be approved by the Court, and the costs thereof shall be borne by the surviving or resulting corporation.

(g) At the hearing on such petition, the Court shall determine the stockholders who have complied with this section and who have become entitled to appraisal rights. The Court may require the stockholders who have demanded an appraisal for their shares and who hold stock represented by certificates to submit their certificates of stock to the Register in Chancery for notation thereon of the

C-3

pendency of the appraisal proceedings; and if any stockholder fails to comply with such direction, the Court may dismiss the proceedings as to such stockholder.

(h) After determining the stockholders entitled to an appraisal, the Court shall appraise the shares, determining their fair value exclusive of any element of value arising from the accomplishment or expectation of the merger or consolidation, together with a fair rate of interest, if any, to be paid upon the amount determined to be the fair value. In determining such fair value, the Court shall take into account all relevant factors. In determining the fair rate of interest, the Court may consider all relevant factors, including the rate of interest which the surviving or resulting corporation would have had to pay to borrow money during the pendency of the proceeding. Upon application by the surviving or resulting corporation or by any stockholder entitled to participate in the appraisal proceeding, the Court may, in its discretion, permit discovery of other pretrial proceedings and may proceed to trial upon the appraisal prior to the final determination of the stockholder entitled to an appraisal. Any stockholder whose name appears on the list filed by the surviving or resulting corporation pursuant to subsection (f) of this section and who has submitted such stockholder's certificates of stock to the Register in Chancery, if such is required, may participate fully in all proceedings until it is finally determined that such stockholder is not entitled to appraisal rights under this section.

(i) The Court shall direct the payment of the fair value of the shares, together with interest, if any, by the surviving or resulting corporation to the stockholders entitled thereto. Interest may be simple or compound, as the Court may direct. Payment shall be so made to each such stockholder, in the case of holders of uncertificated stock forthwith, and the case of holders of shares represented by certificates upon the surrender to the corporation of the certificates representing such stock. The Court's decree may be enforced as other decrees in the Court of Chancery may be enforced, whether such surviving or resulting corporation be a corporation of this State or of any state.

(j) The costs of the proceeding may be determined by the Court and taxed upon the parties as the Court deems equitable in the circumstances. Upon application of a stockholder, the Court may order all or a portion of the expenses incurred by any stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorney's fees and the fees and expenses of experts, to be charged pro rata against the value of all the shares entitled to an appraisal.

(k) From and after the effective date of the merger or consolidation, no stockholder who has demanded appraisal rights as provided in subsection (d) of this section shall be entitled to vote such stock for any purpose or to receive payment of dividends or other distributions on the stock (except dividends or other distributions payable to stockholders of record at a date which is prior to the effective date of the merger or consolidation); provided, however, that if no petition for an appraisal shall be filed within the time provided in subsection (e) of this section, or if such stockholder shall deliver to the surviving or resulting corporation a written withdrawal of such stockholder's demand for an appraisal and an acceptance of the merger or consolidation, either within 60 days after the effective date of the merger or consolidation as provided in subsection (e) of this section or thereafter with the written approval of the corporation, then the right of such stockholder to an appraisal shall cease. Notwithstanding the foregoing, no appraisal proceeding in the Court of Chancery shall be dismissed as to any stockholder without the approval of the Court, and such approval may be conditioned upon such terms as the Court deems just.

(l) The shares of the surviving or resulting corporation to which the shares of such objecting stockholders would have been converted had they assented to the merger or consolidation shall have the status of authorized and unissued shares of the surviving or resulting corporation.

C-4

ANNEX D

FORM OF VOTING AGREEMENT

This Voting Agreement (the "Agreement") is made and entered into as of July 17, 2002, by and between Harvard Bioscience, Inc., a Delaware corporation ("Parent"), and the undersigned stockholder (the "Stockholder") of Genomic Solutions Inc., a Delaware corporation (the "Company").

RECITALS

A. Concurrently with the execution of this Agreement, Parent, the Company and HAG Acq. Corp., a Delaware corporation and a wholly-owned subsidiary of Parent ("Mergerco"), have entered into an Agreement and Plan of Merger (the "Merger Agreement") which provides for the merger (the "Merger") of Company with and into Mergerco. Pursuant to the Merger, shares of common stock of the Company will be converted into common stock of Parent and cash on the basis described in the Merger Agreement.

B. The Stockholder is the record holder and beneficial owner (as defined in Rule 13d-3 under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) of such number of shares of the outstanding common stock, par value \$.001 per share, of the Company as is indicated on the final page of this Agreement (the "Shares").

C. Parent desires, as a condition to entering into the Merger Agreement, the Stockholder to agree, and the Stockholder is willing to agree, not to transfer or otherwise dispose of any of the Shares, or any other shares of capital stock of the Company acquired hereunder and prior to the Expiration Date (as defined in Section 1.1 below, except as otherwise permitted hereby), and to vote the Shares and any other such shares of capital stock of the Company in a manner so as to facilitate consummation of the Merger, as provided herein.

NOW, THEREFORE, intending to be legally bound and for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. *Agreement to Retain Shares.*

1.1 *Transfer and Encumbrance.* Other than as provided herein, until the Expiration Date, Stockholder shall not hereafter (a) sell, tender, transfer, pledge, encumber, assign or otherwise dispose of any of the Shares or New Shares (as defined in Section 1.2 below), (b) deposit any Shares or New Shares into a voting trust or enter into a voting agreement or arrangement with respect to such Shares or New Shares or grant any proxy or power of attorney with respect thereto, (c) enter into any contract, option or other arrangement or undertaking with respect to the direct or indirect sale, transfer, pledge, encumbrance, assignment or other disposition of any Shares or New Shares, or (d) take any action that would make any representation or warranty of Stockholder contained herein untrue or incorrect or have the effect of preventing or disabling Stockholder from performing Stockholder's obligations under this Agreement. As used herein, the term "Expiration Date" shall mean the earlier to occur of (i) the Effective Time (as defined in the Merger Agreement); and (ii) such date and time as the Merger Agreement shall be terminated pursuant to Article IX thereof.

1.2 *Additional Purchases.* Stockholder agrees that any shares of capital stock of the Company that Stockholder purchases or with respect to which Stockholder otherwise acquires beneficial ownership after the execution of this Agreement and prior to the Expiration Date ("New Shares") shall be subject to the terms and conditions of this Agreement to the same extent as if they constituted Shares.

D-1

2. *Agreement to Vote Shares.* During the term hereof, at every meeting of the stockholders of the Company called with respect to any of the following matters, and at every adjournment thereof, and on every action or approval by written consent of the stockholders of the Company with respect to any of the following matters, Stockholder, in his, her or its capacity as such, shall vote the Shares and any New Shares: (i) in favor of approval of the Merger Agreement and the Merger and any matter necessary for consummation of the Merger; (ii) against (x) approval of any Acquisition Proposal (including, without limitation, any Superior Proposal) (each as defined in the Merger Agreement) and (y) any proposal for any action or agreement that would result in a breach of any covenant, representation or warranty or any other obligation or agreement of the Company under the Merger Agreement or which could result in any of the conditions of the Company's obligations under the Merger Agreement not being fulfilled, and (z) any action which could reasonably be expected to impede, interfere with, delay, postpone or materially adversely affect consummation of the transactions contemplated by the Merger Agreement; and (iii) in favor of any other matter necessary for consummation of the transactions contemplated by the Merger Agreement which is considered at any such meeting of stockholders or in such consent, and in connection therewith to execute any documents which are necessary or appropriate in order to effectuate the foregoing or, at the request of Parent, to permit Parent to vote such Shares and New Shares directly.

3. *Irrevocable Proxy.* By execution of this Agreement, Stockholder does hereby appoint and constitute Parent, until the Expiration Date, with full power of substitution and resubstitution, as Stockholder's true and lawful attorney and irrevocable proxy, to the full extent of the undersigned's rights with respect to the Shares and any New Shares, to vote each of such Shares and New Shares solely with respect to the matters set forth in Section 2 hereof. Stockholder intends this proxy to be irrevocable and coupled with an interest hereafter until the Expiration

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Date and hereby revokes any proxy previously granted by Stockholder with respect to the Shares.

4. *Representations, Warranties and Covenants of Stockholder.* Stockholder hereby represents, warrants and covenants to Parent as follows:

4.1 *Due Authority.* Stockholder has full power, corporate or otherwise, and authority to execute and deliver this Agreement and to perform its obligations hereunder. This Agreement has been duly executed and delivered by or on behalf of Stockholder and constitutes a legal, valid and binding obligation of Stockholder, enforceable against Stockholder in accordance with its terms. The Stockholder has not granted any proxies relating to, transferred any interests in or otherwise granted any rights with respect to, the Shares.

4.2 *No Conflict; Consents.* (a) The execution and delivery of this Agreement by Stockholder do not, and the performance by Stockholder of the obligations under this Agreement and the compliance by Stockholder with any provisions hereof do not and will not, (i) conflict with or violate any law, statute, rule, regulation, order, writ, judgment or decree applicable to Stockholder or the Shares, (ii) conflict with or violate Stockholder's charter, bylaws, partnership agreement or other organizational documents, if applicable, or (iii) result in any breach of or constitute a default (or an event that with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, or result in the creation of a lien or encumbrance on any of the Shares pursuant to, any note, bond, mortgage, indenture, contract, agreement, lease, license, permit, franchise or other instrument or obligation to which Stockholder is a party or by which Stockholder or the Shares are bound.

(b) The execution and delivery of this Agreement by Stockholder do not, and the performance of this Agreement by Stockholder will not, require any consent, approval, authorization or permit of, or filing with or notification to, any governmental or regulatory authority by Stockholder except for applicable requirements, if any, of the Exchange Act, and except where the failure to obtain such consents, approvals, authorizations or permits, or to make

D-2

such filings or notifications, could not prevent or delay the performance by Stockholder of his or her obligations under this Agreement in any material respect.

4.3 *Ownership of Shares.* Stockholder (i) is the beneficial owner of the Shares, which at the date hereof are, and at all times up until the Expiration Date will be, free and clear of any liens, claims, options, charges, proxies or voting restrictions or other encumbrances (except such encumbrances, proxies and voting restrictions as are created in this Agreement) and (ii) does not beneficially own any shares of capital stock of the Company other than the Shares.

4.4 *No Solicitations.* Hereafter until the Expiration Date, Stockholder shall not, nor, to the extent applicable to Stockholder, shall it permit any of its affiliates to, nor shall it authorize any partner, officer, director, advisor or representative of, Stockholder or any of its affiliates to, (i) solicit, initiate or knowingly encourage the submission of, any inquiries, proposals or offers from any person relating to an Acquisition Proposal (including, without limitation, any Superior Proposal), (ii) enter into any agreement with respect to an Acquisition Proposal (including, without limitation, any Superior Proposal), (iii) solicit proxies or become a "participant" in a "solicitation" (as such terms are defined in Regulation 14A under the Exchange Act) with respect to an Acquisition Proposal (including, without limitation, any Superior Proposal) or otherwise encourage or assist any party in taking or planning any action that would compete with, restrain or otherwise serve to interfere with or inhibit the timely consummation of the Merger in accordance with the terms of the Merger Agreement, (iv) initiate a stockholders' vote or action by consent of the Company's stockholders with respect to an Acquisition Proposal (including, without limitation, any Superior Proposal), or (v) become a member of a "group" (as such term is used in Section 13(d) of the Exchange Act) with respect to any voting securities of the Company that takes any action in support of an Acquisition Proposal (including, without limitation, any Superior Proposal); provided, that Stockholder may take any such actions otherwise prohibited by this Section 4.4, to the extent the Company is permitted to engage in such actions pursuant to Section 7.1 of the Merger Agreement.

5. *No Limitation on Discretion as Director.* Notwithstanding anything herein to the contrary, the covenants and agreements set forth herein shall not prevent Stockholder or its representatives or designees who are serving on the Board of Directors of the Company from exercising its or their duties and obligations as a Director of the Company or otherwise taking any action, subject to the applicable provisions of the Merger Agreement, while acting in such capacity as a director of the Company (it being understood that this Agreement shall apply to Stockholder solely in Stockholder's capacity as a stockholder of the Company).

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

6. *Additional Documents.* Stockholder hereby covenants and agrees to execute and deliver any additional documents necessary or desirable, in the reasonable opinion of Parent to carry out the intent of the Agreement.

7. *Consent and Waiver.* Stockholder hereby gives any consents or waivers that are reasonably required for the consummation of the Merger under the terms of any agreements to which Stockholder is a party or pursuant to any rights Stockholder may have.

8. *Termination.* This Agreement shall terminate and shall have no further force or effect as of the Expiration Date.

9. *Miscellaneous.*

9.1 *Severability.* If any term or other provision of this Agreement is determined to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to any party. Upon such determination that any term or other

D-3

provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible to the fullest extent permitted by applicable law in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the extent possible.

9.2 *Binding Effect and Assignment.* This Agreement and all of the provisions hereof shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns, but, except as otherwise specifically provided herein, neither this Agreement nor any of the rights, interests or obligations of the parties hereto may be assigned by either party without the prior written consent of the other.

9.3 *Amendments and Modifications.* This Agreement may not be modified, amended, altered or supplemented except upon the execution and delivery of a written agreement executed by the parties hereto.

9.4 *Specific Performance; Injunctive Relief.* The parties hereto agree that irreparable damage would occur in the event any provision of this Agreement was not performed in accordance with the terms hereof or was otherwise breached. It is accordingly agreed that the parties shall be entitled to specific relief hereunder, including, without limitation, an injunction or injunctions to prevent and enjoin breaches of the provisions of this Agreement and to enforce specifically the terms and provisions hereof, in any state or federal court in the State of Delaware, in addition to any other remedy to which they may be entitled at law or in equity. Any requirements for the securing or posting of any bond with respect to any such remedy are hereby waived.

9.5 *Notices.* All notices, requests, claims, demands and other communications hereunder shall be in writing and sufficient if delivered in person, by cable, telegram or facsimile (with confirmation of receipt), or sent by mail (registered or certified mail, postage prepaid, return receipt requested) or overnight courier (prepaid) to the respective parties as follows:

If to Parent:	Harvard Bioscience, Inc. 84 October Hill Road Holliston, MA 01347 Attention: President Fax No.: (508) 429-8478
with a copy to:	Goodwin Procter LLP Exchange Place Boston, MA 02109 Attention: H. David Henken, P.C. Fax No.: (617) 523-1231
If to the Stockholder:	To the address for notice set forth on the last page hereof
with a copy to:	

or to such other address as any party may have furnished to the other in writing in accordance herewith, except that notices of change of address shall be effective upon receipt.

9.6 *Governing Law; Jurisdiction and Venue.* This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of Delaware without regard to its rules of conflict of laws. The parties hereto hereby irrevocably and unconditionally consent to and

D-4

submit to the exclusive jurisdiction of the courts of the State of Delaware and of the United States of America located in such state (the "Delaware Courts") for any litigation arising out of or relating to this Agreement and the transactions contemplated hereby (and agree not to commence any litigation relating thereto except in such courts), waive any objection to the laying of venue of any such litigation in the Delaware Courts and agree not to plead or claim in any Delaware Court that such litigation brought therein has been brought in any inconvenient forum.

9.7 *Entire Agreement.* This Agreement contains the entire understanding of the parties in respect of the subject matter hereof, and supersedes all prior negotiations and understandings between the parties with respect to such subject matter.

9.8 *Counterparts.* This Agreement may be executed in several counterparts, each of which shall be an original, but all of which together shall constitute one and the same agreement.

9.9 *Effect of Headings.* The section headings herein are for convenience only and shall not affect the construction or interpretation of this Agreement.

9.10 *No Agreement Until Executed.* Irrespective of negotiations among the parties or the exchanging of drafts of this Agreement, this Agreement shall not constitute or be deemed to evidence a contract, agreement, arrangement or understanding between the parties hereto unless and until (i) the Board of Directors of the Company has approved, for purposes of Section 203 of the Delaware General Corporation Law and any applicable provision of the Company's Articles of Incorporation, the possible acquisition of the Shares by Parent pursuant to this Agreement, (ii) the Merger Agreement is executed by all parties thereto, and (iii) this Agreement is executed by all parties hereto.

D-5

IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed on the date and year first above written.

PARENT:

By: _____

Name:

Title:

STOCKHOLDER:

By: _____

Name:

Title:

Stockholder's Address for Notice:

Shares beneficially owned:

_____ shares of Common Stock of Company
D-6

ANNEX E

EMPLOYMENT AGREEMENT

This EMPLOYMENT AGREEMENT (the "Agreement") is dated as of July 17, 2002 by and between Jeffrey S. Williams ("Employee"), and HAG Acq. Corp. (to be renamed Genomic Solutions Inc., following the consummation of the Merger, (as defined below)), a Delaware corporation (the "Company"), and Harvard Bioscience, Inc. ("HBIO").

WITNESSETH:

WHEREAS, HBIO, Genomic Solutions Inc. ("GNSL") and the Company are parties to a certain Agreement and Plan of Merger of even date herewith (the "Merger Agreement"), pursuant to which HBIO and GNSL will effect a combination of their respective businesses through a merger of GNSL with and into the Company, a wholly-owned subsidiary of HBIO, with the Company surviving, in accordance with applicable laws (the "Merger");

WHEREAS, the consummation of the transactions contemplated by the Merger Agreement is conditioned upon the execution of this Agreement;

WHEREAS, subject to the consummation of the Merger the Company desires to employ Employee, and Employee has agreed to become employed by the Company, on the terms set forth in this Agreement; and

WHEREAS, as of the Effective Date (as defined below) the Company and Employee desire that Employee's current Employment Agreement, dated January 1, 2000, as amended from time to time (the "Prior Agreement"), be replaced and superseded in all respects by this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants herein contained, the parties hereto agree as follows:

1. *Employment.* Subject to the consummation of the Merger and the provisions of Section 6, the Company hereby employs Employee and Employee accepts such employment upon the terms and conditions hereinafter set forth. Upon consummation of the Merger and payment immediately prior thereto by GNSL, the Company or HBIO to Employee of SIX HUNDRED NINETY THOUSAND DOLLARS (\$690,000) in immediately available funds, the Prior Agreement shall automatically be terminated with no further action on the part of GNSL, the Company, HBIO or Employee and shall be of no further force and effect.

2. *Term of Employment.* Subject to the provisions of Section 6, the term of Employee's employment pursuant to this Agreement shall commence on and as of the date of the closing of the Merger Agreement (the "Effective Date") and shall be for a term of 12 months from the Effective Date unless earlier terminated in accordance with the terms and provisions hereof (the "Term"); *provided however*, that the term of this Agreement shall automatically be extended annually, for an additional 12 month period on each anniversary of the Effective Date unless, not less than 90 days prior to the anniversary date, either party shall have given notice to the other that it does not wish to extend this Agreement. This Agreement shall not take effect unless and until the Merger is consummated. As of the date hereof, Employee hereby waives any right he may have to terminate his employment with GNSL under the Prior Agreement prior to the Effective Date so long as GNSL is not in material

breach of the Prior Agreement, *provided* that if the Merger Agreement is terminated prior to the Effective Date, then this Agreement shall automatically terminate and shall be of no further force or effect.

E-1

3. *Duties; Extent of Service.*

(a) During Employee's employment under this Agreement, Employee shall (i) serve as President of the Company, consistent with Employee's position and general area of experience and skills, reporting to the Board of Directors of the Company, (ii) shall be responsible for such matters as may be specified from time to time by, and shall be subject to the oversight and supervision of the Board of Directors of the Company consistent with Employee's position and general area of experience and skills, and (iii) shall render all services reasonably incident to the foregoing. Employee hereby accepts such employment, agrees to serve the Company in the capacities indicated, and agrees to use Employee's best efforts in, and shall devote Employee's full working time, attention, skill and energies to, the advancement of the interests of the Company and the performance of Employee's duties and responsibilities hereunder. The foregoing, however, shall not be construed as preventing Employee from engaging in religious, charitable or other community or non-profit activities, that do not require significant time and that do not in any way impair, or interfere with, Employee's ability to fulfill Employee's duties and responsibilities under this Agreement, it being understood that such duties require Employee's full working time. Notwithstanding anything to the contrary in this Section 3(a), the Employee shall be permitted to maintain his current positions as an advisory board member for the Michigan Biotech Industry Association, University of Michigan Zell Lurie Entrepreneurial Institute, EDF Ventures, and Telegraph Hill Partners.

(b) Consistent with applicable fiduciary duties, HBIO shall take proper corporate action, on the next business day following the Effective Date, to effect the nomination of Employee to the Board of Directors of HBIO, provided that Mr. Williams hereby agrees to resign such director position immediately upon termination of his employment with the Company for any reason.

(c) Throughout the term of employment, Employee's place of employment with the Company will be in the immediate vicinity of Ann Arbor, Michigan.

4. *Salary and Bonus.*

(a) During Employee's employment under this Agreement, the Company shall pay Employee a base salary at the rate of TWO HUNDRED TWENTY FIVE THOUSAND DOLLARS (\$225,000) per annum (the "Base Salary"). Such Base Salary shall be subject to tax withholding under applicable law, shall be pro rated for partial years and shall be payable in periodic installments not less frequently than monthly in accordance with the Company's usual practice for employees of the Company as in effect from time to time. The Base Salary shall be reviewed no less frequently than annually by the Company and shall be subject to appropriate increase, but not decrease (other than a decrease similarly affecting all or substantially all employees or senior management of the Company or in connection with a change (requested by the Employee) in Employee's position and duties). In addition, the Base Salary shall also be reviewed by the Company at such time or times as Employee requests any change in his employment status.

(b) For each calendar year during Employee's employment under this Agreement, Employee shall be eligible to receive a bonus of up to 100% of Employee's Base Salary paid for such period, the level of such bonus to be based upon achievement by the Company of annual operating profit and/or revenue targets to be established by Company with respect to such calendar year (the "Performance Bonus"). The terms of the Performance Bonus shall be reviewed no less frequently than annually by the Company and shall be subject to appropriate adjustment by the Company. In addition, the Performance Bonus shall also be reviewed by the Company at such time or times as Employee requests any change in his employment status. In order to earn and receive any Performance Bonus for a calendar year, Employee must be an employee of the Company on December 31 of that calendar year.

E-2

5. *Benefits.*

(a) During Employee's employment under this Agreement, Employee shall be entitled to participate in any and all medical, pension, dental and life insurance plans and disability income plans, 401k profit sharing plans, retirement arrangements and other

employment benefits (excluding any bonus, profit sharing or similar plans) as in effect from time to time for employees of the Company at the location at which Employee is employed. Such participation shall be subject to (i) the terms of the applicable plan documents (including, as applicable, provisions granting discretion to the Board of Directors of the Company or any administrative or other committee provided for therein or contemplated thereby) and (ii) generally applicable policies of the Company. During the Term, Employee shall be entitled to an automobile or to a lease for an automobile (the "Company Car") and related insurance under substantially the same terms and arrangements Employee had with GNSL prior to the Merger, including, without limitation, cost of the lease which shall not in any event exceed \$1,000 per month.

(b) The Company shall promptly reimburse Employee for all reasonable business expenses incurred by Employee during Employee's employment hereunder in accordance with the Company's policies in effect from time to time.

(c) Compliance with the provisions of this Section 5 shall in no way create or be deemed to create any obligation, express or implied, on the part of the Company or any of their respective affiliates with respect to the continuation of any particular benefit or other plan or arrangement maintained by them or their subsidiaries as of or prior to the date hereof or the creation and maintenance of any particular benefit or other plan or arrangement at any time after the date hereof.

(d) Within a reasonable period of time following the date hereof, HBIO, the parent of the Company, shall enter into an incentive stock option agreement, substantially in the form of *Exhibit A* attached hereto (the "Stock Option Agreement"), pursuant to which HBIO will grant to Employee options to purchase one hundred thousand (100,000) shares of HBIO's common stock. Such options shall (i) have an exercise price equal to the fair market value of HBIO's common stock at the effective grant date, and (ii) vest annually in equal one-quarter increments on each of the first four anniversaries of the effective grant date, all as more fully described in the Stock Option Agreement.

(e) For each calendar year during Employee's employment under this Agreement, Employee shall receive twenty (20) paid vacation days.

6. *Termination.* Notwithstanding the provisions of Section 2, Employee's employment under this Agreement shall terminate under the following circumstances set forth in this Section 6.

(a) *Termination by the Company for Cause.* Employee's employment under this Agreement may be terminated for Cause (as defined below) without further liability (with the exception of the payment of all earned but unpaid Base Salary and any unused vacation) on the part of the Company effective immediately upon a determination by the Company and written notice to Employee. "Cause" shall mean a finding by the Company that Employee has: (i) acted with gross negligence or willful misconduct in connection with the performance of his duties hereunder; (ii) defaulted in the performance of his material duties hereunder and has not corrected such action within ninety (90) days of receipt of written notice thereof; (iii) committed an act of common law fraud against the Company, its affiliates or its employees; (iv) been indicted for a felony; (v) breached a fiduciary duty owed to the Company or its affiliates; (vi) embezzled assets of the Company or its affiliates; or (vii) failed to adequately treat a drug or alcohol dependency, which in the opinion of a qualified medical practitioner, has had an adverse impact on the

E-3

performance of Employee's duties hereunder, or (viii) caused material disruption in the operation of the Company.

(b) *Termination by Employee.* Employee's employment under this Agreement may be terminated by Employee by written notice to the Company at least one hundred twenty (120) days prior to such termination for any reason, including but not limited to Good Reason. For purposes of this Agreement, "Good Reason" shall mean that Employee has complied with the "Good Reason Process" (hereinafter defined) following the occurrence of any of the following events: (A) a breach by the Company of any of its material obligations under this Agreement and the failure of the Company to cure such breach within ninety (90) days after written notice thereof by Employee; or (B) the failure of the Company to obtain the agreement from any successor to the Company to assume and agree to perform this Agreement. "Good Reason Process" shall mean that (i) Employee reasonably determines in good faith that a "Good Reason" event has occurred; (ii) Employee notifies the Company in writing of the occurrence of the Good Reason event; (iii) Employee cooperates in good faith with the Company's efforts, for a period not less than ninety (90) days following such notice, to modify Employee's employment situation in a manner reasonably acceptable to Employee and Company; and (iv) notwithstanding such efforts, one or more of the Good Reason events continues to exist and has not been modified in a manner reasonably acceptable to Employee. If the Company cures the Good Reason event in a manner reasonably acceptable to Employee during the ninety (90) day period, Good Reason shall be deemed not to have occurred.

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

(c) *Termination by the Company Without Cause.* Subject to the payment of all earned but unpaid Base Salary and any unused vacation, Employee's employment under this Agreement may be terminated by the Company without Cause upon written notice to Employee at least one hundred twenty (120) days prior to such termination.

(d) *[Reserved]*.

(e) *Disability.* If, as a result of Employee's incapacity due to physical or mental illness, Employee shall have been absent from his duties hereunder on a full-time basis for one hundred eighty (180) calendar days in the aggregate in any twelve (12) month period, the Company may terminate Employee's employment hereunder ("Disability Termination").

During any period that Employee fails to perform his duties hereunder as a result of incapacity due to physical or mental illness, Employee shall continue to receive his accrued and unpaid Base Salary and earned and unpaid Performance Bonus, if any, under Section 4(b), until Employee's employment is terminated due to disability in accordance with Section 6(e) or until Employee terminates his employment in accordance with Section 6(b), whichever first occurs. Upon the date of Disability Termination, all unvested stock options shall immediately vest and become exercisable. All other stock-based grants and awards held by Employee shall vest or be canceled upon the date of Disability Termination in accordance with their terms. For a period of one (1) year following the date of Disability Termination, the Company shall pay such health insurance premiums as may be necessary to allow Employee and Employee's spouse and dependents to receive health insurance coverage substantially similar to coverage they received from the Company prior to the date of Disability Termination. Upon termination due to death prior to the termination first to occur as specified in the first sentence of this paragraph, Section 6(f) shall apply. Such payments, in the aggregate, shall fully discharge the Company's obligations hereunder.

(f) *Death.* If Employee's employment terminates by reason of his death, the Company shall, within ninety (90) days of death, pay in a lump sum amount to such person as Employee shall designate in a notice filed with the Company or, if no such person is designated, to Employee's estate, Employee's accrued and unpaid Base Salary to the date of his death, plus his earned and unpaid Performance Bonus, if any, under Section 4(b). Upon the death of Employee, all unvested

E-4

stock options shall immediately vest in Employee's estate or other legal representatives and become exercisable. All other stock-based grants and awards held by Employee shall vest or be canceled upon the death of Employee in accordance with their terms. For a period of one (1) year following the date of death, the Company shall pay such health insurance premiums as may be necessary to allow Employee's spouse and dependents to receive health insurance coverage substantially similar to coverage they received prior to the date of death. In addition to the foregoing, any payments to which Employee's spouse, beneficiaries, or estate may be entitled under any employee benefit plan shall also be paid in accordance with the terms of such plan or arrangement. Such payments, in the aggregate, shall fully discharge the Company's obligations hereunder.

(g) *Continuing Obligations.* Notwithstanding termination of this Agreement as provided in this Section 6 or any other termination of Employee's employment with the Company, Employee's obligations under Section 7 and Section 8 hereof shall survive any termination of Employee's employment with the Company at any time and for any reason.

7. *Confidentiality; Proprietary Rights.*

(a) Employee currently is in possession of, and in the course of performing services hereunder on behalf of the Company (for purposes of this Section 7 including all predecessors, successors and affiliates of the Company, and including, without limitation, HBIO) and its affiliates, Employee has had and from time to time will have access to, Confidential Information (as defined below). Employee agrees (i) to hold the Confidential Information in strict confidence, (ii) not to disclose the Confidential Information to any person (other than in the regular business of the Company or its affiliates), and (iii) not to use, directly or indirectly, any of the Confidential Information for any purpose other than on behalf of the Company and its affiliates except to the extent that: (w) Employee deems such disclosure or use reasonably necessary or appropriate in connection with performing his duties on behalf of the Company; (x) Employee is required by order of a court of competent jurisdiction (by subpoena or similar process) to disclose or discuss any Confidential Information, provided that in such case, Employee shall promptly inform the Company of such event, shall cooperate with the Company in attempting to obtain a protective order or to otherwise restrict such disclosure, and shall only disclose Confidential Information to the minimum extent necessary to comply with any such court order; (y) such Confidential Information becomes generally known to and available for use in the Company's industry, other than as a result of any action or inaction by Employee; or (z) such information has been rightfully received by a member of the Company's industry or has been published in a

form generally available to the Company's industry prior to the date Employee proposes to disclose or use such information. All documents, records, data, apparatus, equipment and other physical property, whether or not pertaining to Confidential Information, that are furnished to Employee by the Company or are produced by Employee in connection with Employee's employment will be and remain the sole property of the Company. Upon the termination of Employee's employment with the Company for any reason and as and when otherwise requested by the Company, all Confidential Information (including, without limitation, all data, memoranda, customer lists, notes, programs and other papers and items, and reproductions thereof relating to the foregoing matters) in Employee's possession or control, shall be immediately returned to the Company.

(b) Employee hereby confirms that Employee is not bound by the terms of any agreement with any previous employer or other party that restricts in any way Employee's use or disclosure of information or Employee's engagement in any business. Employee represents to the Company that Employee's execution of this Agreement, Employee's employment with the Company and the performance of Employee's proposed duties for the Company will not violate any obligations Employee may have to any such previous employer or other party. In Employee's work for the Company, Employee will not disclose or make use of any information in violation of any

E-5

agreements with or rights of any such previous employer or other party, and Employee will not bring to the premises of the Company any copies or other tangible embodiments of non-public information belonging to or obtained from any such previous employment or other party.

(c) During and after Employee's employment, Employee shall cooperate fully with the Company in the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company that relate to events or occurrences that transpired while Employee was employed by the Company. Employee's full cooperation in connection with such claims or actions shall include, but not be limited to, being available to meet with counsel to prepare for discovery or trial and to act as a witness on behalf of the Company at mutually convenient times and locations. During and after Employee's employment, Employee also shall cooperate fully with the Company in connection with any investigation or review of any federal, state or local regulatory authority as any such investigation or review relates to events or occurrences that transpired while Employee was employed by the Company. The Company shall reimburse Employee for any reasonable out-of-pocket expenses incurred (including reasonable attorney's fees) in connection with Employee's performance of obligations pursuant to this Section 7(c). In addition, if Employee is not employed by the Company or an affiliate of the Company, the Company shall reimburse Employee at the rate of \$125 per hour in connection with Employee's performance of obligations pursuant to this Section 7(c)

(d) Employee recognizes that the Company and its affiliates possess a proprietary interest in all of the information described in this Section 7 and have the exclusive right and privilege to use, protect by copyright, patent, trademark, or trade secret, or otherwise exploit the processes, ideas and concepts described therein to the exclusion of Employee, except as otherwise agreed between the Company and Employee in writing. Employee expressly agrees that any products, inventions, discoveries or improvements made by Employee or Employee's agents or affiliates in the course and scope of Employee's employment, or involving the use of the time, materials or other resources of the Company or any of its affiliates, including any of the foregoing which is based on or arises out of the information described in this Section 7, shall be "work for hire" and shall be the property of and inure to the exclusive benefit of the Company and its affiliates. Employee further agrees that any and all products, inventions, discoveries or improvements developed by Employee (whether or not able to be protected by copyright, patent, trademark or trade secret) during the course and scope of his employment, or involving the use of the time, materials or other resources of the Company or any of its affiliates, shall be promptly disclosed to the Company and, without any further act or deed on the part of the Company or Employee, shall become the exclusive property of the Company and its affiliates, and Employee shall execute and deliver any and all documents necessary or appropriate to implement the foregoing.

(e) Employee agrees, while he is employed by the Company, to offer or otherwise make known or available to it, as directed by the Company and without additional compensation or consideration, any business prospects, contacts or other business opportunities that Employee may discover, find, develop or otherwise have available to Employee in the life sciences industry and further agrees that any such prospects, contacts or other business opportunities shall be the property of the Company and its affiliates.

(f) Employee acknowledges that the provisions of this Section 7 and Section 8 are an integral part of Employee's employment arrangements with the Company.

(g) For purposes of this Agreement, the term "Confidential Information" shall mean: information belonging to the Company or its affiliates which is of value to the Company or its affiliates or with respect to which the Company or its affiliates has rights in the course of conducting its business and the disclosure of which could result in a competitive or other disadvantage to the Company or its affiliates. Confidential Information includes, without limitation,

E-6

information, whether or not patentable or copyrightable, in written, oral, electronic or other tangible or intangible forms, stored in any medium, including, by way of example and without limitation, trade secrets, ideas, concepts, designs, configurations, specifications, drawings, blueprints, diagrams, models, prototypes, samples, flow charts processes, techniques, formulas, software, improvements, inventions, data, know-how, discoveries, copyrightable materials, marketing plans and strategies, sales and financial reports and forecasts, customer lists, studies, reports, records, books, contracts, instruments, surveys, computer disks, diskettes, tapes, computer programs and business plans, prospects and opportunities (such as possible acquisitions or dispositions of businesses or facilities) which have been discussed or considered by the management of the Company or its affiliates. Confidential Information includes information developed by Employee in the course of Employee's employment by the Company, as well as other information of the Company and its affiliates to which Employee may have access in connection with Employee's employment. Confidential Information also includes the confidential information of others with which the Company or its affiliates has a business relationship.

Notwithstanding the foregoing, Confidential Information does not include information in the public domain, unless due to breach of Employee's duties under Section 7(a).

8. *Non-Competition.* Employee agrees that during the period beginning on the Effective Date and ending on the later of (a) the first anniversary of the Effective Date and (b) the first anniversary of the end of the Term, Employee will not, without the prior written consent of the Company, in the United States or in any other country in which the Company or its subsidiaries conducts business, directly or indirectly, participate (other than as an investor in not more than 1% of the stock of a publicly traded corporation) in any way (whether as a founder, director, general or limited partner, stockholder, member, employee, consultant, contractor or otherwise), assist in any manner or in any capacity, or have any interest in or make any loan to any person, firm, corporation or business in connection with or with respect to the design, manufacture, marketing, development and sale of products or services that compete with (or products or services that are substantially similar to) the products and services that are designed, manufactured, marketed, developed or sold by the Company or its subsidiaries, including, without limitation, the marketing and sale of such products and services to consumers, resellers, retailers and wholesalers (a "Competing Business"). In addition, the period beginning on the Effective Date and ending on the later of (a) the first anniversary of the Effective Date and (b) the first anniversary of the end of the Term, within the United States or in any other country in which the Company or its subsidiaries conducts business, Employee shall refrain from: (a) recruiting, soliciting, or inducing (or in any way assisting another person or enterprise to recruit, solicit or induce) any employee or consultant of the Company or its subsidiaries to terminate his employment or other relationship with the Company or its subsidiaries; (b) hiring or employing, directly or indirectly through any enterprise with which Employee is associated in any capacity, any employee or consultant of the Company or its subsidiaries; (c) soliciting for or on behalf of any business or entity, any past or present customer of the Company or its subsidiaries; and (d) diverting to any business or enterprise any present or future customer of the Company or its subsidiaries.

9. *Change in Control.*

(a) If within twelve (12) months after the occurrence of the first event constituting a Change in Control (as defined below), Employee's employment is terminated by the Company without Cause as provided in Section 6(c) or Employee terminates his employment for Good Reason as provided in Section 6(b), then the Company shall, in its sole discretion, either (i) provide Employee written notice at least one hundred twenty (120) days prior to such termination or (ii) pay Employee a lump sum in cash in an amount equal to one hundred twenty (120) days pay under Employee's then current Base Salary.

(b) "Change in Control" shall mean the stockholders of HBIO shall approve (A) any consolidation or merger of HBIO where the stockholders of HBIO, immediately prior to the

E-7

consolidation or merger, would not, immediately after the consolidation or merger, beneficially own (as such term is defined in Rule 13d-3 under the Act), directly or indirectly, shares representing in the aggregate more than fifty percent (50%) of the voting

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

shares of HBIO issuing cash or securities in the consolidation or merger (or of its ultimate parent corporation, if any), (B) any sale, lease, exchange or other transfer (in one transaction or a series of transactions contemplated or arranged by any party as a single plan) of all or substantially all of the assets of HBIO or (C) any plan or proposal for the liquidation or dissolution of HBIO.

10. *Parties in Interest; Certain Remedies.* It is specifically understood and agreed that this Agreement is intended to confer a benefit, directly or indirectly, on the Company and its direct and indirect subsidiaries and affiliates, and that any breach of the provisions of this Agreement by Employee or any of Employee's affiliates may result in irreparable injury to the Company and its subsidiaries and affiliates, that the remedy at law alone may be an inadequate remedy for such breach and that, in addition to any other remedy it may have, the Company or its subsidiaries and affiliates shall be entitled to enforce the specific performance of this Agreement by Employee through both temporary and permanent injunctive relief without the necessity of posting a bond or proving actual damages, but without limitation of their right to damages and any and all other remedies available to them, it being understood that injunctive relief is in addition to, and not in lieu of, such other remedies.

11. *Dispute Resolution.* Except for disputes arising under Sections 7 or 8, any dispute arising out of or relating to this Agreement or the negotiation, breach, termination, or validity hereof or the rights and obligations of the parties hereunder, or to any aspect of Employee's employment or the termination of his employment, that has not been settled within thirty (30) days by good faith negotiation between the parties to this Agreement shall be submitted to American Arbitration Association (the "AAA") for final and binding arbitration pursuant to AAA's arbitration rules. Any such arbitration shall be conducted in Ann Arbor, Michigan. Such proceedings shall be guided by AAA's then current rules for arbitration of employment matters not governed by collective bargaining agreements.

Each of the Company and Employee (i) hereby unconditionally and irrevocably submits to the jurisdiction of the United States District Court for Washtenaw County, Michigan., for the purpose of enforcing the award or decision in any such proceeding and (ii) hereby waives, and agrees not to assert in any civil action to enforce the award, any claim that he or it is not subject personally to the jurisdiction of the above-named court, that his or its property is exempt or immune from attachment or execution, that the civil action is brought in an inconvenient forum, that the venue of the civil action is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court, and (iii) hereby waives and agrees not to seek any review by any court of any other jurisdiction which may be called upon to grant an enforcement of the judgment of any such court. Each of the Company and Employee hereby consents to service of process by registered mail at the address to which notices are to be given. Each of the Company and Employee agrees that its submission to jurisdiction and its consent to service of process by mail is made for the express benefit of the other parties hereto. Final judgment against the Company or Employee in any such action, suit, or proceeding may be enforced in other jurisdictions by suit, action, or proceeding on the judgment, or in any other manner provided by or pursuant to the laws of such other jurisdiction; provided, however, that any party may at its option bring suit, or institute other judicial proceedings, in any state or federal court of the United States or of any country or place where the other parties or their assets, may be found.

12. *Notices.* All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given if faxed (with transmission acknowledgment)

E-8

received), delivered personally or mailed by certified or registered mail (return receipt requested) as follows:

To the Company:	c/o Harvard Bioscience, Inc. 84 October Hill Road Holliston, Massachusetts 01746-1371 Attention: Chief Executive Officer Fax: (508) 429-8478
with a copy to:	Goodwin Procter LLP Exchange Place Boston, Massachusetts 02109 Attention: H. David Henken, P.C. Fax: (617) 523-1231
To Employee:	Jeffrey S. Williams c/o Genomic Solutions Inc. 4355 Varsity Drive Ann Arbor, Michigan 48108

Fax: (734) 975-4801

with a copy to:

Jaffe, Raitt, Heuer & Weiss, P.C.
One Woodward Avenue, 2400
Detroit, MI 48226
Attention: Peter Sugar, Esq.
Fax: (313) 961-7917

or to such other address or fax number of which any party may notify the other parties as provided above. Notices shall be effective as of the date of such delivery, mailing or fax.

13. *Scope of Agreement.* The parties acknowledge that the time, scope, geographic area and other provisions of Sections 8 and 11 hereof have been specifically negotiated by sophisticated parties and agree that all such provisions are reasonable under the circumstances of the transactions contemplated hereby, and are given as an integral and essential part of the transactions contemplated hereby. Employee has independently consulted with counsel and has been advised in all respects concerning the reasonableness and propriety of the covenants contained herein, with specific regard to the business to be conducted by Company and its subsidiaries and affiliates, and represents that this Agreement is intended to be, and shall be, fully enforceable and effective in accordance with its terms.

14. *Severability.* In the event that any covenant contained in this Agreement shall be determined by any court of competent jurisdiction to be unenforceable by reason of its extending for too great a period of time or over too great a geographical area or by reason of its being too extensive in any other respect, it shall be interpreted to extend only over the maximum period of time for which it may be enforceable and/or over the maximum geographical area as to which it may be enforceable and/or to the maximum extent in all other respects as to which it may be enforceable, all as determined by such court in such action. The existence of any claim or cause of action which Employee may have against the Company or any of its subsidiaries or affiliates shall not constitute a defense or bar to the enforcement of any of the provisions of this Agreement.

15 *Miscellaneous.* his Agreement shall be governed by and construed under the laws of the State of Michigan, without consideration of its choice of law provisions, and shall not be amended, modified or discharged in whole or in part except by an agreement in writing signed by both of the parties hereto. The failure of either of the parties to require the performance of a term or obligation or to

E-9

exercise any right under this Agreement or the waiver of any breach hereunder shall not prevent subsequent enforcement of such term or obligation or exercise of such right or the enforcement at any time of any other right hereunder or be deemed a waiver of any subsequent breach of the provision so breached, or of any other breach hereunder. This Agreement shall inure to the benefit of, and be binding upon and assignable to, successors of the Company by way of merger, consolidation or sale (of stock or assets) and may not be assigned by Employee. This Agreement supersedes and terminates all prior understandings and agreements between the parties (or their predecessors) relating to the subject matter hereof, including without limitation the Prior Agreement. For purposes of this Agreement, the term "person" means an individual, corporation, partnership, association, trust or any unincorporated organization; a "subsidiary" of a person means any corporation more than 50 percent of whose outstanding voting securities, or any partnership, joint venture or other entity more than 50 percent of whose total equity interest, is directly or indirectly owned by such person; and an "affiliate" of a person shall mean, with respect to a person or entity, any person or entity which directly or indirectly controls, is controlled by, or is under common control with such person or entity.

* * *

[Remainder of page intentionally left blank.]

E-10

IN WITNESS WHEREOF, the parties have executed this Agreement under seal as of the date first set forth above.

COMPANY:

HAG ACQ. CORP.

By: /s/ DAVID GREEN

Name: David Green
Title: President

HBIO:

HARVARD BIOSCIENCE, INC.

By: /s/ DAVID GREEN

Name: David Green
Title: President

EMPLOYEE:

By: /s/ JEFFREY S. WILLIAMS

Jeffrey S. Williams
E-11

PART II INFORMATION NOT REQUIRED IN PROSPECTUS

Item 20. Indemnification of Directors and Officers

Section 145(a) of the Delaware General Corporation Law provides, in general, that a corporation shall have the power to indemnify any person, who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation), because the person is or was a director or officer of the corporation, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with the action, suit or proceeding, if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation and if, with respect to any criminal action or proceeding, the person did not have reasonable cause to believe the person's conduct was unlawful.

Section 145(b) of the Delaware General Corporation Law provides, in general, that a corporation shall have the power to indemnify any person, who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor because the person is or was a director or officer of the corporation, against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of the action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation.

Section 145(g) of the Delaware General Corporation Law provides, in general, that a corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director or officer of the corporation against any liability asserted against the person and incurred by the person in such capacity as a director or officer of the corporation, or arising out of the person's status as a director or officer of the corporation, whether or not the corporation would have the power to indemnify the person against such liability under Section 145(g).

Under Harvard Bioscience's bylaws, Harvard Bioscience commits to indemnify each of its directors and officers to the fullest extent authorized by Delaware law, as it now exists or may in the future be amended, against expenses (including attorneys' fees), judgments, penalties, fines, and amounts reasonably paid in settlement that are incurred in connection with any proceeding, arising by reason of the fact that such person is or was a director or officer of Harvard Bioscience, if such director or officer acted in good faith and in a manner such director or officer reasonably believed to be in or not opposed to the best interests of Harvard Bioscience and had no reasonable cause to believe his conduct was unlawful. Harvard Bioscience's bylaws also provide for the advancement of expenses to directors and, in the discretion of the board of directors, to officers. In addition, Harvard Bioscience's bylaws provide that the right of directors and officers to indemnification shall be a contract right and shall not be exclusive of any other right now possessed or hereafter acquired under any bylaw, agreement, vote of stockholders or otherwise. Furthermore, Harvard Bioscience's bylaws authorize it to provide insurance for its directors and officers, against any liability, whether or not Harvard Bioscience would have the power to indemnify such person against such liability under Delaware law.

In addition, Harvard Bioscience has entered into indemnification agreements with each of its directors. The form of indemnification agreement provides that Harvard Bioscience will indemnify its directors for expenses incurred because of their status as a director to the fullest

extent permitted by Delaware law, its certificate of incorporation and its bylaws.

II-1

Item 21. Exhibits and Financial Statement Schedules

- (a) See Exhibit Index immediately following the signature page.
- (b) Not applicable.
- (c) The fairness opinion of Piper Jaffray is included as Annex B to the proxy statement and prospectus which is a part of this registration statement.

Item 22. Undertakings

(a) (1) The undersigned registrant hereby undertakes as follows: that prior to any public reoffering of the securities registered hereunder through use of a prospectus which is a part of this registration statement, by any person or party who is deemed to be an underwriter within the meaning of Rule 145(c), the issuer undertakes that such reoffering prospectus will contain the information called for by the applicable registration form with respect to reofferings by persons who may be deemed underwriters, in addition to the information called for by the other items of the applicable form.

(2) The registrant undertakes that every prospectus: (1) that is filed pursuant to paragraph (1) immediately preceding, or (ii) that purports to meet the requirements of section 10(a)(3) of the Securities Act and is used in connection with an offering of securities subject to Rule 415, will be filed as a part of an amendment to the registration statement and will not be used until such amendment is effective, and that, for purposes of determining any liability under the Securities Act of 1933, each such post-effective amendment 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.

(3) 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 foregoing provisions, 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 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 Act and will be governed by the final adjudication of such issue.

(b) The undersigned registrant hereby undertakes to respond to requests for information that is incorporated by reference into the prospectus pursuant to Item 4, 10(b), 11 or 13 of this form, within one business day of receipt of such request, and to send the incorporated documents by first class mail or other equally prompt means. This includes information contained in documents filed subsequent to the effective date of the registration statement through the date of responding to the request.

(c) The undersigned registrant hereby undertakes to supply by means of a post-effective amendment all information concerning a transaction, and the company being acquired involved therein, that was not the subject of and included in the registration statement when it became effective.

II-2

SIGNATURES

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has duly caused this Amendment No. 1 to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Holliston, the Commonwealth of Massachusetts, on September 17, 2002.

HARVARD BIOSCIENCE, INC.

By: /s/ CHANE GRAZIANO

Chane Graziano
Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment No. 1 to the registration statement has been signed by the following person in the capacities and on the date indicated.

Signature	Title	Date
/s/ CHANE GRAZIANO	Chief Executive Officer and Director (Principal Executive Officer)	September 17, 2002
Chane Graziano		
/s/ SUSAN M. LUSCINSKI	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	September 17, 2002
Susan M. Luscinski		
/s/ DAVID GREEN	President and Director	September 17, 2002
David Green		
*	Director	September 17, 2002
Christopher W. Dick		
*	Director	September 17, 2002
Richard C. Klaffky, Jr.		
*	Director	September 17, 2002
Robert Dishman		
*	Director	September 17, 2002
John F. Kennedy		
*	Director	September 17, 2002
Earl R. Lewis		

*By: /s/ SUSAN M. LUSCINSKI

Susan M. Luscinski
Attorney-In-Fact

II-3

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

Exhibit No.	Exhibit Description
2.1	Asset Purchase Agreement dated March 2, 1999 by and among Biochrom Limited and Pharmacia Biotech Limited and Pharmacia & Upjohn, Inc. and Harvard Apparatus, Inc. (incorporated by reference to Exhibit 2.1 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)
2.2	Asset Purchase Agreement dated July 14, 2000 by and between Harvard Apparatus, Inc., AmiKa Corporation and Ashok Shukla (incorporated by reference to Exhibit 2.2 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)
2.3	Agreement and Plan of Merger dated as of May 31, 2001 by and among Harvard Bioscience, Inc. Union Biometrica, Inc., a Massachusetts corporation, and Union Biometrica, Inc., a Delaware corporation (incorporated by reference to Exhibit 2.1 to Harvard Bioscience, Inc.'s Current Report on Form 8-K filed on June 15, 2001)
2.4	Agreement and Plan of Merger by and among Harvard Bioscience, Inc., HAG Acq. Corp. and Genomic Solutions Inc., dated as of July 17, 2002 (Excluding schedules and exhibits which Harvard Bioscience, Inc. agrees to furnish supplementally to the Securities and Exchange Commission upon request) (attached as Annex A to the proxy statement and prospectus and incorporated herein by reference)
3.1	Second Amended and Restated Certificate of Incorporation of Harvard Bioscience, Inc. (incorporated by reference to Exhibit 3.1 to Harvard Bioscience, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2000)
3.2	Amended and Restated ByLaws of Harvard Bioscience, Inc. (incorporated herein by reference to Exhibit 3.2 to Harvard Bioscience, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2000)
4.1	Specimen certificate for shares of Common Stock, \$0.01 par value, of the Registrant (incorporated herein by reference to Exhibit 4.1 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)
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 (incorporated herein by reference to Exhibit 4.2 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)
**5.1	Opinion of Goodwin Procter LLP, as to the legality of the securities
**8.1	Opinion of Jaffe, Raitt, Heuer & Weiss, P.C., as to certain tax matters
9.1	Form of Voting Agreement by and between Harvard Bioscience, Inc. and certain shareholders of Genomic Solutions Inc., dated as of July 17, 2002 (attached as Annex D to the proxy statement and prospectus and incorporated herein by reference)
10.1	Harvard Apparatus, Inc. 1996 Stock Option and Grant Plan (incorporated herein by reference to Exhibit 10.1 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)

II-4

10.2 Harvard Bioscience, Inc. 2000 Stock Option and Incentive Plan (incorporated herein by reference to Exhibit 10.2 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

- 10.3 Harvard Bioscience, Inc. Employee Stock Purchase Plan (incorporated herein by reference to Exhibit 10.3 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)
- 10.4 Distribution Agreement dated August 1, 2001 by and between Biochrom Limited and Amersham Pharmacia Biotech UK Limited (incorporated herein by reference to Exhibit 10.4 to Harvard Bioscience, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2001)
- 10.5 Employment Agreement between Harvard Bioscience, Inc. and Chane Graziano (incorporated herein by reference to Exhibit 10.5 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)
- 10.6 Employment Agreement between Harvard Bioscience, Inc. and David Green (incorporated herein by reference to Exhibit 10.6 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)
- 10.7 Form of Director Indemnification Agreement (incorporated herein by reference to Exhibit 10.8 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)
- 10.8 Lease Agreement dated January 3, 2002 between Seven October Hill LLC and Harvard Bioscience, Inc. (incorporated herein by reference to Exhibit 10.9 to Harvard Bioscience, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2001)
- 10.9 Lease of Unit 22 Phase I Cambridge Science Park, Milton Road, Cambridge dated March 3, 1999 between The Master Fellows and Scholars of Trinity College Cambridge, Biochrom Limited and Harvard Apparatus, Inc. (incorporated herein by reference to Exhibit 10.11 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)
- 10.10 Lease Agreement for Commercial Premises dated November 6, 1999 made between Mr. Heinz Dehnert, Grunstrabe 1, 79232 March-Hugstetten, Lessor and the Company of Harvard Apparatus GmbH, Lessee (incorporated herein by reference to Exhibit 10.12 to Harvard Bioscience, Inc.'s Registration Statement on Form S-1 (File No. 333-45996) filed on September 18, 2000)
- 10.11 Employment Agreement by and between Jeffrey S. Williams, HAG Acq. Corp. and Harvard Bioscience, Inc., dated as of July 17, 2002 (attached as Annex E to the proxy statement and prospectus and incorporated herein by reference)
- 11.1 Statement regarding computation of per share earnings (incorporated herein by reference to the "Notes to Consolidated Financial Statements" in Harvard Bioscience, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2001)
- 12.1 Statements regarding computation of ratios (incorporated herein by reference to the "Notes to Consolidated Financial Statements" in Harvard Bioscience, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2001)
- 21.1 List of Subsidiaries of Harvard Bioscience, Inc. (incorporated herein by reference to Exhibit 21.1 to Harvard Bioscience, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2001)

II-5

-
- *23.1 Consent of KPMG LLP
 - 23.2 Consent of Goodwin Procter LLP (included in Exhibit 5.1)
 - 23.3 Consent of Jaffe, Raitt, Heuer & Weiss, P.C. (included in Exhibit 8.1)

Edgar Filing: HARVARD BIOSCIENCE INC - Form S-4/A

- 23.4 Consent of U.S. Bancorp Piper Jaffray Inc. (included in Exhibit 99.1)
 - **24.1 Power of Attorney (contained in signature page)
 - 99.1 Fairness Opinion of U.S. Bancorp Piper Jaffray Inc. (attached as Annex B to the proxy statement and prospectus and incorporated herein by reference)
 - *99.2 Form of Genomic Solutions Inc. Proxy Card
 - **99.3 Consent of Jeffrey S. Williams
-

*
Filed herewith.

**
Previously filed.

II-6

QuickLinks

[ADDITIONAL INFORMATION](#)

[TABLE OF CONTENTS](#)

[QUESTIONS AND ANSWERS ABOUT THE MERGER](#)

[SUMMARY](#)

[HARVARD BIOSCIENCE SUMMARY SELECTED CONSOLIDATED FINANCIAL DATA](#)

[GENOMIC SOLUTIONS SUMMARY SELECTED CONSOLIDATED FINANCIAL DATA](#)

[SELECTED COMBINED COMPANY UNAUDITED PRO FORMA FINANCIAL INFORMATION](#)

[COMPARATIVE HISTORICAL AND PRO FORMA PER SHARE DATA](#)

[COMPARATIVE PER SHARE MARKET PRICE DATA AND DIVIDEND INFORMATION](#)

[RISK FACTORS](#)

[CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS IN THIS PROXY STATEMENT AND PROSPECTUS](#)

[THE SPECIAL MEETING OF GENOMIC SOLUTIONS STOCKHOLDERS](#)

[THE MERGER AND RELATED TRANSACTIONS](#)

[UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION](#)

[UNAUDITED PRO FORMA CONDENSED COMBINED BALANCE SHEET \(in thousands\)](#)

[UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENTS OF OPERATIONS \(in thousands, except per share amounts\)](#)

[UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENTS OF OPERATIONS \(in thousands, except per share amounts\)](#)

[NOTES TO UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION](#)

[INFORMATION ABOUT GENOMIC SOLUTIONS](#)

[GENOMIC SOLUTIONS MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS OF GENOMIC SOLUTIONS](#)

[GENOMIC SOLUTIONS PRINCIPAL AND MANAGEMENT STOCKHOLDERS](#)

[HARVARD BIOSCIENCE PRINCIPAL AND MANAGEMENT STOCKHOLDERS](#)

[COMPARISON OF RIGHTS OF HOLDERS OF GENOMIC SOLUTIONS COMMON STOCK AND HARVARD BIOSCIENCE COMMON STOCK](#)

[DESCRIPTION OF HARVARD BIOSCIENCE CAPITAL STOCK](#)

[LEGAL MATTERS](#)

EXPERTS

GENOMIC SOLUTIONS' STOCKHOLDER PROPOSALS

WHERE YOU CAN FIND ADDITIONAL INFORMATION

INDEX TO GENOMIC SOLUTIONS FINANCIAL STATEMENTS

Report of Independent Public Accountants

CONSOLIDATED BALANCE SHEETS

CONSOLIDATED STATEMENTS OF OPERATIONS

CONSOLIDATED STATEMENTS OF CASH FLOWS

INDEX TO GENOMIC SOLUTIONS FINANCIAL STATEMENTS

GENOMIC SOLUTIONS INC. CONDENSED CONSOLIDATED BALANCE SHEETS (in thousands)

GENOMIC SOLUTIONS INC. CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (unaudited; in thousands, except per share data)

GENOMIC SOLUTIONS INC. CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (unaudited; in thousands)

GENOMIC SOLUTIONS INC. NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

TABLE OF CONTENTS

AGREEMENT AND PLAN OF MERGER

RECITALS

ARTICLE I

THE MERGER

ARTICLE II

DIRECTORS AND OFFICERS OF THE SURVIVING CORPORATION

ARTICLE III

EFFECT OF THE MERGER ON THE CAPITAL STOCK OF THE CONSTITUENT CORPORATIONS

ARTICLE IV

PAYMENT OF SHARES

ARTICLE V

REPRESENTATIONS AND WARRANTIES OF THE COMPANY

ARTICLE VI

REPRESENTATIONS AND WARRANTIES OF PARENT AND MERGERCO

ARTICLE VII

COVENANTS

ARTICLE VIII

CONDITIONS TO THE MERGER

ARTICLE IX

TERMINATION, AMENDMENT AND WAIVER

ARTICLE X

GENERAL PROVISIONS

DELAWARE GENERAL CORPORATION LAW

FORM OF VOTING AGREEMENT

RECITALS

EMPLOYMENT AGREEMENT

W I T N E S S E T H

PART II INFORMATION NOT REQUIRED IN PROSPECTUS

SIGNATURES

EXHIBIT INDEX